

BESTUFS Urban Freight Data Collection Roundtable 22-23 September 2005, LET, Lyon

Introduction

The Roundtable is part of Workpackage 3 of the BESTUFS project, which is concerned with the subject of urban freight data collection and urban freight modelling.

This first roundtable was an initial step in establishing the state of the art about urban freight data collection and discussing data availability in European countries. Subsequent Roundtables will be held annually.

Six papers were presented during the two-day Roundtable. Each presentation focused on urban freight data collection in a specific European Country. Presentations were made about: UK, Spain, France, Germany, the Netherlands, and Italy. Presentations including an explanation of available data sources in each country including consideration of the scale at which data is collected and its reliability and completeness. Topics including data collection method, sampling, difficulties encountered, use to which the data is put, and indicators derived from the data. A discussion took place after each presentation.

A debate about the issues raised in the presentations was held in a final session on day two of the Roundtable. Twenty-four delegates participated in the Roundtable. A list of delegates is provided at the end of these notes.

State of the art of data collection in United Kingdom

Michael Browne, University of Westminster

Chairman: Gernot Liedtke, University of Karlsruhe,

The main organisations responsible for collecting freight data on a regular basis in the UK were discussed, together with the data they collected. All of these data collection efforts take place at a national rather than an urban scale (the Department for Transport is the most important organisation in terms of the breadth and quantity of freight transport data collected). Urban data can be disaggregated from these datasets, but issues concerning sample sizes, and ease of disaggregation determines the extent of urban data available. In the case of London, it has been possible to obtain a substantial amount of data about total freight activity by mode and freight vehicle traffic from these national sources. Most of the freight data collected by urban authorities in the UK is of goods vehicle counts rather than freight activity surveys.

There have also been several one-off studies that have collected urban freight data. These include surveys of deliveries to shops (for example in Bristol, Norwich, Winchester, Ealing and Bexleyheath. Driver surveys have also been conducted in some of these studies, together with parking and loading surveys. Use of video capture has also been used both for quantifying freight vehicle activity, and also for analysing traffic interactions between freight and other road users.

Freight data is collected in the UK for a range of reasons including: government monitoring and performance measurement, commercial monitoring, locally-based projects, to meet requirements of EC Directives, to produce national estimates, for modelling and forecasting, and for legal requirements (licensing and safety controls).

Key gaps in urban freight data in the UK include:

- Vehicle routing/journey information
- Journey time/reliability of journeys (i.e. freight trip performance)
- Environmental impacts at supply chain/sectoral level

- Information/data on loading/unloading activity
- Lack of linkage about freight modal interactions - esp. road movements to other modes
- Available freight data does not provide detail about supply chain stages between which freight is transported - it provides snapshot of vehicles at unspecified point in chain
- Existing survey work tends to lack detail about land uses between which goods movements take place

In summarising the difficulties in urban freight data collection in the UK:

- Many types of urban freight data often not currently collected
- Some data sources can only provide data at a national or regional level. While some data is only available at a city-wide level
- When urban freight data does exist, small sample sizes can affect its reliability
- Urban freight surveys that have taken place tend to be one-offs
- It can be difficult to make links and comparisons between data from different sources/surveys
- Data held by companies may be very useful to policymakers but is often commercially confidential

State of the art of data collection in Italy

*Paolo Guglielminetti, Price Waterhouse & Coopers
Chairman: Wanda Debauche, BRRC, Belgium*

In general, urban freight data collected in Italy is quite poor at present. There is no national body that is responsible for urban freight data collection. The national road freight statistics only contain data about goods vehicles over 3.5 tonnes gross weight. The Italian Ministry of Infrastructure and Transport launched a tender for a pilot statistics study on urban freight data last year but the current status of this tender is not known.

One-off freight data collection has taken place in specific Italian cities either due to urban traffic planning needs or because of the implementation of an urban logistics project. Examples of these one-off data collection efforts include Rome City Centre (1999), Milan (2001), Padova, Genova and Siena (studies for transit point implementation), and Bologna and Ferrara (studies for the definition of urban freight policies or urban traffic plans). There has been little co-ordination between these different urban freight studies, resulting in different approaches being used.

The Milan freight data collection consisted of: traffic counts, cordon interviews with commercial vehicle drivers to establish origins and destinations, interviews and stated preference surveys with owners of commercial premises.

Some large Italian freight vehicle operators such as express and parcel carriers have significant quantities of data about their operations, which they use for planning purposes. This data is potentially very useful in understanding urban freight activity in specific sectors of the freight market. However, this data may not be available due to commercial confidentiality. The operating companies need to be certain of the uses to which it will be put in order to release it. PWC carried out a project on behalf of a major Italian express company between 2003-2005 using data concerning shipments in urban areas. It was possible to redesign the routes operated by the company and thereby reduce vehicle trips and operating costs.

