

MINUTES
BESTUFS II

Work package 3: “Urban freight harmonisation and modelling”

3rd Roundtable: Application fields, use cases and opportunities

3-4 May 2007

Venue :
Belgian Road Research Centre
Boulevard de la Woluwe, 42
B-1200 Bruxelles

Introduction

The roundtable is a part of workpackage 3 of the BESTUFS II project, which is concerned with the urban freight data collection and urban freight modelling.

The first roundtable was held in Lyon, France on 22-23 September 2005 about “Definitions, data sources and data collection methods”. It was an initial step in establishing the state of the art about urban freight data collection and discussing data availability in European countries.

A synthesis report « Urban freight data collection » has been written by Julian Allen and Mike Browne, University of Westminster, U.K. (deliverable D3.1 available on www.Bestufs.net)

The second roundtable took place in Wildau on 8-9 June 2006 about “Modelling approaches on Urban Goods Transport”. It provided comparisons of urban freight transport models according to the objectives of the decision-makers and to provide a platform for urban freight transport modelling experts.

The synthesis of these first two roundtables have been presented, respectively by Mike Browne (*University of Westminster*) and Bertram Meimbresse (*Wildau University*)

This third roundtable concerned “Application fields, use cases and opportunities”. The intention of this roundtable was to identify the current applications fields of modelling in various countries and to compare expectations of decision makers with the outcomes of academics and consultants. The roundtable sought to address the following questions:

- Have the models discussed already been used, and, if so, in what ways?
- Are the modelling tools relevant for the decision-maker?
- When, how often, and in which situations should the models be used or data acquired
- Why should someone pay for the models?
- What improvements to the models are necessary?

The purpose of this roundtable was to consider the decision makers objectives and whether the modelling tools developed by researchers and consultants were meeting their needs. For this reason, the presentations aimed to provide both of these parties’ views (i.e. the decision-maker and the researcher/consultant (however, this was not possible in the case of Stuttgart and the Netherlands where only one party was available to participate in the roundtable). Presentations were made about urban freight modelling work in the following cities:

- Brussels (presentations made by a local authority representative and a Consultant)
- Cities of Emilia Romagna (presentations made by a representative of the regional authority and a university researcher)
- Zaragoza (presentations made by a Chamber of Commerce (CCI) representative and a university researcher)
- Cities in the Netherlands (presentation by a consultant who worked on a project for the government)
- Stuttgart (presentation by a consultant who worked on a project for the city authority)

The debate that took place during the roundtable addressed the issue of the extent to which the actual and suggested modelling corresponded to the needs of decision-makers.

The agenda for the third roundtable is shown below.

Thursday 3 May 2007

AM	<u>Introduction to the work packages and tasks – State of the work</u>	
10h-10h15	Welcome address of the General Director of the Belgian Road Research Centre	C. Van Rooten, BIRC
10h15-10h30	Agenda of the seminar and practical information	W. Debauche, BIRC
10h30-10h45	Overviews of the project- Aims and expected results	D. Patier, J-L Routhier, LET
10h45-11h05	Synthesis of the task 3.1. Data harmonisation	J. Allen, M. Browne, UoW
11h05-11h25	Synthesis of task 3.2.: Modelling approaches	B. Meimbresse, TFH Wildau
11h25-12h	Introduction to task 3.3.: Application fields, Use cases and opportunities	D.Decock, BIRC
12h-12h30	Questions and debate	All
12h30-13h30	<u>Lunch</u>	All
PM	<u>Use cases, application field of freight data collection and modelling : actors point of view</u>	
13h30-14h	The Freight Transport Master Plan of the Brussels Capital Region: data collection and Models	T. Duquenne, Brussels Transport Administration H. Duchateau – STRATEC
14h-14h30	Modelling city logistics in Emilia-Romagna: from the CityPorts project to the CityGoods software.	R. Rosini, Regione Emilia Romagna G. Gentile, University La Sapienza, Roma
14h30-15h	Questions time	All
15h-15h30	<u>Coffee break</u>	All
15h30-16h00	Modelling Urban distribution in Zaragoza – from Modelling to Practice	D. Artigot, CCI of Zaragoza S. Val, University of Zaragoza
16-h00-16h20	Modelling urban distribution in German Cities	J. Janko, PTV
16h20-16h40	Modelling urban distribution in Dutch cities	P. Colon, Buck Consult

16h40-17h20	Debate from decision makers, Questions time	All
17h20-18h00	Preparation for the debate of the next day (list of questions) Conclusions of the day	D. Patier, J-L Routhier, LET + All
18h	End of session	
19h30	Social Dinner	All

Friday 4 May 2007

AM	Discussion	
9h-9h30	Introduction to the debate	A.Bonnafous, LET
9h30-10h30	Debate	moderator : M. Browne, All
10h30-11h	Coffee break	All
11h-12h	Debate	All
12h-12h30	Conclusions and recommendations	W. Debauche, BRRC
12h30-13h	Final statement	D. Patier, J-L Routhier LET
13h	End of Round Table	All
13h-14h30	Lunch	All

PM	Internal session (open to all)	
14h30-16h	Debriefing and follow-up meeting	Co and sub-contractors
16h	End of session	

Summary of Round table presentations and discussions

3 May 2007

Introduction to Tasks 3.1 to 3.3

Synthesis of Task 3.1. Data harmonisation (Mike Browne, University of Westminster)

Mike Browne's presentation covered the following points:

- The objectives of task 3.1. and the output (state of the art on data collection methods and suggestions for harmonisation and standardisation).
- How task 3.1. was carried out and the countries included.
- Mike Browne emphasised the reasons for the importance of urban freight data, and explained the main organisations that collect freight data. *The summary table about urban freight data collected in the countries surveyed is attached to these minutes (see separate pdf document).*
- The presentation highlighted the gaps in urban freight data, common terminology (terms used and their meaning), and the scope for the harmonisation of methodologies (this final point is to be the subject of next year's roundtable).

