



Summary of projects and results from topic
**Inner Urban Freight Transport and City
Logistics**

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INTRODUCTION AND METHODOLOGY

This report has been compiled by the Institute for Transportation, Traffic, Highway and Railway Engineering of the Swiss Federal Institute of Technology (ETH) to summarise the activities undertaken on the key topic urban freight transport as part of Work Package 2 of the PORTAL project.

1.1 Methodology

A first step within work package 2 of the PORTAL project was the allocation of EU projects corresponding to the key topic urban freight transport. Therefore the CORDIS homepage was a good starting point. Another source therefore was through contacts with the Institute for Transportation and Railway Engineering in the field of urban freight transport.

After consultation with the work package leader, a final list with 9 EU projects and 2 COST actions was generated.

The task of the second step was now to get information about each listed project. Therefore, Internet was the main base for this data-recall. First of all the aim was to reach the main homepages of these projects. For getting the addresses of the projects, internet search engines (google, altavista) have been used. In this way, most projects web pages have been found.

For most projects it was possible to get information about all deliverables from the web pages. For others, especially for the COST actions we had to get into contact with the project co-ordinators. Finally we obtained all the final reports of completed projects.

Problems encountered

Problems occurred mainly with projects for which we could not get information directly via the Internet. Sometimes the information from the internet and the final reports was not sufficient. Therefore we made contact with the co-ordinators of the projects. In most cases we could get the desired information then, but it caused further delay.

Some projects which were already finished were quite difficult to screen, either because the homepage was already closed or because the responsible co-ordinator was no longer reachable via the address given by CORDIS.

2. URBAN FREIGHT TRANSPORT

2.1 Description of the key-topic 'Urban Freight Transport'

Urban Freight Transport is a one part of the freight transport chain. Therefore urban freight transport can not be seen separately from all other elements of freight transport.

Therefore it is necessary when speaking about this speciality of the transport chain, to keep in mind the requirements and constraints of freight transport as a whole.

Urban freight transport itself is characterised as follows:

- Narrow streets in European city centres allow only special vehicles with limited cargo capacity
- Urban freight transport, which is mostly located at the end of a transport chain, has small quantities per load

Out of these constraints, the following problems result: Because of small loads, many trips are necessary

- This results in a further charge of the road network in cities
- While long distance freight transport is mainly processed in big loads, transshipment is necessary before delivering within a city centre.

The main research on the topic of urban freight transport refers to those problems. Therefore, the project can be structured as follows:

- Projects which investigate the problem of efficient delivery methods to reduce the number of trips within a city
- Projects which try to distribute traffic within a city equally on the road network
- Projects for the development of efficient transshipment areas (freight villages, city distribution centres)
- Projects which try to encourage containers which could be used both for long distance freight transport and for city delivery

Projects that were listed for the key topic Urban Freight Transport structured as described above:

1. Efficient delivery methods:

- LEAN:** aims at developing and demonstrating new concepts for goods distribution within cities
- BESTUFS:** identifies and describes the success criteria for the movement of goods
- IDIOMA:** shows the potential of optimisation of goods distribution in 5 urban areas within Europe
- COST 321:** studies innovative measures to improve environmental impacts of freight transport in urban areas.
- SOFTICE:** identifies cost of freight transport within Europe with regard to harmonisation in Europe and internalisation of external cost.

2. Optimal exploitation of the road network

- DIRECT:** analyse the aspects of transport-data sharing structures for better databases for traffic management within cities

3. Efficient transshipment areas

- FV-2000:** analysis and evaluation of several freight villages in Europe
- FREYA:** aims at facilitating the access of SME's to intermodal transport
- IDIOMA:** city delivery centres in 5 urban areas in Europe
- INFREDAT:** investigates the whole transport chain of intermodal transport, especially the requirements of data flows
- REFORM:** analyses and evaluates the effects of freight platforms regarding the urban traffic

4. New containers for a continuous freight transport chain

- COST 339:** produces guidelines for standardisation organisations and container manufacture for the implementation of small containers that are usable during a whole transport chain within Europe

Some projects are listed several times, because they cover more than one aspect of the difficulties of urban freight transport.

2.2 Results of LEAN

The project aims at developing and demonstrating new concepts to distribute and collect goods in urban areas. The scope include five different levels:

1. Logistics concepts to improve the productivity in transport organisation.
2. City-Terminal operations to improve forwarding processes in view of the whole logistics chain, even with additional goods transfer points and handling costs.
3. Telematics applications, to improve control of goods distribution process.
4. Tools for administrations to influence transport without radical disruption of economic activities.
5. Recommendations for alternative transport modes to support significant modal shift to rail.