Freight vehicle licensing data is available in Italy. Operating cost information is available in the trade press. Road infrastructure data is available for municipal authorities often in GIS format. However, loading/unloading infrastructure on the roads is not always kept up to date in this infrastructure information.

State of the art of data collection in Spain

Jesús Munuzuri Sanz, ETSII Sevilla

Chairman: Julian Allen, University of Westminster

Urban freight studies have been carried out in several Spanish cities since the early 1990s (for example in Barcelona (1991 and 1997), Granada (1998), Sevilla (2002), Vigo (2002), Valladolid (2003), Malaga (2003) and Zaragoza (2004)). In addition a general urban freight study in Spain was carried out in 2002. This latter survey produced data about the trips generated by different types of businesses, and also calculated the number of truck movements in each city, but the methodology used is not certain.

Survey work carried out in Barcelona has been relatively extensive, including: a commercial census, load zone census, and receiver and carrier surveys. This data has been used in freight projects concerning time windows, multi-use lanes, and parking/loading enforcement.

Freight data collection in the central area in Granada has identified the high rate of illegal parking and the use of loading zones for non-loading activity. The work in Vigo was concerned with double parking in the city. The work in Malaga was concerned with the establishment of an Urban Distribution Centre in the historic part of the city. The UDC started operating in Spring 2005 but it is thought that the UDC is no longer operational due to lack of use (caused primarily by the lack of parking/loading enforcement in the city)

Work in Seville consisted of collecting primary data (including freight vehicle counts and retailer surveys) and also making use of secondary, freely available data (such as population densities, business locations, and licensed vehicle data).

State of the art of data collection in the Netherlands

Jaap Vleugel, TU Delft

Chairman: Julian Allen, University of Westminster

The Netherlands Bureau of Statistics collects national and regional data about freight transport in the Netherlands. It makes regular publications available that contain this data. NEA also collect and publish statistical and business data about the freight transport industry. However this does not contain local freight transport data.

A recent development is the development of a database (Connekt's Delivery profile) has been used to collate and make available local authority members' freight data. This data is a one-time collection but the database contains data for several cities.

Vehicle licensing data is available for the Netherlands. NEA and TLN publish financial data and indicators concerning freight transport companies. Land-use and transport network data also exists but is not freely available.

The Platform Stedelijke Distributie (PSD or the Forum for Physical Distribution in Urban Areas) in the Netherlands has been transformed into four regional taskforces aiming to establish regional solutions for city logistics. PSD provided information and guidance about urban freight issues, and was developed in co-operation with both the public and private sector. The closure of PSD has affected the availability of data concerning freight transport regulations in Dutch cities. In addition, very few academics are active in the field of urban freight transport in the Netherlands at present.

Most of the freight data that exists and is publicly available in the Netherlands is not available at the urban/local scale.

State of the art of data collection in France

Jean Louis Routhier, LET, University of Lyon 2

Chairman: Antonio Musso, University of Roma

An overview of transport data collection in France since the mid 1970s was provided. This showed that there had been no specific urban freight data collection efforts prior to 1990. In 1993 the French Transport Ministry launched a research programme to improve knowledge about urban goods movement. This involved large scale data collection and the building of diagnostic and decision-making tools at a local and national level to improve urban goods movement, to allow better decision-making about urban sustainability, and to assist local authorities and actors to carry out innovative experiments.

Three key aims of urban freight data collection in France were defined:

1. Knowledge of the flows (for traffic management of the urban area – short-term local decision-making)
2. Decision-making for urban planning (such as traffic calming, security, economic growth (middle-term urban planning policy))
3. Environmental and sustainability concerns (in terms of how to change behaviour towards a more sustainable transport system – long-term for policy measures and laws)

There are four main types of source of urban freight data in France:

1. Registers and censuses (including economy and land use data and vehicle data collected by the national government). These can be used for weighting of statistics and calibration of models.
2. Periodical vehicle surveys (including traffic counts by the national government and local authorities). These can be used for weighting of statistics and interurban traffic modelling
3. Occasional surveys (large). These include large-scale specific urban freight transport surveys carried out by LET for the Transport Ministry and shipper surveys carried out by INRETS for the Transport Ministry. These can be used for urban goods modelling, and qualitative and quantitative freight transport analysis.
4. One-off surveys (small). Examples of these include consumer purchasing and e-commerce surveys, and parking surveys parking. They can be used for local qualitative analysis and decision-making.