Synthesis of task 3.2. : Modelling approaches (Bertram Meimbresse, TFH-Wildau University)

Bertram Meimbresse's presentation covered the following points:

- the objectives of Task 3.2.
- the models as an interface between data collection and measure applications.
- the logical progression from the problem addressed, the selected method, the data requirements, the model used, and the results achieved in order to solve the problems (i.e. application fields, which is the topic of this third roundtable).
- the classification of urban goods models into three types (econometric models, transport demand models, and transport distribution models).
- the main characteristics of 12 models used in 7 different countries: objectives, type of model, model resolution, input and output.

Mr Meimbresse observed that data about the behaviour of the logistics actors is often not available for use in models, additional data are often necessary for modelling and model calibration, that models are generally under-used regarding their potentiality, and that existing urban freight models are often stand alone rather than being part of a national modelling development strategy.

Introduction to task 3.3.: Application fields, Use cases and opportunities (Davy Decock, BRRC, Brussels)

Davy Decock presented the objectives of the 3rd roundtable, discussing the current application fields of modelling and how the expectations of decision makers compares with the views and outcomes of modelling efforts by academics and consultants.

He presented the results of survey work carried out as part of Task 3.3. There were 22 completed responses to the questionnaire from a total of 7 different countries. A typology of urban freight models was presented according to the country, its financier, owner, developer and responsible party.

A synthesis paper containing a summary of this survey and its findings is annexed to the minutes.

Discussion about the task 3.3 presentation

Harmonisation in modelling approaches is easy to say as an objective but very difficult to actually achieve. It is also debatable whether harmonisation is a worthwhile goal anyway as everyone thinks that their problem is different and therefore requires various approaches. Attempts to harmonise could therefore lead to the lowest common denominator and a lack of innovation. It is more realistic to aim for smaller goals such as understanding and then possibly harmonising the definitions used in models.

It is noted that questionnaires and survey work in urban freight have changed a lot in the last 10-15 years. It was suggested that perhaps it was more important to think about harmonising questionnaires and objectives of modelling work rather than the models themselves. As the questions being asked of urban freight researchers are changing over time, perhaps it is possible to try to foresee the questions that will be asked in the future.

The view was expressed that there in Belgium there has been no continuity at a national government level in the urban freight work carried out. When the national government changes, so too does the focus of interest. There has also been a lack of ex-post evaluation. Instead new data collection and modelling exercises are continually being set up. It was felt that this is due to a high staff turnover among civil servants in some countries as well as due to elections and politicians.

One participant felt that existing data from national surveys could be very useful in urban freight modelling and also helped to keep down the costs of the modelling work. In the work in Emilia Romagna the modelling work was developed in accordance with the national data available which helped to keep down the financial budget. However another participant felt that policymakers need to be realistic about what can be achieved with existing data alone, especially as in some countries there is little existing data from national surveys that is of use for urban freight modelling.

Another issue of discussion was the problems caused by having to use data from many different sources in urban freight modelling. Often the data from these different sources is not comparable and some data is of poor quality. Working out how best to use existing data in a harmonised way is an important issue.

Another participant felt that it is important to ensure that definitions used in survey work are very clear (both for respondents and also to make data easy to understand and comparable when other researchers attempt to use it). They felt that it is important to have a classification in place that can be followed in urban freight data collection. Then, although different studies in different cities will have varying data collection requirements according to the objectives of the work and the configuration of the city, it would be possible to follow the pre-defined classification.

The portability of models was raised as an issue. The person raising this felt that you cannot seek funding for harmonised data collection without the ability to produce outputs and results in the short-term. It is therefore necessary to have models in place. In this view, it is important to compare different models and their results in different countries and cities in order to establish which approaches are most useful.

However another participant disagreed with this view. They felt that modelling is an output and should not be viewed as the final tool. They believed that a freight action plan may not even require a model – so focussing too much on modelling can be a deterrent to carrying out the required data collection and evaluation work. They felt that data collection is always of use, but that with modelling this is not always the case.

Another participant made a distinction between technical models and mental models. They felt that it is always necessary to have a mental model in place before data collection is carried out. In this sense it is necessary to always have a mental model in mind before collecting data as you have to have a reason for collecting data. The development of a technical model may or may not be necessary.

Use cases, application field of freight data collection and modeling : actors point of view

Modelling city logistics in Emilia-Romagna: from the CityPorts project to the CityGoods software (Reno Rosini, Regione Emilia Romagna and Guido Gentile, University La Sapienza, Roma)

Mr Rosini presented an overview of the economic structure of the Emilia-Romagna region, the traffic and environmental problems experienced, and the CityPorts project to help alleviate these difficulties (which ran from 2002- 2005). Dr Gentile presented the CityGoods model that was developed to model freight activity in Bologna, and the data collection work that took place to support this modelling.

Summary of the Italian presentation:

- Model formulation
- Based on NACE codes, with a “subtree” system
- Best practise analysis
- Finest management
- CityGoods : a GIS system in what we find :
 - Local and coherent units (based on economic activities typology)
 - Analysis of freight urban demand
 - Generation model
- A response to politicians’ demand : to localise best point for transfer platforms (to demonstrate that platforms is useful)
- For distribution, not a classical routing approach, traditional gravitational model is incorrect, because of the trips realised (a trips is made with many stops)
- Number of movements for each zone => construction of the automatic road graph (model of the network)
- Use of an assignment model
- Pb : how many deliveries for every local unit ?
- A visualisation of each **supply chain** (but no so many interviews) => 6000 interviews to calibrate the model
- And : consider congestion, so integration of flow of persons (in addition to modelisation of volume of flow of each supply chain) \leftrightarrow *conflits d’usage*

The Freight Transport Master Plan of the Brussels Capital Region: data collection and Models (Thierry Duquenne, Brussels Transport Administration and Hugues Duchateau – STRATEC)

Mr Duquenne explained the Brussels Transport Master Plan and the work that was commissioned from STRATEC in order to model urban freight in the city. Mr. Duchateau explained the approach taken when the work was carried out in 1997 to generate a freight O/D matrix (including survey work and modelling approach). The work focused on the Pentagon area in the city centre.

Discussion about the Emilia Romagna presentation

A question was asked about updating of the model.

In terms of updating the Emilia Romagna model, more surveys will be carried out in future and ten-yearly census data will be used. In carrying out the original work much data was collected that was not ultimately required. Therefore, when updating the model it will be possible to be very clear about the data needed, and to ensure that surveys can be made shorter and hence cheaper.

