



Information Management Policies Assessment for City Transportation Systems

Forum International des Grandes Mitrôpoles pour l'évaluation et le développement des Systèmes de Transports Intelligents

IMPACTS EUROPE ANNUAL CONFERENCE

Gothenburg, Sweden, 1-2 March 2001



Original drawing : Michel DUCRET, Geneva

Synthesis

I - Welcome address and presentation of transport policy in Gothenburg

Mr Leif BLOMQUIST, Deputy Mayor

Welcomed the attendees focusing on the importance and quality of the participation, Then, he gave an overview of the situation of the greater Gothenburg.

City presentation

The population of Gothenburg is about 600 000 inhabitants. The City was created at the beginning of the 17th century and was influenced by the Dutch colony who designed a town on the model of Amsterdam. Gothenburg harbour, which is the most important in Sweden has been the most important factor for the urban economic development. In the 19th century Gothenburg decided to be wide open to industry and external exchanges. Then came textile, mechanics, automotive. Gothenburg then became an industrial town.

Nowadays there is also an important University and the development of telecommunication and Information technologies.

Transportation policy in Gothenburg

Non-commercial traffic has been growing steadily with 2 to 4 % in the urban area and 4 to 6 % in suburban areas; however, in the city centre this type of traffic has remained at the same level for years due to various restraint measures.

The primary means of public transport in the Gothenburg region are tram, bus and commuter train. In recent years significant investments have been made in extending the tram system to improve its accessibility making it the most important mode of public transport. The tram system accounts for 60%, and commuter trains for only 2% of trips made by public transport..

The City of Gothenburg Traffic & Public Transport Authority has overall responsibility for traffic-related issues in Gothenburg, in close collaboration with other companies and authorities in Gothenburg region, including Västtrafik AB, the region's public transport company and the Swedish National Road Administration.

The comprehensive plan for Gothenburg formulates a vision based on competition and sustainability. The transport infrastructure has developed in a way that makes best use of existing facilities in order to minimise the use of the private car. The Gothenburg region aims particularly to improve the local environment by reducing traffic sources and other forms of pollution. The policy also aims to improve the overall quality and accessibility of public transport, as well as its safety record.

In order to achieve these goals, Gothenburg aims to develop the public transport system further and to make it more efficient, with the tramways as the base. The environmental goals are also achieved with more natural gas powered buses and the environmental protection zone in the city centre.

Gothenburg City and the Swedish national road administration (SNRA) have been engaged for many years in a number of European programs dealing with Intelligent Transportation systems. For instance, a main objective of the European PROMPT-project in Gothenburg has been to upgrade the traffic control system, implementing and adapting the SPOT local intelligent controllers and maintaining, as far as possible, absolute tram priority within this new control philosophy. The City of Gothenburg now operates an absolute priority strategy for its trams at traffic signals. The new control scheme reduces the delay in the network by 8-20% compared with the priority system that depended on the traffic conditions.

II - Impacts activities

Mrs. Laurence DOUVIN, President, Mr. Pierre SCHMITZ Member of the Steering Committee & Mr. Jean-Louis GRAINDORGE, Secretary General of Impacts Europe

Reminder : This Impacts Europe Conference takes place in Gothenburg after Paris (1997), Brussels (1998), Vienna (1999) and Geneva (2000). Each conference marked a step forward for improvement of the co-operation between cities and showed the growing interest that Cities have.

E.U. Projects

During the intercontinental conference in Chicago it was decided to submit a proposal in the framework of the Growth programme that called for Euro-American networking in the domain of transportation. An important work was provided that associated Impacts North American partnerships. Unfortunately, this proposal named TRIDENT was finally not accepted,

The E.U. Commission published another call for proposals in December 2000 in the framework of the CIVITAS initiative. In fact this important programme is addressing big and medium size towns aiming to engage strong experiences dealing with sustainable mobility and is targeted on the assessment of these policies. Some of the Impacts Europe Member Cities are in the process of responding to this call.

In addition, the E.U. Commission called for an accompanying measure that will be led by a consortium of experts in order to define indicators that could help to make a common evaluation of the projects to be selected in the CIVITAS programme. The steering Committee of Impacts Europe studied the opportunity of being candidate and a first draft for reflection was provided by URBA 2000 focusing on specific political indicators.

Due to the conditions of the call : only one proposal will be selected which would cover all topics of the CIVITAS initiative, there should be no link between cities involved in the program and the accompanying measure, participants decided not to respond to the call.

