BESTUFS II Final Conference

11-13 June 2008

Cities of Tomorrow

Divani Palace Acropolis Hotel
Athens, Greece

Minutes

The final BESTUFS II conference on 'Cities of Tomorrow' was held in Athens, Greece on 11-13th June 2008 with over 50 participants from across the EU and some from as far away as South Africa. The conference started with a technical visit to ELTA – Hellenic Post on 11th June just beside the Athens Olympic 2004 arena. Then the participants visited the sorting centre in Athens.

In the evening of the 11th the participants enjoyed an informal but excellent dinner just beside the Acropolis, one of the main attractions of Athens.

The second day of the conference started with the chairmanship of Prof. Mike Browne, University of Westminster. He welcomed all participants to the conference and gave a brief introduction to the BESTUFS project. BESTUFS I focused on the issues of large cities while BESTUFS II focused on medium size cities. BESTUFS II, as a platform, organised 4 annual workshops and 4 annual conferences in different European cities which were joined by people from different backgrounds: academics, researchers, city councils, freight transport operators and users with workshops and conference themes that were just as diverse.
The project has produced Best Practice Handbooks and updates to earlier editions; a Good Practice Guide in 17 languages (distributed in the conference as well); several bibliographic CD Roms; policy and research recommendations; data and modelling roundtables; reports on data collections, modelling and applications; quantification of urban freight transport effects; and seminars in most nations in the local language.

Today some European cities are growing and some are in decline or change. Big and progressive cities like London and Paris have departments manned with experts to deal with freight transport related issues. On the other hand, most small and medium size cities do not have such experts or units. It is not easy to measure the success (or failure) of BESTUFS (I and II). But one thing that is clear is that there now are many more people who know of or wish to understand urban freight logistics issues. This wider network feels that something has to be done to face the challenges of urban freight to live and work in a sustainable way.

John Berry from European Commission DGTREN gave a presentation on the EC's effort to achieve a sustainable and competitive freight logistics system in Europe. The

mid-term review of 2001 White Paper recognised that economic and transport growth are interlinked and the transport policy needs to respect co-modality which is the complementarily and efficient use of all modes in an optimal European transport system. The external costs of transport are: infrastructure 1.5%, congestion 1%, accidents 0.5%, air pollution 0.6%, noise 0.3% and global warming 0.2%. The fact is CO2 emission from energy is reducing in all sectors except transport. Of this air transport is the worst and rail is the least polluter. Despite this, consumers are enjoying cheap air flights. The good news is that road safety is getting better and the vehicle engines are getting better (focusing on Euro 5 by 2011). The logistics package published on 18th October 2007 includes a logistics action plan with an agenda for the next five years including such points as the freight-oriented rail network, ports policy and short sea shipping.

Many European cities have adopted different approaches to tackle their problems such as congestion, for example, London (UK) has adopted a congestion-charging scheme and has proved a success. Manchester (UK) is planning to introduce congestion charge for motorists on the busy roads by 2012. Different cities have different perspectives and thus the London or Manchester choice of solution may not be suitable. Nevertheless, their experiences are important for other cities to adopt such policies. John said “I am here to listen to you, the experts and practitioner in the field, and will take the message to the Commission as to what are the essential needs to be done”.

Many participants appreciated John for his excellent presentation and the Q&A session was quite long. During the question and answer time John said that the solution of city logistics problems depends on what the individual city wants to do: to raise revenue or fund capital investment or reduce congestion.

- Stephen Steele from Transport for London (TfL), informed the conference that they foresee a 50% increase in demand and 10% decrease in road capacity. So the planning processes of cities are a tool for planning demand management, for example, construction and operational material plan. He also opined that CO_2 is surely a problem that technology will solve but the biggest problem or the challenge is the congestion problem. How can we solve it without impediment to economic growth?
- Marco Monticelli, IVECO, posed a question asking if regulation can lower CO_2 emission. Higher size and weight cargo unit vehicles are economically good and probably environmentally as well as it replaces multiple vehicles. We cannot cut economic growth.
- John said that road pricing is only one solution. In Russia, rail freight yard or distribution centre is in the city centre, which is servicing the whole city deliveries. Unfortunately, Europe has lost the railway spaces in the city area and thus it is very difficult to offer such services.
- Peter Sonnabend from DHL expressed the opinion that the urban freight issue gets little attention from all stakeholders. He referred to his own experience of a five-day conference in which there were only three presentations on urban freight. He also expressed that the politicians failed to understand the freight issue, and passenger issues get priority.
- Corinne Mulley from Newcastle University suggested the experience of Newcastle city that implemented “no car lanes” which can be used by trucks as well. This eases the congestion.
- John expressed the opinion that road pricing or old vehicle charging is penalising the poor.