The LEAN project covers a wider range of the freight transport chain. Its main emphasis is on multimodal transport.

At the demonstration sites the city logistic concepts generated have been tested. These **study sites** are the cities Cordoba (Madrid) and Sevilla in Spain, Halle and Regensburg in Germany, Linz, Vienna and Wiener Neustadt in Austria and Norwich in Great Britain.

The **Experts** who are involved in this project are consulting engineers in the field of logistics. For information in relation to the key topic around City logistic concepts, Horst Heinlein was the work package leader. For the application of these results towards specific European cities Guillermo Montero was the responsible expert.

The University of Sheffield is the only project partner being a leading educational institute. The project mainly involves experts from engineering offices and consultancies.

Beyond the reports, which have been written during the project a, special folder, was made which contains inserts of each demonstration site. Unfortunately there is no report published where all the concepts for city logistics are listed and explained. The Final Report includes these subjects. With regard to the conclusions of LEAN, where an information campaign in Europe is required (see next site), it would be excellent to have guidelines in a separate form for city logistics in Europe.

LEAN has a website, which is reachable under <http://www.lean.at>

The main **results** of LEAN can be summarised as follows:

1. Local authorities are not involved in the problems of urban freight transport. They do not do not recognise it as a problem of urban regions. Therefore freight transport has no part in regional traffic plans.
2. The requirements of the involved groups (local authorities, freight forwarders, companies) towards urban freight transport, if they do exist, are quite diverse. Sometimes they are even opposed.

3. The technical knowledge about freight transport does almost not exist. This is a further reason, why there is no emphasis on this subject.
4. It seems that the results and findings from research programmes on freight transport do not reach the involved partners in this part of the transport chain.

Out of these results, the project partners of LEAN came to the **conclusion**, that an Europe-wide information campaign with a focus on urban freight transport for providing information as well as guidelines and operational aids is absolutely necessary.

2.3 Results of BESTUFS

BESTUFS is a project out of the fifth framework programme. Its aim is to establish and maintain an open European network between urban freight transport experts, user groups/associations, ongoing projects, interested cities, the relevant European Commission Directorates and representatives of national, regional and local transport administrations in order to identify, describe and disseminate best practices, success criteria and bottlenecks with respect to the movement of goods in urban areas. The objects of BESTUFS are:

- to create a permanent and dynamic concertation activity during the period of the 5th Framework Programme,
- to identify and structure the various themes which build the urban freight solutions (UFS) domain and which have relations and influence to it; to present projects and best practices in view of this schema,
- to support the clustering of projects on European level and to integrate projects and clusters into the network,
- to collect, compare and summarise available experiences and results of projects and initiatives in the UFS domain mainly of Europe but also - if easily obtainable - of the USA and other countries,
- to identify and describe best practices and success criteria within the UFS domain,
- to disseminate experiences, project relations, best practices and success criteria to a broad public of interested actors and thereby aiming at the transferability of solutions,
- to establish links and co-operations with relevant other thematic networks (treating different themes) on European level in order to share and integrate the results (regarding overlapping themes) and to avoid duplication of work,
- to establish links and co-operations with national thematic networks (treating the UFS domain) in order to share and integrate results and
- to support the co-operation between actors in the UFS domain by providing information and by providing contacts.

BESTUFS started in May 2000.

BESTUFS has a **website** under <http://www.bestufs.net>. This site is a large database for actual information about conferences, projects and experts in the field of urban freight

transport. It is possible to get via this web page the dates of meetings going on in Europe and the links of web pages of other projects.

As the objective of BESTUFS is to provide a European network of experts in the field of urban transport, many partners are member of the its brains trust.

Within the project organisation, Mr. Dieter Wild from PTV in Germany is the co-ordinator of BESTUFS. Besides him there are only 3 more partners involved in BESTUFS , Mr. Mark Robinson from the Advanced Railway Research Centre of the United Kingdom, Mr. Johan Visser from NEA in the Netherlands and Marin Ruesch from Rapp in Switzerland.

Within the project partners in BESTUFS, there are no leading study sites.

As BESTUFS is a project of the fifth framework programme, there are no results and materials available from this project yet.