A question was asked about whether the initial objectives of the work had been achieved.

Originally much focus in the project was on urban consolidation centres in the participating cities. However the research showed that this was not the best solution. In Germany and elsewhere these

facilities were set up in the 1990s without analysis but in Emilia Romagna the analysis indicated that this approach was not appropriate. Consolidation centres were not seen as an efficient approach to take as the benefits derived from the system are difficult to distribute between the different parties using it. Instead it was decided in the project that a wide range of different policy approaches were needed to tackle urban freight issues including vehicle controls, access controls etc.

A question was asked about how the model dealt with the issue of the number of stops/deliveries in a tour as there are many different supply chain configurations in reality, which have implications for the number of deliveries per tour. The model has a prescribed average number of stops per tour for each type of supply chain in the model. However the model cannot replicate the number of different supply chains that actually exist.

It was explained that the decision to develop an urban freight model did not exist at the start of the project. Initially the project commenced by trying to understand urban freight through data collection exercises. The decision to develop a model was only taken later.

Discussion about the Brussels presentation

A question was asked about updating of the model.

In terms of updating the Brussels model, updating was carried out in 2001 but this did not include new origin-destination data.

A question was asked about whether the initial objectives of the model had been achieved. It was felt that the politicians had taken no account of the modelling results. It would have required politicians to focus on and address illegal parking and loading and the police did not want to have to be responsible for this. So instead initiatives were taken in local communes rather than at a city-wide level. However, more recently there has been a change in thinking in the urban authority – it is educating the police about vehicle enforcement and also providing suitable on-street loading/unloading facilities.

Since 2004 it has not been necessary for goods arriving at ports to provide all the paperwork that was previously required. This can now be done at the border rather than at the Port. This has resulted in the opening of large new distribution centres at national borders.

The modelling work proved very useful in considering the options available and the costs and benefits of these different options. It was explained that the modelling work was difficult to validate - many assumptions are needed in order to carry out such modelling, and also understanding of the relationship between goods flows and goods vehicle movements is generally weak.

Modelling Urban distribution in Zaragoza – from Modelling to Practice (Diego Artigot Noguer, CCI of Zaragoza and Susana Val, University of Zaragoza)

Ms Val explained the modelling and other work carried out by the University of Zaragoza into freight transport operations in the city. Factors were found to be affecting traffic flow in the city including: traffic levels, narrow, historic street layouts, the number of commercial premises, the number and location of loading/unloading zones, illegal parking and inadequate enforcement. Urban Distribution Platform modelling work was carried out to identify suitably busy areas with many businesses and few loading zones where such delivery facilities could be located with onward final distribution by electric vehicles. Five areas were considered. Analysis was carried out to determine where a UDP was most needed based on length and area of the street, type and number of premises and loading zones location. Mr Artigot Noguer from the Chamber of Commerce and Industry (CCI) in Zaragoza explained the role that they had played in supplying the University of Zaragoza with data about the businesses in the city. He also explained the wide-ranging transport plans that are currently under consideration in the city including widening pavements on key radial routes, extending cycle lanes, and introducing pedestrianised areas in the city centre. He explained the current lack of loading/unloading zones in the

city and the abuse by other motorists of those zones that do exist. Loading/unloading zones have been prioritised in the City Transport Plan.

Modelling urban distribution in German Cities Josef Janko, PTV)

Mr Janko presented the transport planning and modelling approach used by the city authority in Stuttgart. PTV helped to combine the transport planning model and the transport model of the Planning Department into a single approach. VISEVA demand modelling of vehicle tours was carried out. This included passenger and freight transport on the roads. Mr Janko also presented the Quiet City Study in which modelling of access restrictions for goods vehicles (i.e. not through traffic permitted) was carried out.

Modelling urban distribution in Dutch cities (Peter Colon, Buck Consultants International)

Mr. Colon began by discussing the National Mobility Plan in the Netherlands and that this includes urban freight issues such as: time windows, vehicle weights and dimensions and environmental zones. He presented the work carried out by Buck Consultants for the government to model urban freight serving shops and restaurants in the 50 largest Dutch cities in order to provide neutral data to inform a wide audience of existing urban freight operations and the potential impact of different policy measures (taken by logistics companies, retailers, shippers and local government). Costs and benefits were calculated for the economy, environment and society and logistics operations. In each city studied, base data about the supply chains, the number of shops and floor area, goods flow, time restrictions, and delivery vehicle types was collected – this data was collected from a range of sources and surveys. The modelling work was carried out in an Excel spreadsheet for 15 different types of shop. The model was used to calculate the number of vehicles used per city, the vehicle km, the costs and the emissions. Eleven policy scenarios were then tested including the use of cleaner vehicles, changing vehicle sizes, changing delivery times, consolidating deliveries and collections etc.

Discussion about the Zaragoza presentation

As many as 80% of deliveries in Zaragoza are made illegally. This is due to two factors: private cars being parked where deliveries need to be made, and loading/unloading areas being too far from the point of delivery. Therefore although the loading/unloading area per street was measured in the work this is not always used for its intended purpose. Businesses in Zaragoza are unhappy about current delivery operations due to the inefficiencies caused by congestion and loading/unloading difficulties.

In Zaragoza the work is still in a research phase at the moment. Actual changes on-street will take place after city elections have occurred, but it is not clear how these elections may affect the project.

Discussion about the Stuttgart presentation

The model is being used on a daily basis in Stuttgart. The city of Stuttgart uses it for emissions modelling and for considering the likely effects of implementing an Environmental Zone. The Chamber of Commerce published a brochure for its members and policy makers about the results. These results fed into the Clean Air Plan.

Discussion about the Netherlands presentation

Mr Colon felt that the most uncertainty in the assumptions made were in the volumes delivered to different shops and restaurants per m² of floor space.

Problems and inefficiencies caused by delivery operations (such as congestion resulting from deliveries) are not included in the modelling work. Also, the model assumes optimised goods flows but not all flows are optimised in real-life.

As with many freight modelling efforts there is also a validation problem as no city wide data about delivery operations exist to compare the model outputs against.