- The chair concluded that there are multiple tools for different perspectives or scenarios to solve city congestion problem. However, generally the public perception about freight or truck is not very positive. Therefore, we need to work on this as well.

The second session was started with the presentation of Prof. Christian Vandermotten on the topic of 'Recent Trends and Challenges for the European Metropolises in a Globalised Competitive Economy'. He discussed the pre- and postindustrial metropolitan cities. Now most cities are doing fine except a few such as Vienna. Cities are also engaged in competition to attract trade and investment. He opined that the cities with strong linkages and with many headquarters of corporate offices such as banks or insurances are doing very well (for example London, New York). Some metropolitan areas are performing better than others due to, among others, location, administrative position, knowledge base, transport network and tourist and heritage value. For the growing advantages of the decisional places, a very high level of productivity for the decisional and top-level services in the main agglomerations is essential. The best competitive effect is linked to the best linkages with the world economy. He concluded that the most internationalised metropolitan areas benefit from good economic performance, but inside the logic of each national economy. These performances are however lower in the most industrial international cities e.g. the German metropolises.

After lunch, the session started with a welcoming lecture from the chair, Mr Marco Monticelli from IVECO. He opined that there are four 'keywords' about sustainable but competitive cities of tomorrow. The first is the 'vehicle technology' that is progressively moving forward to the Euro 5 Engine. The second keyword is adopting an 'integrated approach'. Technology alone cannot solve every problem. Other solutions must be taken on board. The third keyword is 'no single solution' can solve all problems. Alternative fuel is now linked with food and the UN recently has warned about the food demand and essential measures to avoid worldwide crisis. The fourth key word is 'Globalisation'. Globalisation must be taken on board everywhere including Urban logistics.

Then Mr Antti Permala, VTT, Finland gave a presentation on 'Large Vehicle Scale RFID in Cities'. RFID (Radio Frequency Identification) is a wireless identification technology that connects objects to the internet so that they can be tracked and companies can share data about them. The concept is: place a transponder - a microchip with an antenna – on an item and then use a reader - a device with one or more antennas – to read data off the microchip using radio waves. The reader passes the information to a computer, so that the data can be used to create business value. He discussed the development of RFID during the last few years, technology, application and cases. Last mile solutions were presented during the BESTUFS II Conference in April 2005. Since then the standardisation has proceeded to EPG gen2. Technology is still developing towards longer reading distances, more capacity in chip memory and more powerful solutions. However, the question is how we can benefit from this development. When the RFID identification works then the next question is how to deal with ERP integration and visibility along the supply chain. A lot of closed applications; big rollouts on product, pallet or vehicle level are still in the 'starting block'. He insisted that the efficient use of RFID is largely dependent on the layout of the terminal. If a new terminal is being built which intends to use RFID, then it would be better if expert advice was taken beforehand.

Dr Ing. Klaus Richter from Fraunhofer, Germany presented on 'How does and will GNSS (Galileo) aid more efficient freight?' User requirements of urban logistics will

be guaranteed by Galileo Value Added Services. He gave a brief comparison of two scenarios of intelligent logistics for small volume of goods: present and 2025. Currently the theft of goods is increasing compared to that of utility vehicles. The rate of theft will be further intensified, as the value of goods will be 'new cash' by 2025. Currently we monitor logistics process with discrete ICT support/ solutions.