2.4 Results of COST 321

The objective of the COST 321 action was to study the design and operation of innovative measures to improve the environmental performance of freight transport in urban areas. Therefore it was necessary to analyse, how the air pollution, noise and energy consumption are reduced by optimising the use of trucks in city traffic through the application of modern logistical devices and appropriate administrative measures.

The programme was structured in two different working groups:

1. review of the logistic or administrative measures already tested or planned by transport operators
2. examination of the effectiveness of measures by appropriate methods.

These analyses have been made for situations in several countries in Europe. For each test region, a separate report was written to explain the situations.

Except for a brief description in the CORDIS **web page** of COST 321, there is no further web page available.

The final **report** of COST 321 has been published as a book. It includes also the national reports of the participating countries. With more than 300 pages, this book gives a wide overview on this research programme.

COST 321 assembled a huge range of **experts** on urban freight transport. The project had quite an intense emphasis on the national investigations. Hence, each country distributed the diverse tasks to its one expert. Horst Koriath from Germany made the co-ordination of the project. Mr. Willi Dietrich from the city of Zurich acted as vice-chairman within the project.

The Project partner of the Greek group was the University of Piraeus. It's faculty for maritime studies is one of the three leading education institutes, which were involved in COST 321. together with the University of Delft and Cranfield University. Delft University participated with it's research School TRAIL, which has no direct relation to education. Also Cranfield University did not take part with one of it's regular faculty. It involved the Centre for Logistics, which offers courses for postgraduate students.

Results of the project

According to the outcomes of COST 321, the optimisation of urban freight transport has to take in account the following parameters:

- transshipment technology
- land use management
- conditional access for delivery service providers
- transport fleet composition
- infrastructure capacity
- locally convened development forms and programs
- political drive and availability of money

Therefore an optimisation is only possible if a balanced mix of measures affecting the listed parameters is proposed from the beginning.

This is not only a task for the public authority, particularly when regarding their weak financial situation. Also all others actors in the transport chain have to be involved and kept informed from the beginning.

Because of this complex interaction of involved partners and diverse parameters, optimisation can only be achieved step by step. Each step has an modest effect, but contributes to an effective improvement in the aggregated freight flows.

Urban freight transport ca not be seen separately from the other parts of the transportation chain, especially when focusing on environmental aspects. Many locally organised forms of goods delivery in cities can not reach the market, because the transport chain doesn't allow further transshipments at city distribution centres economically. The requirements of intermodal transport in hole Europe has to be studied.

In the cities, internalisation of external cost should lead to more equal competition. For increasing competition of bundled goods delivery, new solutions for goods handling and operation at freight villages has to be developed.

To be able to profit from all efforts that are made in Europe, a database for information exchange is absolutely necessary. All new projects should be based on the experiences of earlier test sites.

2.5 Results of SOFTICE

The objectives of the SOFTICE project was to demonstrate the interaction between production cost, transport demand for freight, and to demonstrate the benefits of harmonised freight transport

To achieve this main objective, the following five main steps had to be fulfilled:

- an identification of the main parameters affecting freight cost structure in EU member States plus Switzerland and some CEEC countries and of the factors affecting freight transport demand.
- a collection and comparison of some relevant examples of factors of freight costs by country, checked by a Shippers Panel Survey.
- a map covering various types of industries, illustrating the weight of transport costs as a proportion of their overall production and distribution costs, as well as, the conditions of their preference of each transport mode (or combination of modes)
- development and validation of a "four stages" methodology for the analysis of the present distortions in Europe and adaptable to different possible policy scenarios.
- analysis of the consequences of different policies for taxation and internalisation of costs on spatial production organisation.

Within the SOFTICE project, five main project partners are involved. The Work package leader for the methodology was Lars Sjöstedt from CTT in Sweden. He was also responsible for the door to door approach of the cost evaluation. Peter Mackie from Leeds University, UK was responsible for part of transport costs in the total product cost. Robert Rivier from EPFL Switzerland specified the external costs and made suggestions for their internalisation.

Experts working with Christian Reynaud from INRETS in Paris are all members of a leading educational institute. The Universities involved are Chalmers University in Göteborg, plus the Universities of Rome, Karlsruhe and Sheffield.

While SOFTICE is a theoretical research project (see the numbers of involved Universities), there are no **study sites** included in this project.