The model is being used to discuss urban freight issues and the possible effects of different policy measures with local authorities. Meetings have been set up to discuss the modelling results of major policy measures such as the introduction of Low Emission Zones, the use of urban consolidations centres etc.

Debate and general issues raised about the presentations

- Do the models represent a frontier between the real world and the scientific world (where are the links?)
- Need to be aware of different policy levels – some are very detailed while others are more strategic – different models will be required in each case
- It is important to recognise the changes that happen over time in logistics chains – this is hard to include in models
- Agreed that the WP was not about making recommendations about the correct/appropriate urban policies – it is about data and modelling
- Need to try to point out gaps and useful approaches but it will not be possible (or appropriate) to say that one type of model is right and another one is wrong.
- Distinction was noted between the period when the model was ‘built’ and when it was then used and then the way in which the results were interpreted for policy decisions
- Data issues are very important in modelling and there is a need to ensure the connection of the topics
- Data may be (is) required at many levels – aggregate (level of the city) disaggregate (parts of cities, particular sectors etc)

Friday 04 May 2007

Debate on use cases, application field of freight data collection and modelling

Introduction by Alain Bonnafous, LET

Alain Bonnafous made a very helpful summary of the main themes and issues. This will be developed into a short paper and circulated to all participants – the following brief note simply highlights a number of the themes identified – these will be amplified in the paper.

- A good urban freight model needs to be consistent, measurable and relevant.
- It is difficult to meet all three of these conditions and there are often contradictions between them.
- There is no standard urban freight model today – we need to consider many different models proposed by various groups (consultants, universities etc)
- Some models in other fields have become more standardised and have been adapted to cope with the complexities noted above.
- Models discussed in the workshop have a variety of constraints and limitations (this is to be expected).
- Methodological innovation is desirable in this field – perhaps this will occur through looking in more detail at the unit of movement (individual flows) compared with the 4 step OD type approach.
- We are not ready for a standard model of urban freight due to the complexity – many different policy-oriented urban freight models may be required (and developed) rather than a single model

Discussion based on the introduction by Alain Bonnafous

Mike Browne welcomed the points raised by Alain Bonnafous in his presentation – especially the view that the aim of a single urban freight model is undesirable. He wondered whether some models are more promising and helpful in terms of achieving the three conditions of consistency, measurability and relevance.

He also felt that it raises questions about who the model is intended for and which objectives it is addressing. We could think about identifying the possible objectives of urban freight models, and then identifying the approaches available to meet each of these objectives.

Some participants felt it is necessary to consider data collection and harmonisations issues before discussing models in a meaningful way.

Mr Meimbresse was of the opinion that a model is an instrument to reflect part of reality, and that a model is only good if it provides an accurate representation of reality. Therefore we cannot say a model is good or bad at answering a specific question.

He felt that the time taken to develop a model is an important consideration. Some very specific models can be developed in a couple of days. Other general models can take months to develop and have large data requirements and lengthy validation processes.

One participant expressed the view that data harmonisation eases the speed of model development and is therefore useful. However, focusing on the ownership of the model should not be seen as a crucial issue. Another agreed with this view, feeling that the harmonisation of data is more important than finding a generalised modelling platform.

However, one participant felt that ownership and accessibility of models is important, as without the ability to access the model it does not exist for that individual.

Several issues were identified by one participant as important for future urban freight data collection and modelling including: being aware of the units used in analysis, compiling national registers of data collected, and harmonisation efforts with respect to data (not to say that the same type of model or data should be used in each country but that it is important to know what is in the “black box” and how it has been calibrated).

The need to develop a glossary was raised by Wanda Debauche to help ensure that we are all meaning the same thing when we are talking about data.

Another participant felt that a glossary would be very useful but that it was important to identify the top 100 terms to include so that the task is achievable. They also felt that it is not possible for this project to harmonise the data requirements of all urban freight models – instead we should focus on the data that best describes ten key issues such as loading/unloading, urban consolidation centres, etc.

Another participant identified the need to find ways of sharing data about issues such as loading zone design, radius of turning circles etc. Between EU countries.

Conclusions and Final Statement

Wanda Debauche introduced the closing session with some remarks on the conclusions that could be drawn from the Roundtable. These included:

- There is a lack of experience about urban freight and urban freight modelling among decision makers in government. For them modelling is a “black box”, so they often choose not to invest in it. They often require answers quicker than can be achieved with model development. There is therefore a need to convince them of the utility of such tools and that urban freight issues do need to be investigated and solved. This can be achieved through more dissemination of results of projects, networking and training.
- The objectives and questions of urban freight transport have changed over time (in terms of what policy makers are interested in). A lot of urban freight data already exists in many countries. We need innovation in methodologies and data collection techniques. Evaluation of models could be useful.
- There is a need to better identify the stakeholders in urban freight and to make the modelling work more realistic and better represent the real world.
- Is it possible to relate the objectives of urban freight to the models and approaches so that it is possible to determine which models are relevant for which objectives and questions.
- Data harmonisation may be possible – but there is a need to standardise the terminology and definitions being used in order to carry out comparisons. A glossary would assist in this process.
- The project should continue to produce an inventory of existing models and methodologies.

A range of views was expressed as a result of these ideas, some of which were in opposition to each other. These included that the project should use its resources to do the following:

- Compile information on infrastructure and legislation in each country
- Aim at producing best practice in town planning
- Produce a classification for urban freight and then organise the existing data already identified into this classification

- Focus on providing a message to policy makers and model makers – this could be achieved by producing a top ten urban freight transport issues that need data collection/modelling attention and highlighting what is unique about the subject

Daniele Patier noted the following points: Generally, the local authority has a problem to resolve and decides to finance a consultant to find a solution. The consultant or researcher has to find the available data or to collect data adapted to the problem. The harmonisation of data requires that the same definitions are used but over and above this we also need to know how the data has been collected. For example, are the surveys small samples or more exhaustive? Has calibration taken place? What has been included (and excluded) – e.g. in counting truck numbers does this include own account or just third party operations? large vehicles and small vehicles? Is consideration given to loading/unloading and parking as well as to the movement? It is essential that a proper definition with detail should be provided about the surveys that are made in urban areas. For the model, the question is not to harmonise models (each can be specific), but we have to understand what can be done with the model - who is the owner of results? Is it free and available for others working in the field?