Best4city is a project working with Galileo that will support low volume commercial transportation. The project is funded by the Federal Ministry of Transport, Germany. It will work with interchangeable trailers. It has two aspects: Low cost- outdoor tracking only (GSM, AGNSS). Its main goal is a common use for a variety of transportation tasks. On the other hand, the high cost end can work outdoor and indoor. Indoor tracking includes UWB, WLAN, and RFID. Its main goal is intelligent goods tracking through assembly lines. The project includes simulation study using a 3D model of the city of Magdeburg. It includes a simulation of a delivery to a shopping mall. It will examine the availability of GPS and Galileo Satellites along the trajectory. He concluded that: an intelligent city logistics concept is needed; interchangeable trailers can support flexible logistics under various aspects; the need for guaranteed tracking and documentation for all kinds of freight is getting more important. He also concluded that Galileo will improve the possibilities for more precise and reliable tracking especially in urban environment; and value added services can be continuously controlled, even in real-time.

Agneta Sjogren from Volvo Technology presented on 'What is ADAS?' ADAS is an advanced driver assistance system. It supports drivers in the driving task, provides active support for lateral and/or longitudinal control with or without warning. On average 40000 people die in European traffic every year. Of these, 90% of deaths are caused either directly or indirectly by the driver. The accident occurs often due to mismatch between driver-vehicle and traffic environment. Agneta showed a video that depicts clearly the mismatch. ADAS also provides support to drivers in urban environment including urban freight solutions.

Mr Robert Goevaers from SenterNovem presented the PIEK project. He gave a brief background note on the project for night delivery. Many experts are exploring for solutions to city logistics problems such as congestion. There are projects on night delivery. Nevertheless, citizens protest strongly due to some realistic reasons including noise problems, sleeping disturbance and health. So PIEK started exploring - how can we solve these side effects on night delivery solutions? Because night delivery is a good solution, but we need to mitigate these effects. These negative effects were mitigated by using low noise trucks, equipment and logistics approach. Albert Heijn is subsidiary of the mother company Ahold. The company was founded in 1887 and currently is a market leader. It has 7000 stores worldwide and 230,000 associates. It has 70,000 employees. Its logistics infrastructure in Netherlands includes two national distribution centres (one is for ambient and another is for conditioned products) and four regional distribution centres. It has to continue its regular and reliable delivery schedule under very restricted time frames, which is a big challenge in city centres.

Generally in night delivery the noise levels are: tail lift 83 dB(A), floor 85 dB(A), wall 74 dB(A), warning system, reversing beep 110 dB(A), cargo storage and refrigeration: 69 - 74 dB(A). But under the PIEK project the noise level of all components are below 60 dB(A). The project conducted trial/survey on 10 shops, 9 cities and 1000 deliveries morning and evening. The trials lasted for 3 months. It monitored among others: Noise complaints, Local environment, Greenhouse impact (emission), Logistic improvement, and Costs. SenterNovem/Albert Heijn conducted 5 trials in

2007 which included deliveries between 05:00 and 07:00, deliveries between 19:00 and 02.00, and more than 1000 deliveries. There was only one complaint. So the results are very positive, less emission (noise and air), cost-savings, better usage of capacity, profits from upgrading Rigid to Euro-trailer, and less jam delays/waiting hours/kms. The experience of the PIEK project suggests we can offer alternative transport option to reduce city logistics problems and to do more profit. The increase/ enlargement of delivery time-slots to evening/night under certain conditions offer an opportunity. The benefits includes more hours/day for delivering, better use of capacity, increase road-safety by delivering outside shopping hours, and no length-restrictions using max capacity with less movements.

The starting day of conference ended with a common dinner at Daphne's Restaurant in the Plaka district.

Madame Laurence Douvin, Councillor of the City of Paris, chaired the first session of the second day of the conference. She recalled her long involvement with BESTUFS workshops and seminars and meeting various experts and practitioners. She opined that BESTUFS has successfully raised awareness among city logistics stakeholders. When the project (first phase) started in 2000 only few people were aware of the topic and that has changed dramatically. However, the necessity of an urban logistics platform is still there and she hoped that EC will come forward with funding.