There are many websites available for the SOFTICE project. The main website under <http://alfa.ist.utl.pt/~cesur/softice/> has a quiet short description of the project, whereas more detailed information can be found on the web pages of the project partners (<http://dgcwww.epfl.ch/WWTSO/softice.htm>, <http://www.inrets.fr/ur/dest/softice.htm>).

The results of the project are published in a separate **booklet**. As SOFTICE covers the key topic Urban Freight transport only in a secondary manner, only a small part of this booklet is of interest within PORTAL.

Results of the project

As urban freight transport is only for minor interest in SOFTICE, only the results that influence urban freight transport are listed here.

According to the outcomes of SOFTICE, transport costs for products with a high level of aggregation vary between 3% and 6%. Not included in these figures are the own-account transport operations costs. They are normally not visible in transport statistics. They represent between 14% and 22% of the total transport costs.

The research on external costs gave an interesting view of the situation in urban areas. The results of SOFTICE show, that an internalisation of external cost will not lead to an increase of intermodal transport. Therefore it is not obvious whether this measure will lead to a discharge of congested roads. Gains are expected, from the more efficient road haulage, which will be necessary for freight forwarders when internalisation of external costs will be implemented. But probably these gains will be counteracted by the increase of international trade.

The only measure for reducing the number of trips in urban areas is to limit vehicles. Concerned by these limitations is the number of trips in dependency of the vehicle weight, of certain road sections or certain hours of a day

2.6 Results of DIRECT

The aim of DIRECT is to provide a better data consistency for the integration of long/medium term planning and short-term traffic management procedures. Therefore the cost for data collection, improved quality and coverage of the data should contribute to a better background for the development of new modelling, prediction and analysis tools. The objective of the project is to analyse the various aspects of the development, implementation and operation of transport-data sharing structures (TDSS) facilitating this integration. DIRECT is a project, which aims to optimise traffic on roads. So, it is not only limited on freight transport.

The official **homepage** of DIRECT can be found under <http://www.infoservice.fr/simulog/direct/direct.html>, but unfortunately this homepage does not include much more information than the CORDIS web page does.

In combination with two congresses in the Netherlands and Toronto, **papers** referring to the contents of DIRECT have been published. One about Data Integration Requirements of European Cities for Transport and another about Organisation of Transport Data Sharing in Urban Areas. The second paper especially contains interesting information with regard to the key topic urban freight transport.

Besides these two papers, there are no more published reports out of DIRECT. Worth mentioning are the eight deliverables within Direct. They give a deeper insight into the special subjects of the project. Deliverables are available for the following themes:

- D 1 : State of the Art Review
- D 2 : User's Requirements Analysis
- D 3 : TDSS Specifications
- D 4 : TDSS Technological Aspects

- D 5 : Institutional, Organisational, Legal and Financial Aspects
- D 6 : Barcelona Prototype Development and Implementation
- D 7 : Lille Prototype Development and Implementation
- D 8 : Integration of Results and Derivation of Guidelines

The co-ordination of DIRECT was by Mr. Claude Rochez from STRATEC in Belgium. Experts, who contributed in the field of urban freight transport, are Patrick Gendre from CERTU in France who is specialised in environmental matters within urban areas and Mr. Erik Verron from the transportation research group of TNO INRO in the Netherlands.

The University of Southampton with its transport research group is the only leading educational site involved in DIRECT.

Case studies have been undertaken in Lille (France) and Barcelona (Spain). The emphasis of the investigation in Lille was on the collection of several traffic datas. In Barcelona a concrete assessment of the advantages and possibilities of a transport-data sharing structures was tested. As both test sites are oriented on traffic in its whole, the interest of PORTAL is only in the field of data collection for optimised urban freight delivery. Therefore the Lille test site gave interesting insights.

Results of the project

The main results of the project concern the development of transport-data sharing structures. Without doubt, traffic management is an important part of optimised urban freight transport. The results of DIRECT concerning an optimal data structure are not really relevant to the aims of PORTAL. Therefore they will not be presented here.

2.7 Results of FV-2000

The main objectives of FV-2000 was to analyse and evaluate freight village structure and lay-out in order to determine whether the proximity of different transport and logistics activities is a key factor for the use of intermodal transport and to establish the merits and limits of the development of freight villages for the enhancement of intermodal transport competitiveness, based on benchmarking and analysis of the best practices and case studies. An examination of freight village operations and internal organisation have measured the impact of such structures on the environment and guidelines and management tools have been developed to improve working conditions and security for freight village operators whilst increasing their awareness with regard to risk factors, safety and the environment.