Relations with the E.U. Commission

Mrs. Laurence DOUVIN, Mr. Pierre SCHMITZ

Mrs. Laurence DOUVIN, Mr. Pierre SCHMITZ explained that, on 17th November, they met Mr. François LAMOUREUX Head of the Transport and Energy Directorate of the E.U. Commission who expressed a great interest on Impacts initiatives and hoped that a further co-operation with the Commission would be settled.

Mr. François LAMOUREUX explained that the strategy of the DG TREN in the domain of ITS is now oriented to help the process of implementation more than to encourage the offer of products.

In 2001 the main axes of the DG Transport and Energy are :

- Reduction of pollutant emissions (they are in the process of publishing a directive),
- Quality and flexibility of public transport,
- Clean urban transport,
- Urban road pricing.
- Standardisation, for instance, especially in the domains of traffic information and traffic management.

From the Commission's point of view, Impacts, which gathers strategy-makers and political Officials is particularly interesting and should be a good interlocutor for discussing the main axes of action that the Commission is expecting to undertake.

Relations between Impacts Europe and Impacts North America
Mrs Laurence DOUVIN

She explained that a meeting has been planned on 13 March with Mrs Andrea d' AMATO, Commissioner of Transport of Boston and President of IMPACTS North America and the representatives of Los Angeles and Chicago in order to discuss the participation of U.S. Cities at the IMPACTS 2001 Conference.

In North America there are only a few opportunities for big Cities to dialog with each others. This is the first reason who encourages the NACTO Cities (NACTO is the National Association of City Transportation Officials) to take part in IMPACTS. They also feel excited to exchange viewpoints with European Cities facing similar problems in another institutional and cultural context.

Despite it remains very difficult for Officials of Cities to be funded when they travel in Europe, it seems possible to be optimistic on the American attendance in Berlin.

Preparation of Impacts 2001 in Berlin
Mrs. Maria KRAUTZBERGER, Mrs Laurence DOUVIN, Mr. Jean-Louis GRAINDORGE

Mrs Maria KRAUTZBERGER told that Berlin is currently actively preparing the intercontinental conference that will take place on July 12 to 14. She expressed the wish that the Agenda should give place to dynamic exchange and discussions on further progress of Impacts.

During the discussions it was focused on he interest :

- to organise simultaneous discussion groups like in Philadelphia and Rome;
- to manage a dialog with industry and private companies ;
- to give opportunity to a participation of representative of the European Union as well as the United States Federal bodies and national administrations.

Mr. Jean-Louis GRAINDORGE reminded that two conference calls have already been organised with the American City representatives. The last one allowed to carry out the main points that they would like to mainly discuss on the following topics

Inner City truck management :

Solutions for a better use of streets and highways, Identification of effective incentive and enforcement strategies, Adaptation of vehicles (size, fuels...)

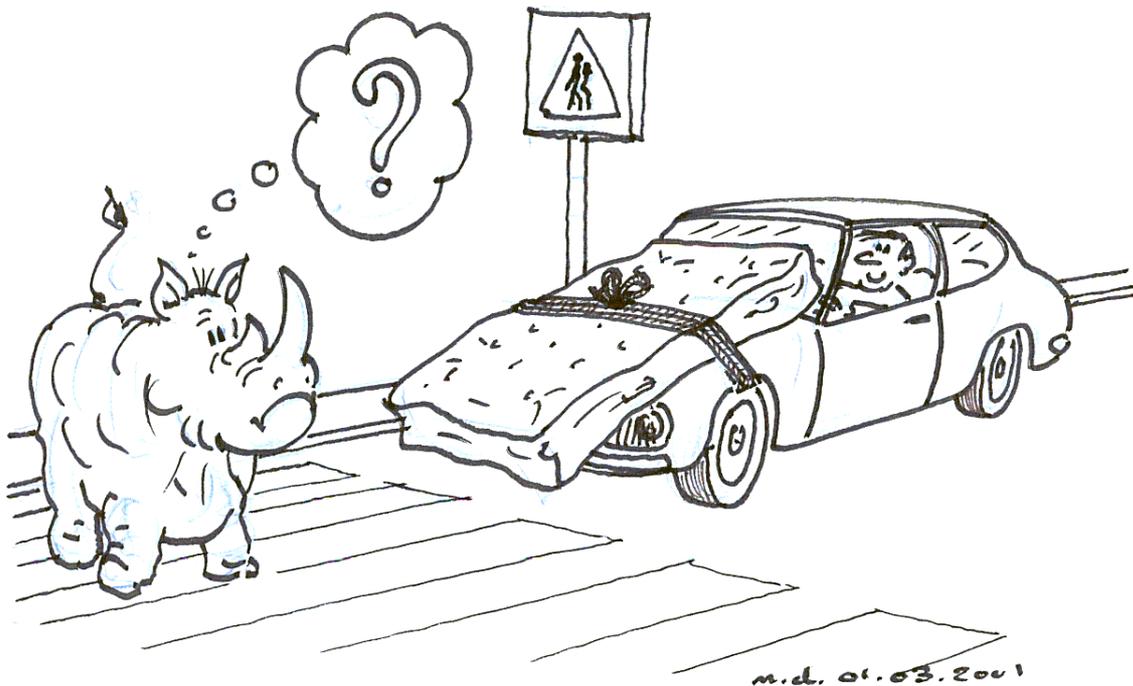
Regional issues and Inter-modal freight transfers