Other points made in the closing discussion:

- Information on legislation and infrastructure for each country would be helpful.
- Some glossaries already exist.
- It may be useful to identify approaches being made by the Commission through organisations such as Eurostat
- Noted that it would be helpful to have a list of the top ten issues in urban freight transport that should be addressed by data collection and modelling.
- There may in some cases be a lack of detailed knowledge and information among local and city authorities concerning urban goods movements
- The decision-makers consider the models as a “black box”. Training and dissemination activities for city and regional planners (and chamber of commerce) delegates seems necessary in order to clarify the potential functions and application of urban freight models.
- There is not a standard model, but some of them could be transferred and used more widely providing there was clarity and agreement about the objectives and the units of measurement in respect of data requirements
- There is no standard model, they correspond to the stakeholders identity (perception of the situation and secondarily their objectives), capacity to consulting and researcher actions, the financial means, often under estimated according to their needs
- Some of the objectives of the round table have been achieved but there remains the need for further discussion at the final round table that will be held in 2008.
- The outcomes presented during the past two days indicate that decision-makers concerned with policy for urban freight do not make full use of the models that are available. There seems in that sense to be a mismatch between the supply and demand with regard to urban freight modelling. These issues will be the subject of further thought and discussion within the WP.

Daniele Patier concluded the workshop by suggesting that the following issues required focussing on in the project:

- Producing a glossary in several languages.
- Adopting a typology of models (including who uses the model, where it is used, the units used, the characteristics etc). Then consider the objectives of models to see if it is possible to propose a type of model that is suitable for each objective. This will involve contacting model owners for additional information about their existing models where there are gaps in our current understanding.

- Stakeholders and decision makers are not always making best use of the tools available. There is a need to better understand the barriers that prevent decision makers from using these tools and focussing on how best to overcome these barriers.
- Identifying the top 10 issues in urban freight transport that should be addressed by data collection and modelling, that should be focussed on by decision makers and policy makers.

Announcement : Antonio Musso proposed that the next WP3 round table will take place in Rome on the 17th and 18th of April 2008

An additional presentation was made during the discussion period at the end of the second day – see below:

Consolidation Centre Project in Linkoping (Dr.Jan Eriksson, VTI)

Dr Eriksson presented a pilot trial of an urban consolidation centre in Linkoping that had run for nine weeks. DHL, Schenker, DFDS and Posten had participated in the trial. Pproximately 5,000 conignments had been handled. The results indicated that the number of deliveries had been reduced by two-thirds, the time spent loading and unloading was reduced by four-fifths, vehicle kilometres run in the city were reduced by 50%. Average loadings on vehicles were increase from 51 kg/m² to 76 kg/m².

Some of the participating companies are keen to continue the scheme beyond the initial trial but others want time to consider its role in their future operations.

Jean-Louis Routhier tabled the following document to assist future discussion about the link between data collection and modelling and the extent to which models were meeting the needs of users.

From questionnaire results to use cases discussion, did we obtain a good knowledge of:

	Level	improvement
The context (who is involved, who is paying..) ?		
The circumstances of data collection?		
The circumstances of modelling?(where in process?)		
Which uses of DC/modelling for ?		
The way used for data collection?		
The methodology for modelling?		
The validation of the case study/model ?		

Does the DC/model answer the questions of:

	Level	improvement
Diagnosis?		
Ex-ante evaluation ?		
Ex-post evaluation?		
Scenarios?		
<i>Reasons of failure (if goal/target not reached)?</i>		
Diagnosis?		
Ex-ante evaluation ?		
Ex-post evaluation?		
Scenarios?		

Does the DC/model answer the questions of:

	Level	improvement
The good spatial scope of study area?		
The scale of space and time?		
The specification of the variables of the model?		
An acceptable precision of the outcomes?		
The quality of indicators?		

Does the DC/model bring knowledge for:

	Level	improvement
Logistic functioning (shippers, carriers)?		
Use of LGV?		
The link between economic activity and transport sector?		
The congestion? (road occupancy-traffic and on road delivery)		

What is blocking the efficiency ?

Language		
Lack of Knowledge, background and training?		
Political willingness?		
Involvement of Stakeholders		
Ability of the tool for short, middle, long term decision aid?		
Cost of data collection		
Cost of the development of the model ?		
Cost of implementing the model?		

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Annex 1: Summary table showing urban freight data collected in the countries surveyed – taken from Task 3.1

Michael Browne, University of Westminster

Annex 2: Application field, examples and opportunities

Davy Decock and Wanda Debouche, BRRC, Brussels

This small report gives a short overview of the results of the responses on the questionnaire “Application field, examples and opportunities” together with the findings stated in the third Roundtable BESTUFS II at Brussels, 4th and 5th of May 2007.

Methodology

A short questionnaire was sent to European experts dealing with urban freight transport to describe several urban freight cases (urban freight model/data collection). The questions didn't deal with the content of the urban freight case, but rather with the expectations, involved partners and overall judgement and application of the selected projects. The questions dealt with:

1. Objectives and questions addressed in the urban freight case
2. The involved actors: financer, developer, owner, responsible, other involved actors and their role
3. The integration of urban freight case in overall urban transport plan and model (if applicable), and the integration of the model (if applicable) in other regional, national or international freight models
4. Frequency use and validation of the selected project
5. Satisfaction about the applied data collection/model
6. Experienced problems (particular and general problems when there are)

The respondents came from 7 European countries (United Kingdom, France, The Netherlands, Belgium, Germany, Italy and Spain) with different selected cases (figures 1 & 2).