In terms of occasional large-scale surveys, a joint survey and modelling approach was carried out by LET on behalf of the Transport Ministry between 1995 and 1997 in three French towns. This was intended to provide a good knowledge of urban goods movement, to carry out analysis, to develop a model, and to provide software for decision-making to help local authorities. Survey work was carried out in 3 sectors: (i) pick ups and deliveries using urban goods movement surveys (both establishments and goods vehicle drivers were surveyed), (ii) consumer purchasing trips using household surveys, and (iii) urban management flows (including waste collection) trips through specific studies.

Analysis and modelling work from these large-scale surveys has provided quantification of vehicle kilometres generated by each of three sectors as well as the proportion of total urban traffic accounted for by freight transport. It has also been possible to calculate the energy consumption and CO₂ emissions from freight transport activities.

The main gaps in urban freight data in France include:

- Non-road freight transport data
- Quantitative data about home delivery
- Operating cost data
- Urban management flow data (resulting from road works, network management etc.)
- Traffic generated by warehouse activity
- Consumer purchasing behaviour data

- Commercial data that is confidential

No updating of the large-scale data collection in the three French cities has taken place since it was carried out 10 years ago.

State of the art of data collection in Germany

Horst-Hermann Binnenbruck, PUTV

Chairman: Davy Decock, BRRC

Surveys of (i) official statistics concerning freight transport and (ii) data concerning urban freight transport in Germany were presented. This demonstrated that far more freight data is available at a national level from official statistics than is available at an urban level in Germany. In particular, virtually no urban freight data is available for air and waterway modes.

There were many projects that collected urban freight data in Germany in the last decade. Approximately 100 projects took place; many were associated with city logistics projects that were established in German towns and cities. Most of these took place using postal questionnaires. Topics about which data was collected included: numbers and type of trips, volumes and types of goods transported, and specific sectors such as service, express/courier and waste. However, many of these surveys and data collection efforts were not very successful due to poor response rates. This was caused by surveyors not making sufficiently good contact with respondents.

The KID survey (which was completed in 2002) was a survey of all motorised traffic in Germany in typical housing areas. It included details of number and kind of vehicles and trip purposes, time of trips, trip speeds, goods transported, and origins and destinations. It was a postal questionnaire with approximately 100,000 questionnaires sent out (to cover all vehicle types). The response rate was 50%. The results of this survey have provided breakdowns of commercial vehicle trip-purposes in urban areas in Germany for a range of weights of goods/commercial vehicles. A range of difficulties encountered in carrying out this survey were discussed. These included problems with address details and recent changes in vehicle ownership, sampling problems including sample sizes being too small for some of the segments sampled and difficulties in including rental cars, and including the results of non-response analysis into the primary data collection.

Work has shown that ad hoc data collections are producing a far less satisfactory result than official data collection efforts in Germany (in terms of factors such as exhaustiveness, comprehensibility, comparability, and availability).

Round table debate on papers

Chairman: Michael Browne, University of Westminster

1. A debate about the issues raised in the presentations was held in a final session on day two of the Roundtable. This focused on the topics addressed in each presentation (the data collection carried out in each country, including consideration of the scale at which data is collected and its reliability and completeness; together with topics including data collection method, sampling, difficulties encountered, use to which the data is put, and indicators derived from the data). In addition, the following points were debated:
 - Whether it is possible to identify the link between the data collection approaches of each country and the institutional, geographical, cultural and economic circumstances
 - Given any differences observed, how best to manage data collection and to assess its current state
 - How best to work together to improve data collection and enhance its value for modelling