The project FV-2000 has a web page, which is reachable via <http://www.bo.interporto.it/fv2000/>. Further information is available at the web page <http://www.freight-village.com/>.

The address is http://europa.eu.int/comm/transport/extra/downloads/lille99_b1_fv2000.zip includes a complete slide show with general information about FV-2000.

Within FV-2000 a computer programme was developed, which comprises a decision support system (DSS). Further materials are not available apart from the three deliverables:

- D1: Common Methodology
- D2:
- D3: Recommendation on the improvement of FV structure

As the objective of FV-2000 was to analyse freight villages, eight study sites are involved in this project. All study sites are freight villages in Europe, these freight villages are nearby the following cities:

- Aalborg
- Barcelona
- Årsta
- Bologna
- Kotka
- Rungis
- Padova

The main partners of FV-2000 are organisations of those freight villages. The Project coordinator was Gilberto Gallino, chief of the freight village of Bologna. Furthermore there are experts from consulting offices involved in the project FV-2000, like Haide Bakmann and Kent Bentzen. From the part of the freight forwarders, Henry Dyrland and Jaques Arnoux are main contractors in FV-2000. All mentioned experts have got important knowledge in the field of urban freight transport.

FV-2000 has no project partner from a leading education institute. That has to do with the practical research on existing freight villages.

Results of the project

The results of FV-2000 are extensive. They are mainly based on the question, which forms of freight villages are the most efficient. According to these outcomes, freight villages can contribute to the solution of the problems deriving from the growing demand for transport of goods in Europe. Today, the numbers of freight villages in Europe with the possibility of transshipment from rail to road is low. With regard to the high cost of intermodal terminals, equilibrium between the number of such freight villages and the total operation costs has to be found. An optimal distance between two intermodal terminals could be about 150 kilometres. In any case, these terminals should be located at the heart of infrastructure, for example as a city delivery centre.

2.8 Results of FREYA

The FREYA project aimed at facilitating the access of SME's to intermodal transport, and focused hereby on the establishment of commercially viable relations with freight villages, their services, procedures and information systems.

The main goals of the FREYA project have been :

- To improve the commercial options of transport SME's in the intermodal market.
- To improve the accessibility of the European freight villages and their related networks for transport SME's

The main homepage of FREYA can be found under the address <http://www.freight-villages.dk/>. This homepage gives a general overview on the existing freight villages in Europe with the corresponding links to organisations of these freight villages. The general information on FREYA is quite short on this homepage. More information could be found on its CORDIS site and the special web pages of the some involved project partners (<http://www.hut.fi/Units/Transportation/Research/freia.html>; <http://www.impetus.gr/freia.htm>).

Materials, which are not part of the regular dissemination plan of EU projects are not available.

FREYA had no demonstration sites The Project **co-ordinator** of the FREYA project was Karsten Juul-Olsen from PLS consulting group. Three more experts were partners of the project, Kees Verweij from the freight transport research group NEI in the Netherlands, Stelios Efstathiadis from the Greek consulting group IMPENTUS and Prof. Matti Pursula from Helsinki University, the only leading educational which is involved in FREYA.

Results of the project

The inter-modal transport market is not transparent. What is needed is a classification system of freight villages services, facilities and commercial options.

A classification system dealing with rankings from one star to five stars must be finalised. The FREYA classification system proposes the way towards a more transparent freight village environment.

An "inter-modal council" must be produced to take care of: Classification, consulting, marketing, representation and standardisation.

The most important requirements of SME's are physical facilities like: Offices, warehousing and storage, followed by information services like: EDI connections and reliable (electronic) freight exchange systems.

Both the terminal network (32%) and the terminal control (32%) are equally important functionalists to improve, while terminal access (19%) and terminal operation (16%) were both rated more modestly.

The survey results stresses the systemic nature of the inter-modal chain, best illustrated by the nearly equally high ratings of the three networking issues: Operation (38%), access (34%), and control (28%).

The expectations of the freight village representatives towards the future of the inter-modal transport market are optimistic. A total of 74% believe in a positive development of inter-modal transport in the future. Only 19% believe it will remain on the current level, and 6% that the market share of inter-modal transport will decrease.

Freight villages can improve their market shares for inter-modal transport among transport SME's by offering: Freight exchange systems (electronically), improved terminal services, the implementation of city-logistic initiatives, plus the offer of other share cost services and the increase in the total number of block trains.