Inter-modal facilities to support expanded freight by land, combining road, rail and waterways transportation, location of routes and facilities, freight inter-modal centres management

Co-operations and partnerships

Inter institutional co-operation and new management models, Assessment of supply and demand issues, Partnerships with automotive industry, energy and transport firms.

III - Debate on Pedestrian Safety Policies



original drawing : Michel DUCRET, Geneva

Presentations

Gothenburg : Mr. Lennart ADOLFSSON

Paris : Mrs. Ghislaine GEFFROY

Vienna : Mr. Fritz DANTZMAYR

ACEA/EUCAR : Mr. André RAULT

Synthesis and Conclusions

1° A common objective : make impossible the useless death.

The Swedish Parliament has passed “zero vision” legislation, which sets as a long term objective the elimination of fatal injuries in road traffic provided that basic rules are followed.

The legislation is based on the principle that, in the event of an accident, people should not be subjected to levels of violence ever and above that which the human body can withstand without being killed or receiving permanent injury.

Following the introduction of the “zero vision” legislation, the Gothenburg Traffic Committee has set its own road safety targets, which, based in the average rate for the period 1985-1989, aim to achieve a 60% reduction in the number of fatal and serious road accidents by 2005.

Paris and Vienna are engaged in similar objectives and are developing policies aiming to reduce in great proportions the number of pedestrian fatalities and injuries.

2° Political perspectives

2-1 : The basic approach is to encourage people to rediscover the pleasure of walking. Cities must encourage people walking and in general the use of sweat transport considering the fact that persons choosing to privilege them are not harmful to the other ones and do not generate any trouble to the whole society.

But this can only be a reality if

- walking is secured and if public space within the City is shared in an equitable way between pedestrians and motorists.
- walking is pleasant, which means that pedestrians would be able to enjoy their travel. So city policy makers need to create a great number of dedicated spaces for pedestrians.

From a political point of view, Cities should be able to manage a “civilised” transport system based on a principle of equity : a pedestrian = a motorist. Pedestrians should have right to the same respect for the protection of their life and for the use of the common space.

2-2 : New political approaches : Urban transport policies are in the process of moving on the pressure of needs for a better quality of life and a better environment and a more secured city. There are nowadays doubts on the opportunity of creating new rapid infrastructures especially dedicated to heavy traffic.

3° Common statements

3-1 : The greatest part of fatalities and injuries to pedestrians concern young children, elderly people and persons with reduced mobility. The most frequent cause of the accidents is due to the fact that these persons do not pay a sufficient attention to the traffic and finally respect the regulation.

3-2 : In the case of an unprotected person being hit by a motor vehicle, the “violence limit” or vehicle speed at which survival would normally be expected, is around 30 km/h. The pedestrian fatality rate rises to 80 % in accidents involving vehicles travelling at 50 km/h

Therefore a key strategy for reducing the number of pedestrian fatalities and instances of serious injury would be to design the street environment in such a way that a pedestrian crossing vehicles could not exceed 30 km/h.

IV - Technical means to assure pedestrian safety

4-1 : analysis

The participants had a special interest for the extensive accident reporting system of the City of Gothenburg. For many years they have been receiving accident reports from both the police and hospital casualty departments. All accidents are recorded in a file along with the information about how the accidents occurred and a description of the injuries that were incurred. The information is linked to digital maps of the city which can then be analysed using a geographical information system.