2. It was felt that the output of this BESTUFS workpackage should be practical rather than academic, as urban authorities want advice on what data to collect and how best to achieve this. It is therefore important to pool information and knowledge from different countries, and then summarise the findings and recommendations.
3. There is a conflict between, on the one hand, the need for more urban freight data (as relatively little detailed information about freight transport operations currently exists in most countries) and, on the other hand, the fact that funding and resources for data collection are under pressure. It is therefore important to consider whether more can be achieved with the existing urban freight data, before specifying the collection of additional freight data. It should also be investigated whether new technologies, such as vehicle satellite navigation systems can play a role in providing this type of data. It is important to consider the extent to which it may be possible to build urban freight models with relatively small-scale data collection surveys being used to provide input to the models. Clearly further discussion would be necessary to determine the contents of such data collection efforts.
4. National governments tend to be keen on the use of indicators. Producing appropriate urban freight transport indicators could prove to be useful at an aggregated level, and could also help with identifying local, specific issues. In addition, this could provide an argument for data collection and survey exercises.
5. The Roundtable has helped to show that there are two distinct uses for freight data: data can help to provide an understanding of freight transport activities in an urban area (or part of an urban area), and can also be used for modelling purposes. Both of these uses are important. Many urban authorities are looking for relatively short-term advice and solutions about urban freight transport that clearly requires data; they are not necessarily looking for urban freight models that can take a relatively long time to develop and can require large quantities of data.
6. In terms of urban freight modelling, it is important to decide on the modelling approach and then from this define the data collection required. Despite the fact that several urban freight models have been developed, at present there is no generally accepted procedure for urban freight modelling. It is also important to recognise that significant costs that are often associated with obtaining the data required for urban freight modelling, especially, when the models are not yet mature.
7. It is possible to consider applying the model developed in France by LET in urban areas in other countries. It has already been used in Bologna. However, in order to be able to apply it in other urban areas would require the availability of the necessary input data for that country.
8. The importance of different approaches in urban freight transport data collection was emphasised. Supply chain approaches are not necessarily compatible with logistics approaches, which in turn are not necessarily compatible with trip chain approaches. It is likely that a range of different types of survey are required in order to fully understand and model urban freight transport.
9. Differences in the level of government that is responsible for organising and resourcing urban freight data collection were apparent in the various country case studies presented. In some cases, urban data collection efforts are led and funded by national government (e.g. France), while in other countries such efforts are organised by regional or urban government (e.g. Belgium).
10. To summarise, the experience and knowledge about urban freight data collection varies enormously between the countries represented at the BESTUFS Roundtable. In general there are many differences and gaps in existing urban freight data collection and in the use of urban freight indicators in the European countries discussed. In terms of urban freight modelling, a common strategy has not yet been devised, but some ideas and initial models do exist. By sharing ideas and information and producing overviews of existing freight data collection in different countries, the

BESTUFS project will prove very valuable in comparing and contrasting different approaches in data collection. The BESTUFS work will also document urban freight transport terminology and its meaning in the countries studied. This will help to compare which terms are commonly used in each country and whether terms have the same or different meaning in the various countries. Many indicators can be measured to describe urban freight transport. The work being carried out in BESTUFS will help by providing information about the indicators used in each country studied and comparing them.

List of delegates

name	First name	Institute	Town	e-mail	Country
ALLEN	Julian	University of Westminster	Westminster	allenj@westminster.ac.uk	United Kingdom
ALLIGIER	Louis	LET	Lyon	louis.alligier@let.ish-lyon.cnrs.fr	France
AMBROSINI	Christian	LET	Lyon	christian.ambrosini@let.ish-lyon.cnrs.fr	France
BINNENBRUCK	Horst-Hermann	PUTV	Gappenach	putv01@t-online.de	Germany
BONNAFOUS	Alain	LET	Lyon	alain.bonnafous@let.ish-lyon.cnrs.fr	France
BROWNE	Michael	University of Westminster	Westminster	m.browne@westminster.ac.uk	United Kingdom
CAMPOS	Magin	CENIT, UPC	Barcelona	magin.campos@upc.es	Spain
CROZET	Yves	LET	Lyon	yves.crozet@let.ih-lyon.cnrs.fr	France
DEBAUCHE	Wanda	BRRRC	Brussels	w.debauche@BRRRC.be	Belgium
DECOCK	Davy	BRRRC	Brussels	d.decock@BRRRC.be	Belgium
EICHHORN	Claudia	PTV	Karlsruhe	Claudia.Eichhorn@ptv.de	Germany
GUGLIELMINETTI	Paolo	Price Waterhouse & Coopers	Roma	paolo.guglielminetti@it.pwc.com	Italy
LIEDTKE	Gernot	University of Karlsruhe	Karlsruhe	liedtke@iww.uni-karlsruhe.de	Germany
MELO	Sandra	University of Porto	Porto	smmelo@fe.up.pt	Portugal
MUÑUZURI SANZ	Jesús	ETSII	Sevilla	munuzuri@us.es	Spain
MUSSO	Antonio	University of Roma	Roma	antonio.musso@uniroma1.it	Italy
OVERSON	Chris	Department for Transport	London	Chris.Overson@dft.gsi.gov.uk	United Kingdom
PATIER	Danièle	LET	Lyon	daniele.patier@let.ish-lyon.cnrs.fr	France
RAVET	Denise	LET	Lyon	denise_ravet@yahoo.fr	France
ROUTHIER	Jean-Louis	LET	Lyon	jlrouthier@let.ish-lyon.cnrs.fr	France
THEVENON	Jean	CERTU	Lyon	jean.thevenon@equipement.gouv.fr	France
TOILIER	Florence	LET	Lyon	florence.toilier@let.ish-lyon.cnrs.fr	France
VLEUGEL	Jaap	TU Delft	Delft	J.Vleugel@otb.tudelft.nl	The Netherlands
WILD	Dieter	PTV	Karlsruhe	dieter.wild@ptv.de	Germany