Dieter Wild from PTV, the coordinator of BESTUFS II, gave a brief presentation on the start and end of the project. He recalled that no freight initiatives existed in 1999. PTV started to design BESTUFS in 1999. It aimed to fill up the gap by addressing the urban freight issues, identifying stimulation of innovation and access to best practices. The international conference on city logistics also for the first time took place in Australia in 1999. The question was "how can we structure a project?" The EC offered 'Thematic Networks' without research efforts. It aimed at 'Best Practices': internal discussion on how to assess measures, which are the best practices when looking at the given good practice innovations? The BESTUFS consortium adopted a practical approach: descriptions of innovations with additional information about advantages, disadvantages, experiences etc. as available. In that line, we structured the project in the following groups: workshops, conferences, clustering of projects, dissemination (e.g. newsletters, website) and network.
BESTUFS II took the approach of approaching small and medium cities and users so that more people can participate. Language is a barrier in pan-European project implementation. BESTUFS II had organised national/local seminars in 17 languages. It has published in different languages as well. For example, the Good Practice Guide is available in 17 languages. They are distributed free. The first BESTUFS workshop was held in Brussels to identify which urban freight aspects are most important. The participants of this workshop identified 18 issues. BESTUFS II had a steering committee (SC) to help select the topics of workshops and conferences. Thanks to all SC members (Laurence Douvin, Laetitia Dablanc, Peter Sonnabend and Francesco Massa) for their whole-hearted support over the years. The BESTUFS.net website has been very popular and the amounts of downloads over the years has been very impressive.

The interest of cities is continuously growing. Now more cities start with experimentation. More information about the impact of measures/solutions is becoming available. Large cities set up (freight) transport master plans. Many cities organize round tables dedicated to urban freight transport. Private logistics actors also recognize that contribution to a clean environment leads to an advantage in competition. The reasons of this growing interest include European legislation on

energy efficiency, vehicle technology and emission; EU-wide initiatives with projects such as CIVITAS, BESTUFS II, NICHES; and changes in society such as more shopping malls - less small retailers as well as e-commerce and new technology at reasonable cost including vehicles, equipment, ICT.

He acknowledged that despite the successful implementation of BESTUFS I and II projects that urban freight is not yet as it should be. He noted that the society has to devote more attention and support to urban freight transport to achieve a sustainable urban mobility. In the future there will be growing complexity of sustainable decisions such as conflicts with road pricing, urban planning particulates. Sustainable urban transport planning, among others, with obligatory addressing of freight will be required. Now more and more people are doing internet-shopping and getting home-delivery in typical business segments. Other business segments and regional commerce (such as service technicians, construction site products) will follow soon. Thus e-Fulfillment solutions have to be developed. He thanked the organizers of this conference for organizing an excellent event including technical visit, dinners and hotel. He also thanked all project partners for their support over the years. Without their support BESTUFS would not be a success story. He also thanked participants for their engagement.

Jean-Louis Routhier from the University of Lyon presented Work Package (WP) 3 on 'Best practices in Urban Goods Movement data collection, modeling and application fields'. The objectives are: to collect, compare and describe different data collection approaches; to provide a platform of urban freight transport modelling experts; to help to exchange expertise and practical experiences; and to contribute to harmonisation and standardisation of data collection methods. The WP3 had four tasks: data harmonisation, modelling approaches, use of cases and application fields and round tables organisation. An online questionnaire was used to get expert opinion on three parts: description of UGM data collected in 11 European countries, description of UGM modelling approaches in Europe and description of the model use cases. 43 experts took part in this online survey. Then four round tables were organised in four cities where 77 experts from 14 countries took part. We also got contributions from 108 experts from 12 countries (11 European and one from Japan) which included 46 academics, 32 consultants and 28 authorities' engineers. The research suggests that there is a lack of interest for urban freight transport from both decision makers and general public.

The study finds that the availability of data strongly influences the chosen methodology for the modeling and that gravity models use commodity flow data and cannot reflect the round organization. The UGM models calculate very often the more helpful trip chains than goods flows and a group of UGM models use land use pattern while another group use transport surveys. Using both is the better solution deciding between them is difficult. The UGM Models tend to consider supply chains more and more in the simulation process to reflect better the behavior of the market actors and newest models consider a wider range of urban management issues like environment, parking policy, policy making support (land use, regulation, incentives).