Figure 1: Respondents of the questionnaire

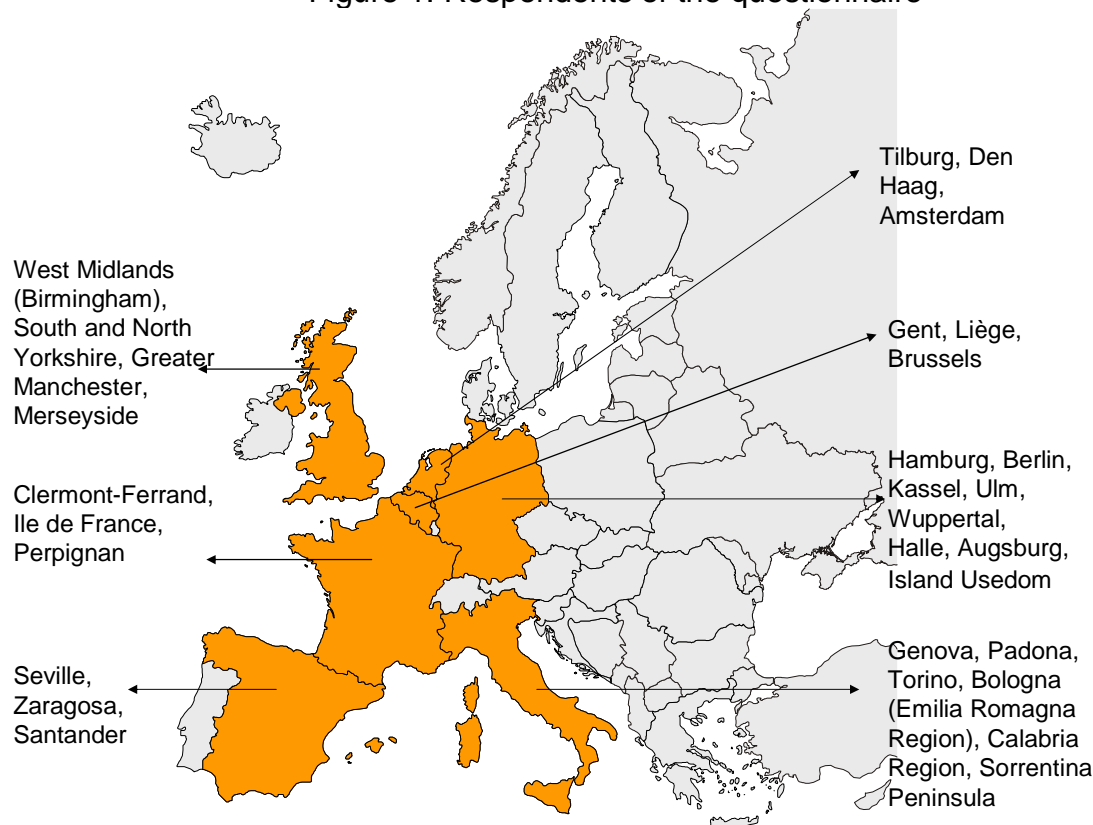


Figure 2: The selected urban freight cases

The analysis of the responses refers to the reported cases. So this overview doesn't consider all present experience with urban freight transport in European cities. The cases were described by performers of the selected cases (data collection or freight model) or by neutral experts (non-performers). So in most cases only one point of view has been obtained.

The cases Brussels (Belgium), Emilia Romagna Region (Italy) and Zaragosa (Spain) presented at the 3rd Roundtable in Brussels were presented by two involved actors (the performer and the client of the selected case). Besides these 3 cases also urban freight models in the Netherlands and the case Stuttgart (Germany) have been presented at the 3rd Roundtable at Brussels, but only from one viewpoint (performer).

Objectives, questions addressed in the reported cases.

The reasons why urban freight transport has been studied in the reported cases are:

- Quantative and qualitative diagnostic: Understanding of urban freight transport patterns (now and in the future) due to congestion, accessibility problems, ...
- Impact simulation: Policy measures and decisions (regulations, town planning, etc.) and new (logistic) concepts (City Box and Underground logistics, UDC) are simulated and evaluated.
- Other sustainable aspects, especially environmental aspects are studied in order to reduce noise and pollutant emissions.

Although objectives in the selected freight cases are quite common, it is also important to stress the fact that the questions of policy makers change. In the Emilia Romagna Region e.g. it was in the beginning the goal to judge about the feasibility of the implementation of Urban Distribution Centres in different cities in the Region. During the process the focus changed with help of the results of the developed urban freight model (CltyGoods). The policy makers are considering nowadays rather limitations for goods vehicles in the cities (due to the lack of possible recuperation of money investments in urban distribution centres). Also in the Dutch (recent) cases e.g., the attention goes now more to the environmental impacts of urban freight transport.

Involved actors in the urban freight projects

Different actors are involved in the urban freight exercise, like e.g.:

- Financer of data collection or model
- Owner of data collection or model
- Developer of data collection or model
- Responsible of the project
- Advisor/consultant

The different roles in the project can be performed by consultants (private consultancy bureaus, research institutes or universities), local, regional, national or international authorities, private companies, etc.

Following tables give an overview of the different actors for the different relevant roles in urban freight projects (with or without modelling exercises).

City (country)	Financer	Owner model	Developer	Responsible
Tilburg (NL)	local authority	consultant	consultant	local authority
Amsterdam (NL)	local authority	local authority	local authority	local authority
Brussels (B)	regional authority	consultant	consultant	regional authority
UK (EUNET, GBFM)	national authority	national authority	national authority	national authority
UK (GBFM)	national authority	national authority	national authority	national authority
Birmingham, UK (PRISM)	local + national authorities + 3rd party users	consultants + local + national authorities	consultant	local and national authorities
Seville (E)	started as research project	university	university	university
Santander (E)	university	university	university	university
Zaragosa (E)	university	university	university	university
Halle (D)	national authority	research institute	research institute	research institute
Berlin (D)	regional authority	consultant	consultant	consultant
Wuppertal (D)	local and regional authority, EC	local authority	consultant	public authorities
Emilia Romagna Region (I)	regional authority	university	university	regional authority
Sorrentina Peninsula (I)	regional authority	university	university	regional authority
Reggio Calabria (I)	university	university	university	university
Clermont-Ferrand (F)	local authority	university	university	local authority
Perpignan (F)	local authority	consultant	consultant	consultant
Ile de France (F)	national authority	national authority	national authority	national authority

Actor is financer, responsible, owner and developer of the model

Table 1: Different actors and their role in the urban freight modelling

The reality is even more complicated than table 1 shows because developers of models often use data from existing data collections (other owners, financers, etc.) or get specific funds for a part of the project (European contribution for the data collection in Emilia Romagna Region e.g.).