The information, the FREYA system should provide can be summarised as follows:

- Timetables
- Type and Weight of Cargo
 - Hazardous Goods Conditions
- Tracking and Tracing of Cargo
- Booking Information
- Freight Village Services
 - location of storage
 - parking spaces
 - path-finding inside freight village area
 - routes on urban network
- Freight Village instructions
 - Loading/Unloading instructions
- Customs and Documentation
- Administrative tasks
- Other Inter-urban Transport Modes
 - location of Info-kiosks
 - location of terminals
 - train/ships/air flight timetables
- Trip Planning
 - information about costs/prices
 - information about timetables, etc.
 - road conditions
 - weather conditions
 - environmental conditions
 - gas station locations
 - incident warnings

2.9 Results of INFREDAT

The INFREDAT project aims at developing a consistent methodology for collecting intermodal freight transport data.

Information about INFREDAT is available from its homepage which is reachable via the address: <http://www.infredat.ptv.de/>. This site gives a widespread overview over the project. Further information is available on the site of ISIS (<http://www.isis-it.com/Project/Infredat.htm>)

Within INFREDAT no **papers** have been published. Deliverables as part of the project dissemination are the following:

- D1: Identification and categorisation of intermodal transport flows
- D2: Review report on intermodal freight transport data and methodologies
- D3: Intermodal freight transport data model and data base structure
- D4: Data collecting approach
- D5: Cost-benefit analysis
- D6: Final report on pilot test cases
- D7.1 : INFREDAT - Project flyer
- D7.2: INFREDAT - 'Discussion forum'
- D7.3: INFREDAT - Handbook: Conclusions and recommendations for the implementation and realisation

INFREDAT has a huge advisory board. Within this advisory board, a wide range of **experts** is concerned in the INFREDAT project. Of special note in comparison with other projects is the huge number of representatives of pressure groups like the European freight forwarder organisation or intermodal transport associations. Because INFREDAT is a project with deals with transport data, experts from statistical offices like Eurostat are also partners in the project.

The co-ordinator of the project is Matthias Hormuth of the transport engineer office, PTV in Germany.

INFREDAT has no partner from a **leading educational institute**. Alan Pearman from Leeds University is a member of the advisory board.

Pilot **case studies** for the INFREDAT project are in Spain and Germany, Italy, the United Kingdom and The Netherlands and Poland.

Spain – Germany:

This pilot case study deals with cars, which are produced in Spain and transported by rail, road and sea to southern Germany

Italy – United Kingdom:

The transportation of white goods from Northern Italy to Great Britain was studied. Three possible transport modes are available for this destination: trailers, conventional rail and intermodal transport.

The Netherlands – Poland:

The transportation of all categories of goods between the two countries was studied. This pilot case was included, because freight transport between Eastern Europe and Western Europe will increase steadily in the next years.

Results of the project

Data needs are quite different between the diverse actors within the transport chain. Railway operators are mainly interested in the following data:

- First origin – final destination of goods
- Identification of the shippers
- Region to country flows, by mode

The actors are very sensitive towards a decrease of statistical data. They know only a part of the total transport chain. The lack of reliable, frequently updated flow data by origin – destination appears as the most crucial need for the transport companies.

It would be necessary for them to have the data for reacting in real time to optimise their transport. This is necessary to be able to choose the most profitable transport and logistic options.

Even though the transport companies quantify the benefits of having data as very high, they are not willing to pay for it.

Today the main actors within the transport chain collect only data, which is useful for their immediate operational purpose. Considering a specific chain of transport, data available constitute a kind of “puzzle” coming from different sources.

The main factors for the limited availability of data is

- The heterogeneity of information systems
- Inconsistent definitions and units
- Companies considering their data as confidential.

According to the outcomes of INFREDAT, the described problems can be solved as follows:

- An official authority has to guarantee an official framework for confidentiality
- A data collection through a mediator which would aggregate the data
- A independent organisation can harmonise the collected data “ex ante”

2.10 Results of REFORM

The REFORM project aimed to analyse and evaluate the effects of freight platforms regarding the urban traffic. Its objective was to provide guidelines and criteria for designing, locating and organising freight platforms in urban areas with the view of optimising the benefits of these platforms and to reduce their negative effects.

The information to the REFORM project, which is available from the Internet is very limited. Only one site with a short description exists. This site was made by the STRATEC group in Bruxelles and is only available in French (<http://www.stratec.be/PlanFR275.html>). The official homepage of REFORM should be reachable by the server of the co-ordinator of the project IVU in Berlin. But this site is no longer working.