A total of 20 different types of data collection are used for urban logistics knowledge. A few are available on specific urban goods data. The main issues: No consensus about data collection methodology; Standard data do not exist at urban scale; Available data are not suitable with objectives; Lack of reliability for urban goods data collection; a problem with: Who has to pay the collection? Urban freight transport is seen as a cause of problem and not as a factor for economic development. There is a strong competition between freight and passenger transport sector. Data collection

has to take into account all UGM components, “own account” and third party transport, all the goods exchanged between establishments, small as well as large enterprises, from light commercial vehicles to maxi-code trucks. Data collection also has to show the relations between the business logistics needs and the transport conditions: to put road occupation in touch with parked or running vehicles (impact on congestion, tool of management for decision maker); and to make existing modelling approaches efficient on simulation. We need to move towards a standardisation of urban freight survey by associated business (establishments) and vehicle travel (drivers) data collection.

Jarl Schoemaker, from NEA presented on ‘Urban freight data and quantified impacts of projects in Europe’. He informed the conference that the quantitative information on urban freight transport is not easily available. We need to see the problems in advance: Availability of data and evaluations; Quality of data and evaluations; Limited comparability (different objectives, survey areas, methodologies, indicators…), difficult to compare. Some data are not publicly available, although some data are there, e.g. private companies would not share their data; unclear what the “right” indicators are; and freight still unknown by some decision makers. The freight data can be used as a powerful persuasion tool, for example to raise awareness. It is becoming more and more important to take action. Therefore the BESTUFS II team has developed two reports aiming to provide useful, inspiring information for anyone interested in 1) urban freight transport data and 2) quantified impacts of urban freight projects in Europe.

For this, the BESTUFS II team has conducted identification of existing material, data gathering, reporting and validation of both reports by experts in two dedicated meetings. The first report, “Quantification of Urban Freight Transport Effects I” (2006) provides information from surveys and statistics on: Freight volumes and commodities in urban areas. Urban freight transport fleet, urban deliveries, Economy, Environment and Safety. The second report (expected to be published in this summer of 2008); “Quantification of Urban Freight Transport Effects II” contains information on the impacts of urban freight measures and projects on: Economy, Environment, and Social (actually three pillars of sustainability). Some cities implement different measures at the same time. The published report presents examples of single measures: one implemented measure. It also includes examples of multiple measures: (nearly) simultaneous implementation of several measures (e.g. Urban Distribution Centre + Low Traffic Zone + incentives).

The prospect of future urban logistics largely depends on the following issues: Improvement of quality, comparability and availability of urban freight data and evaluations are needed to improve awareness and to make better decisions. Can people trade in privacy for value? Will there be private traffic management centres because of lack of competence in cities? Is there potential for Galileo? It will affect the arrival forecasts of the trucks at destination, anonymous information to traffic management and automated law enforcement. Last but not least, can we introduce European observatory on urban mobility? BESTUFS II has produced two useful reports. However, there are big gaps in urban mobility statistics at the EU level, but also at the local level where freight flows are concerned. Cities should conduct regular freight surveys (as they are rare and results are often very difficult to compare because of the different methodologies used) and monitoring of the effects of measures is also often quite insufficient and difficult to compare. Cities should be encouraged to finance regular freight surveys, as most cities do for personal travel surveys. Guidance on efficient and comparable data collection and monitoring could help cities. Data collection pilots in cities in different countries could provide

interesting comparisons. The establishment of suitable performance measures and benchmarking would help cities to determine the most relevant fields of action and would deepen the understanding and monitoring of urban freight related measures. The European Commission will have to play a big role to achieve a sustainable urban city logistics.

Mr Tom Zunder from Newcastle University chaired the last session of the conference. Dr Heiko A. von der Gracht presented on 'Scenario Planning for Logistics: an expert's view for 2025'. Scenarios are internally consistent, plausible, and challenging narrative descriptions of possible situations in the future, based on a complex network of influence factors. He discussed the pros and cons of forecasting future with the example of oil price. Forecasting tries to abandon uncertainty by providing only one forecast - scenarios confront decision makers with uncertainty by presenting multiple futures. The scenario planning in logistics included interviews with 31 of the top 50 logistics service providers concerning their scenario planning practices. The study found that many logistics service providers plan narrowly into the future. Only few consider a classical planning fence of 5-10 years for their strategic planning.
Compared to industry sector standard, the logistics service industry shows a backward picture regarding scenario-planning practices. Logisticians who implement scenario planning benefit threefold: future robust strategies, early adopter advantages and innovativeness and creativity. The scenario study considered four future perspectives; process and viewpoint, goal, guiding question and mindset. Delphi study was used to collect expert knowledge for scenario development in a scientifically sound process. Projections are stronger related to urban freight. All their estimates achieved agreement among the Delphi Panel. The major deficiency of most scenario studies is that they neglect wildcards. Seven projections, which are of high importance, achieved high level of agreement among the expert panel.