City (country)	Financer	owner data collection	Performer data collection	Responsible
Den Haag (NL)	GOVERA *	not specified	consultant	local authorities
Amsterdam (NL)	local authority	local authority	local authority	local authority
Gent (B)	local authorities	local authorities	Consultant	local authorities
Liège (B)	local authorities	local authorities	Consultant	local authorities
Hamburg (D)	local authorities	not specified	consultant (university)	local authorities
	national authority	national authority	consultant (university)	national authority
Augsburg (D)	national authority	national authority	research institute	local authority
Island Usedom (D)	national authority	national authority	consultant	local authorities
Genova (I)	local and national authorities, EU	local authority	university and consultant	local authorities
Padova (I)	local authorities	local authorities	consultant	local authorities
Torino (I)	local authorities	local authorities	consultant	local authorities

* (freight organisation with national, regional, local and professional partners)

Table 2: Different actors and their role in the urban freight data collections

The tables above show that a lot of different partner structures have been set up in the urban freight projects. Sometimes an organization is as well the financer, owner, developer and responsible for the project while in other examples many partners are involved. For the (simpler) data collections less (different) partners are in general involved.

Different structures lead by consequence also to different objectives, views, approaches, priorities and results so that it could be very difficult to compare different exercises. Projects at national level e.g. are more difficult to extract city level information. And in general it was not the first goal of such exercises to obtain freight information at city level. Data collections should be adapted to obtain better information from the model application at local level because at higher (regional, national or international) level data are rather available in an aggregated way.

Data collections at national level are often a legal obligation, while local initiatives are rather an attempt to respond to a problem. Available funds to realise projects differs according to the present partners and partner structure.

Besides the above mentioned partners also regional and national experts (e.g. PSD: Platform Stedelijke Distributie, The Netherlands), chambers of commerce (e.g. Brussels, Transport and industry federations, Public transport operators, port authorities are consulted (eventual membership in a following-up committee), but this is certainly not the case for all cases.

Next figure shows, for the different approaches for financing (as example) the modelling or data collection exercise.

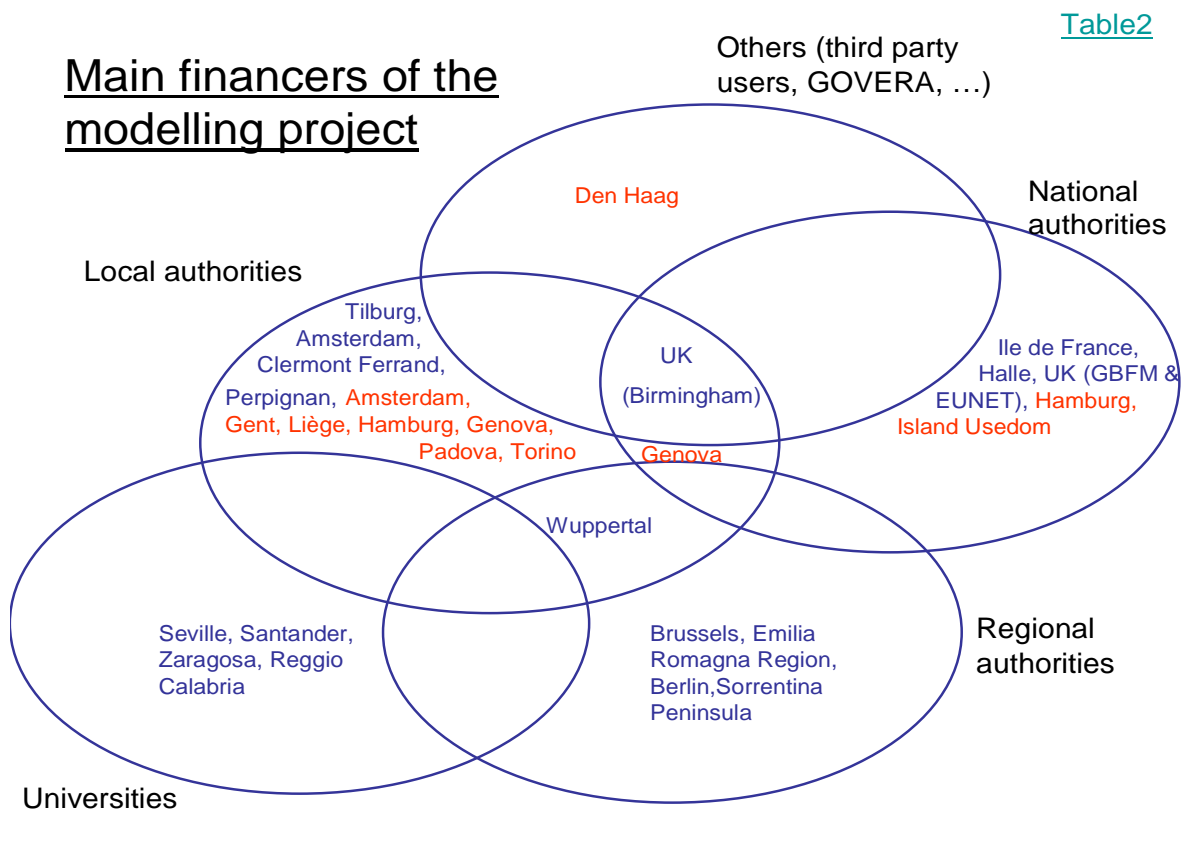


Figure 3: Main financiers for the different urban freight cases

Blue: modelling exercises
Red: pure data collections

It has also been stated at the 3rd Roundtable, that the partner structure could be problematic for the use of the model. To solve this, the model should e.g. be accessible (different from owned) by other parties than the developers.

The Integration of urban freight case in overall transport plans and models, frequency use and validation

Next table shows that (for modelling exercises):

- There is in general no (very poor) integration with an overall urban freight transport plan. Only for 2 of the reported cases, integration with the current transport plan was found.
- Most models include passenger transport (+ 50% of reported cases).
- There is a poor integration with regional and national transport models.
- Most cases are one shot operations (but many models are recently developed or are under construction). No update of the results has been foreseen besides the UK Great Britain Freight Model (national model with possibility to make local simulations).