Within REFORM a **handbook** was written as a guideline for the creation of effective freight villages. This handbook aims especially to help local authorities to build freight villages that fulfil the requirements of optimised urban freight delivery. Therefore, it includes very interesting and important information for the key topic urban freight transport. Unfortunately, this handbook is not published separately, so it is not possible to get it via official publication offices. It is available as a part of the final report of REFORM.

REFORM assembled four **experts** from European engineering offices. Bertram Meimbresse from IVU, Berlin was the co-ordinator of the project. An interesting expert with regard to the key topic of urban freight transport is Mrs. Perez-Cerezo from ET&T in Spain. She is a specialist in environmental aspects of freight traffic in urban areas. She also member of the advisory board of the project BESTUFS. Another important expert especially on freight villages is Mr. Kent Bentzen from NTU in Denmark. He is also an associated contractor in REFORM.

No **leading educational institute** is participating in REFORM.

Four freight villages and city delivery centres have been **studied** within REFORM. Very interesting is the **sites** Ostgüterbahnhof Berlin. It has also railway access so intermodal transshipment was a part of the investigations in Berlin. With two other freight villages in the surroundings of Berlin, the relationship and influence of those platforms gives interesting insights. Other study sites are in Bruxelles, Coslada and Rome.

Results of the project

REFORM is one of the very interesting projects with regard to urban freight transport. The outcomes of this project are essential for the optimisation of freight transport in cities.

As an interface between different transport modes, freight platforms are generally suited to increasing the competitiveness of the railway and combined transport. Furthermore, the establishment of freight platforms increases the likelihood of implementation of urban delivery schemes. These schemes are suited to increasing the load factor of trucks and therefore lead to a use of larger trucks and a reduction in truck tours and mileage. These effects also reduce the costs for participating

forwarders, making the establishment on a freight platform profitable. The total traffic and economic effects can be summarised as follows:

Traffic Effects:

- Reduction of long distance road transport (modal shift), due to
 - Provision of efficient transshipment facilities at the platform
 - European Network of freight platforms
- Reduction of urban traffic, due to
 - Co-operation is more likely at sites with a high density of transport companies. This co-operation leads to higher load factors and therewith to a reduction of truck trips
 - Services are provided directly on the site
 - When industries are established on site, traffic can be avoided since the distances between industries and transport companies are reduced

Economic effects:

- Regional economics: Logistic centres increase the region's competitiveness
- Impact on transport companies: Benefits from co-operation and availability of services on site
- Impact on consignees (recipients): Benefits from deliveries (reduction of the number of deliveries)

However, the implementation of single urban freight platforms is hardly sufficient for strengthening intermodal transport on a European scale. What is needed is a network of intermodal freight platforms connecting Europe's largest cities and industrial areas. In addition, a subsystem of transshipment terminals is useful for strengthening intermodal transport on a lower scale by, for example, offering special logistic solutions for big retailers and organising urban deliveries more efficiently by implementing a network of city terminals.

2.11 Results of IDIOMA

The success of intermodal transport depends strongly on the managerial and organisational performance of the pre- and end- haulage of the intermodal transport leg. IDIOMA will show how the distribution of goods in metropolitan areas can be improved. The IDIOMA project was mainly an analysis of the test sites in the participating countries.

IDIOMA has a large **homepage** under the address: www.idioma.gr.

The co-ordination of the project was due to Mr. Wild from PTV in Germany. Other important **experts** are Mrs. Haide Backman from TFK in Sweden. She was responsible for the test site in Malmö. Mr Martin Ruesch from Rapp in Switzerland is an expert in intermodal transport and new technologies for transshipment. Prof. P. Klaus from the University of Nürnberg is specialised in logistics. Within IDIOMA he studies the whole transport chain from the point of the city distribution. Hans Visser

from NEA in the Netherlands has investigated the optimal relation between freight villages of different cities in the Randstad.

Two **leading educational institutes** have participated in IDIOMA. The Swiss Institute of Technology was making research on transshipment technologies and their costs, and the University of Nuremberg is researching into economical impacts of logistics.

The IDIOMA project is not finished yet, thus the final report is not available for the moment. However many internal **reports** (IR) have been written, especially in reference to the **test sites**.