Mr Peter Sonnabend from DHL presented on 'Logistics Innovation for the Urban Domain'. Globalization of production and trade have proliferated container movement, e.g. from ASPA +79% in 1997-2003 (2.9 to 5.2 million TEU). European inland freight transport is growing near-synchronous with EU-25 GDP, +26% in 1995-2004 (1,832 to 2,318 bio ton-km). The building freight surge does not exempt the cities, for both receiving and shipping. Efficient logistics networks are keys to digest the additional demand for goods movement. Professionally logistics operators aim to optimize their planning, operations and equipment for a maximum utilization of vehicles and drivers: saving costs, reducing congestion, minimizing fuel consumption, minimizing local and global emissions. However, logistics service providers are dependent on a set of framework conditions outside their immediate influence. Urban deliveries often become a frustrating experience.
Dedicated freight infrastructures enable ports, airports, and inland terminals to cope with the increasing traffic. In urban areas, freight must share limited infrastructure at a disadvantage. The use of vehicles that would be optimum from a logistics perspective is often compromised by physical factors, requiring an arbitrary split of the volumes to several vehicles and tours. The circulation of commercial vehicles is often impeded by regulatory and capacity limitations of road and roadside infrastructures that induce unproductive delays that must be recovered with additional vehicles further increasing the burden. Delivery windows in inner cities are compressed by shift-back opening hours and static curfews; additional vehicles, adding to peak traffic loads, must compensate shorter time windows. Commercial vehicles account for 10% of traffic, but 40% related energy use and 50% emissions. Efforts to cope suffer from divergent goals and solutions for local and global pollutants, volatile policies and limited market offers for alternatives. Freight has been

off the urban agenda for years, draining municipal awareness and competences. Receivers usually do not care for good logistics, leaving 15-50% of deliveries unorganised.

He opined that we have to get freight back on the urban agenda – not as singled out culprit but an equal player acknowledging its vital role to sustain the living city. We have to restore logistics competence in municipal decision making and planning, with leverage in the formulation of truly integrated mobility policies. Also we have to support local authorities to embark on serious infrastructure management giving priority to collective transport systems for passengers and freight. It is essential to intensify the proliferation of urban logistics demonstrators combining consolidation and last mile aspects to broaden awareness and acceptance. We need to push clean commercial vehicles through operational benefits of value, with a clear roadmap but without choking existing operations. We have to promote products instead of prototypes and studies.

The conference was ended with a roundtable discussion.
The experts opined that the CIVITAS program should be expanded for freight.
Mike Brown opined in the context of Peter Sonnabend's comments regarding study versus product that the study needs to continue to further research and evaluation. But the study must be selective and more productive and concrete.
Peter Sonnabend informed the conference that there are currently 900 DHL package stations which will be increased to 1500 by 2009. This is an innovative approach for postal delivery and reduction of vehicle miles. Currently there are different initiatives on environmental zone. Some are very positive and others are neutral or negative. The Euro 5 engine will be mandatory by 2011 which will reduce the environmental effects.
Alberto Preti from the Institute for Transport and Logistics pinpointed some issues on which it is worthwhile to keep on working.
- Nighttime delivery is an important solution for city logistics and technology can definitely help in the reduction of noise disturbance.
- there is a need to harmonise city logistics regulations in neighboring urban contexts in order to avoid regulatory fragmentation which is not in line with operators managerial and operational activities. In fact the "break even geographic scale" of logistics operators is not only municipal, especially in regional contexts characterised by small-medium cities.
- it is very important to address demand management (also through training) in city logistics policies;
- there is a need to target small & medium transport & logistics operators and cooperate with them (further of course than with global leaders) to develop city logistics policies;
- public administrations need specific freight units to cope with city logistics issues. Logistics is a transveral topic and it needs an interdisciplinary approach.

The conference closed with thanks to all organisers, speakers and participants.