City (country)	Model/ software used	Is the model part of an overall urban freight transport plan	Is the model integrated in an overall urban model also including passenger modeling	Is the model integrated within regional/national/international transport model	Regularly used?
Tilburg (NL)	omnitrans	no	yes	yes, regional transport model	one shot operation
Amsterdam (NL)	Unknown	no	yes	yes, regional transport model	one shot operation
Brussels (B)		yes	yes	no	one shot operation (freight part)
UK (EUNET, GBFM)	EUNET	no	yes (not the current eUNET 2.0 version)	no	demonstration study
UK (GBFM)	GBFM	no	yes	yes, national transport model	regular, new version soon
UK (PRISM)	PRISM	no	yes	yes, regional transport model	one shot operation
Seville (E)		no	yes, running on EMME/2 software	no	no estimation yet
Santander (E)	Unknown	no	no	no	one shot operation (under construction)
Zaragosa (E)	Unknown	no	no	no	one shot operation
Halle (D)	Unknown	no	yes	no	one shot operation
Berlin (D)	WIVER/VISUM	no	used together with individual car transport model in allocation phase	no	one shot operation
Wuppertal (D)	Unknown	no	no	no	one shot operation
Emilia Romagna Region (I)	CityGoods	no	no	no	one shot operation
Sorrentina Peninsula	Unknown	no	yes	no	one shot operation
Reggio Calabria (I)	Unknown	no	yes	no	one shot operation
Clermont-Ferrand (F)	FRETURB	yes	no	no	one shot operation
Perpignan (F)		no	no	no	one shot operation
Ile de France (F)		no	no	no	one shot operation

Most cases: no integration with overall urban freight transport model!

Most models also include passenger transport (+ 50% of cases)

Poor integration with regional and national transport models

Most cases: one shot operation (but also many recent models or models under construction)

Table 3: Integration of urban freight modelling in overall transport plan and other models and frequency of use

For the pure data collections similar conclusions can be made. As for the modelling exercises there is poor integration with transport plans (but yet more in comparison with the model exercises) and most exercises are one shot operations. No specific ex-post evaluation has been found (calculated versus measured effects).

City	Is the study part of an overall transport plan	Regularly used?
Den Haag (NL)	no (delivery profiles)	one shot operation
Amsterdam (NL)	no	regular
Gent (B)	no	one shot operation
Liège (B)	no	one shot operation
Hamburg (D)	no	first of its kind (KID survey) one shot operation
Augsburg (D)	no (part of environmental concept)	
Island Usedom (D)	yes (regional transport plan)	
Genova (I)	yes	one shot operation
Padova (I)	yes	
Torino (I)	yes	

Table 4: Integration of urban data collection in overall transport plan and frequency of use

Experts argue that results of models are two till five years valid. So it is important to update obtained information. Although some exercises are (very) recent, some exercises exist already a long time (e.g. freight model Brussels).

As results from task 3.1 have shown that the interest in urban freight transport is growing in many European countries are growing, there is still a long way to go. Urban freight transport is more complicated than regional, national or international transport. It is e.g. quite difficult to know a lot how trips within cities are organized. Besides the development of data collections and models also an update of obtained information is needed.

Funds are indeed an important aspect, because they are needed for collecting and updating the data. This could be problematic because for the development, sometimes particular budgets (European contributions) e.g. are foreseen while for updating the data such contributions can't be expected. Special occasions like the Olympics in London 2012 could be an opportunity to collect certain data. Investments are then easier to find. It is obvious that available funds for urban freight transport analyses vary widely in Europe (depending on interest, involved partners and partner structure, political interest, etc.). Simpler data collections are cheaper and definitely interesting at short term, but for a mid and long term vision on urban freight transport tools like urban freight models could be more interesting. It is evident that this also depends on the complexity of the experienced problems.

Also the expectations of the final customer (of urban freight exercise) should be taken into account. A lot of money could be invested in the development e.g. in a model and could be invested in an even better urban freight model, but it has poor added value when clients don't take into account the results from the obtained exercises or when the this model does not provide a better insight in urban freight transport for the customer itself. The urban freight model is a tool, not a final goal.

It is also obvious that the goals of city logistics models used by private companies for optimizing their routes are different with models developed by public authorities, etc. They are not (or less) willing to disseminate results due to commercial purposes.

It has also been stated at the roundtable in Brussels that more detail about the followed methodology for the collection of data is needed (random samples, interviews, questionnaires, etc.).

New technology could give new possibilities to gather information (cameras, RFID-technology), but the appliance of these instruments could also be problematic (respect of privacy, commercial interests, etc.).

Experienced problems with urban freight data collections and models

The lack of interest and use on urban freight data collections and models are related with methodological, intrinsic and political reasons. Found problems, cited in the responses on the questionnaire are told in the discussions were:

- Difficult to model urban freight (too complex)
- Adequate data is missing. In some cases statistics could be used to know more about freight transport within cities, but often these data collections are not executed with that purpose so that interesting/important data are missing in the data collection.
- Urban freight models deal mostly with the whole city area while most problems related with urban freight transport are found in well defined city areas
- Energy problems are not enough important at local level,
- Lack of solutions provided by researchers due to the direct conflict with commercial interests of shippers and hauliers,
- Problems are not big enough to justify large investments in model development and data collections,
- Policy makers and staff change (elections) so a short term vision is emphasized while models are useful for mid or long term visions
- Organisational problems and difficulties to implement measures (lack of willingness to take unpopular measures like fining offenders)
- Lack of competence about urban freight transport at local level (poor knowledge of urban freight transport)
- The principal objective is to make a diagnosis of urban transport to fulfil legal requirements (France), so there is not always a real motivation of the local authority behind the initiative.
- It is difficult to convince actors that urban deliveries have to be optimized.

Dissemination of results and experiences is important. Companies or institutes are not always aware of the on going projects that could be similar. Nevertheless it has also been stated by some experts that the diffusion of expertise is not that simple. Objectives, available funds and data, involved partners, etc. differ. Results could e.g. rather be transferable, but it's more difficult to transfer models e.g.