For urban areas in Europe have been examined:

- The Öresund region with Helsingborg and Malmö represented the suitable basis for co-ordinated and composite distribution concepts including intermodal transport sea/road as well as rail/road.
- Nürnberg demonstrated co-operative inbound city logistics and provided different technological solutions. Starting consolidation at the far end of the transport chain, the consignee, and using intermodal transport to cover the long haulage leg for a freight centre.
- In Paris traffic conditions are getting worse and real time traffic information has to be improved to be integrated into transport logistics planning decisions. This was demonstrated via 4 intermodal terminals.
- In the Amsterdam-The Hague-Rotterdam-Utrecht region (Randstad) new concepts for linking multiple freight distribution centres and terminals by rail (Flow net) have been tested.

Results of the project

As the IDIOMA project is not finished yet, a final summary of results is not available

2.12 Results of COST 339

The main objective of COST 339 is to produce guidelines for governments, standardisation organisations, transportation associations and container manufacturers to assist in the developments of rules to cover the implementation of small containers that are usable Europe wide.

The final objective is to generate and deliver recommendations to the competent authority for standardisation (CEN/TC 119), based on the results of COST 339.

It is also intended that the intermediate and final results of COST 339 will help to accelerate and simplify the requirements, specifications and standardisation processes necessary to enable the potential of intermodal transport systems to be realised as early as possible.

Apart from the CORDIS information on COST 339 there is no other **website** available.

Within COST 339 there is **documentation** from several workshops, but unfortunately they are not available for external persons. A final report is not written yet.

Many experts are participating in COST 339. The co-ordinator is Jost Wichser from Swiss Institute of Technology. He is a specialist on intermodal transport. In addition to him, representatives of pressure groups are participating, like Christian Seidelmann from the intermodal support organisation. Also manufacturers of containers are doing research in COST 339, like Mr. Peter Guha from Switzerland.

As **leading educational institutes**, the faculty for maritime studies of the University of Piraeus is a member of the COST action. Interesting with regard to the objectives of PORTAL is the participation of the University of Graz, which is a specialist on intermodal transport with regard to city delivery.

Results of the project

COST 339 proposes new standardisation for small containers than the existing C swap bodies. The proposed new size is 1/4 or 1/2 of this standardised container. These smaller containers could be the key for new urban distribution organisation. The time spent for transshipment on freight villages could probably be decreased with the implementation of new smaller containers. Important in this context is the compatibility of these containers with the UIC rules for swap bodies.

The requirements of the market for these small containers are:

- modularity with package size up to ISO series 2 containers and compatibility with class A swap bodies.
- Roll ability
- Stack ability
- City van carrying light weight 1/4 boxes
- The use of small containers in underground tunnel for high dense urban areas
- One way compatibility with air freight containers

However small containers can be a alternative to partial loading and reduce transport costs. The distribution platforms can reduce storage capacity and transport distances could be reduced. The also can act as a storage place outside supermarkets. All goods can be loaded, expect of those which need low temperatures. Commissioning at city-logistic platforms is not needed with small containers. Producers can directly put the products in these containers for the whole transport chain.

3. RECOMMENDATIONS FOR NEW MODULES

The screening of the different projects has revealed that the amount of available material is quite limited. Information and especially the results of the projects are included in the reports of the project. There is only one project (COST 321) that published a book. The main emphasis has to be determined by the results and recommendations of the projects.

New education should summarise these results. First of all, a description of freight transport is necessary in its entirety. Then the part of urban freight transport within this transport chain should be described. Therefore the following structure can be developed:

- Explanation of freight villages
 - The role of freight villages within urban freight transport
 - How freight villages should be organised
 - The impact of freight villages on environmental tasks
- City delivery systems
 - Vehicles for optimal city delivery
 - Impacts of traffic management on freight distribution
- Optimal containers for urban freight transport
 - Why is there a need for new containers
 - What should they look like

Due to the lack of material, which are published by the screened projects, the development of new materials could be very helpful.

4. FINAL CONCLUSIONS

The main benefit of the projects analysed was the summary of the results, which have been found. Today, these results are not available, they have to be picked out from former projects. As freight transport is a highly integrated subject, an overall summary of the project results is absolutely necessary. Only such a summary can become a guideline for the optimisation of urban freight transport.

For the dissemination of these new, integral materials, it is necessary to make them available for the concerned actors in the transport field. Therefore, they have to be published officially and distributed.

This could be a step to more transparent European research, which could be a gain for all people working on the field of urban freight transport, and not only for those who are participating in a EU project.