4-2 : technical measures

Cities have implemented speed humps, raised pedestrian crossings, central refuges and street narrowing programmes. In certain cases intersections have been converted into roundabouts. In Gothenburg, some bus stops have been designed so that motor vehicles, irrespective of the direction in which they are travelling, can pass when a bus is at the stop. The city of Paris is reflecting on the possibility of organising "green waves " for pedestrians. Vienna has especially invested on pedestrian priority systems. ...

4-3 : Input of the automobile industry for pedestrian safety improvement

Car manufacturers are currently working on Active Safety Systems whose aim is to reduce pedestrian fatalities, pedestrian injuries and societal costs. These systems are focusing on the means to avoid collisions and reduce collision severity. For a collision, vehicle and pedestrian must be in the same place and there must be a difference in speed. Then, reduce collision severity will consist in minimising the difference of speed.

There are three possible solutions for achieving this goal : to anticipate and steer, to anticipate and brake, to anticipate and warn.

Anticipate and steer : On one hand, one of the main actions is the improvement of the visibility using are High Density Discharge lamps, Daytime Running Lights (DRL's) which have already yet provided important decrease of the risks for pedestrians in the USA (less 28%) and Sweden (less 17%). On the other hand, progresses in tyres optimisation, , enhanced stability and traction control, variable power assist, body control...could also play a role for reducing the number of accidents.

Anticipate and brake : current technology to apply for improving braking deal with ABS, ABS + electronic brake force distribution, Emergency Brake assist, brake by wire.

Technologies to foster : automatic pre crash brake intervention, collision avoidance, adaptive cruise control stop and go, smart steering, and warning systems are still in the phase of research.

V - Roundtable on freight management in large cities – Synthesis

Presentations

- Julio GARCIA RAMON, Barcelona
- Maurizio TOMASSINI, Rome
- Maria KRAUTZBERGER, Berlin
- Marcel HUSCHEBECK, Bestufs E.U. project
- Heinz SODEIKAT, Ertico and Siemens
- Daniel AUGELLO, Ertico and Renault

The presentations, on the basis of experiment led in the various cities, reached a consensus of the participants on many points :

- The function of in town good delivery and commercial transport has to be considered as a part of the economical functioning of the metropolitan area;
- There are growing requirements and constraints for safeguarding the urban space, the quality of life and environment;

It is necessary :

- To act towards a collective rationality for improving the current situation and a reconciliation of economy and ecology
- To move towards a better integration of logistical services;
- To move towards a better use of the capacities of the existing infrastructures using vehicles better adapted to the characteristics of urban environment
- To manage urban spaces in a tighter and more precise way.
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1 - Town good delivery and commercial transport as a part of the economy of the City

Transport and delivery of products and goods are fully integrated in the economical functioning of cities. They are subjected to a pressure on their costs. But it appears that the conditions of reliability (control of time) and of flexibility (adaptation to the unlimited diversity of requested services) are becoming more determining criteria than the continuation of cost reductions.

Reliability largely depends on urban management of traffic congestion

Flexibility at the end of its logic could lead to the caricature: " the delivery of one parcel by an almost empty truck ", that is to say increase of congestion and enormous material over-investment.

An answer can be a more significant use of small vehicles. However in the search for optimisation, it is clear that a truck, when it is well filled and correctly used, is a better solution than several vehicles insufficiently filled (that provides a better benefit of the material investments and less obstruction in the city).

Finally the economic progress of the inner city freight management system – transport and delivery - necessarily associate with transport, in a strict sense, all logistical functions. Thus, this progress would only be possible if all the parameters of the whole system are simultaneously in progress. This supposes concrete co-operations between actors and a better integration of the services.

2 - Requirements and constraints for safeguarding urban space, quality of life and environment

The economic function of urban freight management takes place in the networks of roadway system and is carrying harmful polluting effects that citizens feel negative.

In the large metropolises, citizens are increasingly sensitive to the ecological topics and claims for improving their quality of urban life is increasing. Four types of harmful effects which justify that certain regulations are imposed can be mentioned :

Urban space use : the urban space is limited and has to be open to a number of uses. However the transport function exerts an enormous pressure on the other uses by its request of spaces reserved for traffic and parking. The exclusive use of public spaces by the freight vehicles in parking, unloading or circulation must be reasonably limited and be controlled. Consequently, the search for vehicles whose size is strictly limited to the function to ensure and the drastic reduction of the time of disuse in parking are solutions that Cities should look at. This, in fact, is not contradictory with economic efficiency.

Obstructions: search of the smallest number of vehicles circulating under the conditions most comparable possible with those of the general traffic in order to avoid congestion. This leads to a logic aiming at ensuring the best possible filling of the trucks; there can be also a search time schedule delivery which avoids the peak hours.

Noise is a major urban harmful effect which considerably contributes to give to make citizens critical. Among the means of limitation of this harmful effect, the possibilities of progress in the motorization of the vehicles as well as the conditions of loading and unloading have to be considered. (think to a diesel engine badly regulated working during 10 minutes near a store)

Pollutions: Citizens are increasingly sensitive to the health risks or the various nuisances which result from emission of polluting gas. The ideas tending to promote the development of slightly polluting or not polluting vehicles (clean vehicles or ZEV vehicles), such as " the Californian mandate " will undoubtedly appear at the cities like a means of answering at the request of their citizens.

3 - Towards a collective rationality for improvement, reconciling economy and ecology

Several approaches presented by the cities reveal the search of a collective rationality for the progress which reconciles the economy and the logic of its actors with the ecological requirements expressed by the political authorities at the request of the citizens.

The expression of this collective rationality is expressed in terms of planning (in France Urban mobility planning), or charts " (Rome), or " Pacts " (Barcelona mobility pact), or diagrams (logistic diagram in Berlin).

In fact, all countries are looking at a framework for reflecting that associates public authorities and economic actors, with a sufficient horizon of futurology, aiming at directing the co-operation of the actors of the market between them and with the various public bodies.

Within this framework, more or less formally elaborated, it is possible to settle organisations which operationally format co-operations between actors to integrate part of the system of transport (example of Berlin for the processing of transport of materials and waste of construction).

4 - Moving towards an integration of the services of logistics

All functions assured by the transportation and logistics chain are in the process of significant improvement.

Thus, it seems that storage at the entries of city tends to be reduced. On the contrary, the need for intermediate storage distributed within the districts is appearing.

The discussion was developed starting from Heinz SODEIKAT's presentation on the impacts of the E-Commerce. If, globally all forms of E-Commerce do not enable to foresee important changes, the B to C – business to customer - is likely to increase the amount of deliveries of small parcels. This function of delivery for individuals should be stimulated and should increase significantly.

The problems of loading and unloading, starting from the roadway system, must evolve to reduce obstructions by vehicles in the course of delivery. Technical solutions as low floors for fast catch of load as well as solutions of integrated administrative management are suggested.

5 - Towards the best use of the capacities of the existing infrastructures

The crucial question is the obstruction of the roadway system by trucks and other vehicles used for good delivery. However, Cities lay out other infrastructures whose transport capacities remain surplus and can be used : railways, rivers... There is thus a serious challenge to look for organising flows of carriage of goods by maximising the use of these excess capacities. On that point the experience of Berlin is particularly interesting.

This would only be possible if multimodality and interoperability become concrete and operational. There still, it is necessary more completely to cause new operators that should be able to integrate the various types and means of transport.

It is obvious that for transport, within general traffic, there are prospects for progress in improving the various devices of the traffic management.

6 – A better adaptation of vehicles to the characteristics of urban needs

The specific constraints of urban context, the complex geometry of the roadway system and often its narrowness call an adaptation of vehicles with various type and conditions of transport.

The tendency to delivering by many small vehicles was formerly mentioned. Those can be small commercial vehicles and even scooters.

The pressure to the reduction of the harmful effects of nowadays vehicles (noise and noxious gas emitted by the thermal vehicles) was emphasised as well. It is probable that in a term of about ten years the growing call for less noisy, less polluting vehicles, will contribute to important modification of automobiles. These effects would be caused by requirements for new regulations or political choices of Cities deciding to give priority to non polluting vehicles (ZEV).

To the question: " Can it exist a specific vehicle for urban freight delivering ? " the answer suggested by EUCAR seems to be this one: " if cities are able to make converge their regulations towards a suitably definite model, States and manufacturers should come to define standards and/or techniques which ensure this differentiation.

To illustrate this prospect, it will be pointed out that in a few years, the market will offer small electric commercial vehicles whose performances are perfectly adapted to the urban requirements.

7 - A better management of urban spaces

Experiences of Rome and Barcelona illustrate the possibility of defining specific rules to access dense and strongly commercial urban zones.

The acceptance of such rules obviously depends on co-operations that can be settled between the store owners and their transport and delivery operators as well on the care of political authorities to reconcile the economic needs for the trade, the quality of life of the inhabitants, and the attractiveness for the tourist frequentation.

Conclusion

The discussion that took place in the framework of the round table revealed a consensus on the need for a global conception of the commercial transport and logistics, system itself included in the more global function of City mobility.