

# ADDICT - Results

## Assessing and Developing Initiatives of Companies to control and reduce Commuter Traffic

DURATION OF THE PROJECT  
01/01/2007 - 31/07/2011

BUDGET  
515.467 €

### KEYWORDS

Belgium, mobility management, sustainable commuting, companies, Travel Demand Management (TDM),

### CONTEXT

In Belgium, as in many other developed countries, car traffic has steadily increased in recent decades. Volumes of traffic have become too high for the road capacity, especially under specific circumstances such as the weekday's peak hours. This congestion problem threatens the economic competitiveness of countries. In fact, it is difficult to conceive a strong economic growth without an effective transport system.

The traditional approach to tackle the congestion issue is the development of a supply-based transport policy. The aim is to solve the traffic problems by increasing the transportation supply (e.g. by building new infrastructures). This approach has become less popular for financial, environmental and social reasons. An alternative way to tackle the congestion problem is to implement a Travel Demand Management (TDM) program, which tries to optimize the transportation demand by using the existing infrastructure.

As an important source of travelling patterns, the companies have a ringside seat to implement TDM programmes and to promote a more sustainable mobility. The first step towards the implementation of TDM programmes within companies was set out in the USA with the passing of the Clean Air Act, Regulation XV in Southern California (1988). This act introduced the concept of Employer Mobility Plan (EMP), which works out the set of actions carried out by a company to promote and favour a more sustainable mobility. A major emphasis of an EMP is to reduce single-occupant vehicle (SOV) travel in order to limit the congestion and to enable a more efficient use of the existing transportation infrastructures.

EMPs have gained importance throughout the entire Europe. In 1998, the United Kingdom developed a White Paper entitled 'A New Deal for Transport: Better for Everyone' that promoted a voluntary take-up of EMPs by companies. The Netherlands created a Taskforce Mobility Management (TFMM) and have also overhauled their commuting benefits system to further promote alternative modes of transport. The European Union established the European Platform on Mobility Management (EPOMM) in 2006, as a result of an EU-subsidized project.

The aim of this platform is 'to promote and further develop mobility management in Europe' and 'to support the active exchange of information and learning on mobility management between European countries'. Also, the European Commission recognizes the potential of mobility management within companies in its Action Plan on Urban Mobility (APUM).

In Belgium, the Federal government and the three Regions have also taken numerous mobility initiatives. In 2003, the Federal Belgian Parliament decided to develop a three-yearly mandatory questionnaire on mobility management for large employers in order to stimulate initiatives and social dialogue on mobility within companies. In 2006, the Flemish Region has created a Commuting Fund which subsidizes projects of employers. Forty-nine projects of companies have been subsidized to date. The Walloon Region offers its support for the making up of EMPs, and the Brussels-Capital Region lays down the implementation of EMPs to companies employing at least 200 workers.

Companies and their EMPs are mostly neglected in literature. In fact, papers focus mainly on the role of the individual commuter in congestion problems and only few papers have considered workplaces and employers as prime subjects of research.

### OBJECTIVES

The **ADICCT** project (**A**ssessing and **D**eveloping **I**nitiatives of **C**ompanies to control and reduce **C**ommuter **T**raffic) studies the role of Belgian companies in mobility management.

Its objective is to improve public and private decision making and guide investments in employer-based commuter transport schemes. To achieve this objective, the project aims at determining which mobility measures and which companies' characteristics make commuter choice programs successful in reducing (and/or controlling) commuter car traffic. Thus, the project's results will contribute to promote sustainable mobility management.



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The project was spread across four years and was split into two phases. The first phase started in February 2007 and ended in January 2009. The second phase ended on July 31 2011. Our research was divided into four Work Packages

WP 1	Literature review	2007
WP 2	Data collection: <ul style="list-style-type: none"> <li>⇒ Federal Diagnostics (HTWT-database 2005 and 2008)</li> <li>⇒ Enrichment of the database with additional information (NACE-code,...)</li> <li>⇒ Case studies: interviewing a selection of mobility managers</li> </ul>	2008-2009-2010
WP 3	Analyzing the database <ul style="list-style-type: none"> <li>⇒ Exploratory Factor Analysis: categorization of the mobility measures</li> <li>⇒ Cluster Analysis: classification and analysis of companies</li> <li>⇒ Multilevel Regression Analysis: modeling the modal split (bicycle, carpooling and public transport)</li> </ul>	2008-2009-2010
	Analyzing the survey <ul style="list-style-type: none"> <li>⇒ Checking the quality of data from the database</li> <li>⇒ In depth-study of mobility management</li> </ul>	
WP 4	Policy recommendations	2010

To achieve this, we first conducted a literature review to overview the employer's measures influencing the commuting behaviour of employees and to select and define relevant variables in the data analysis. Next was the data collection: we enriched the Home-To-Work-Travel (HTWT) database, provided by the Federal Public Service (FPS) Mobility and Transport and we set up a survey among mobility managers of companies located in Belgium. After that, we analysed the results, performing quantitative analyses on the enriched HTWT database and two qualitative case studies research on the data of the survey. The last step was formulating policy recommendations for both the federal and regional governments and for the companies.



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### CONCLUSIONS

Companies in Belgium have at their disposal a range of mobility measures to perform mobility management. However, different statistical analyses, such as an exploratory factor analysis or a correspondence analysis, performed in this research project have indicated that employers tend to implement a set of similar mobility measures. In addition, a pronounced link between, on the one hand, the mobility management measures taken, and on the other hand accessibility remarks and problems is absent. Nevertheless, it is those companies confronted with accessibility and mobility problems which are the first to invest in mobility management (Rye, 1999a).

At first glance, the implementation of mobility management at Belgian workplaces seems thus to fall outside rational behaviour, but as Rye (1999b) states the often altruistic goal of transport plans '*is not their raison d'être*'. Indeed, transport policy seems to be the preferred tool to fulfil demands outside the field of transport (Blauwens et al., 2008), like human resource related issues. Also the results of the case study show that mobility management appears to be a tool to achieve company business objectives. In fact, operational motivations are the main sources of motivations when companies consider the implementation of an EMP. Even though the legal framework and the altruistic concerns influence some companies, operational functions can be found to the EMP. Moreover, the majority of the ETCs interviewed find that the EMP of their company has provided benefits to their company. The most common benefits are the improvement of the well-being of the employees and of the image of the company.

Most of the mobility policies in the studied Belgian companies fail. This is not surprisingly as a link between mobility measures in the companies and their mobility problems is lacking. A second reason for the failure is the lack of integration mobility policies suffer from. They are mainly based on the implementation of measures promoting a specific alternative mode of transport (bicycle, public transport or carpooling).

Most decision-makers do not seem to have adopted an integrated vision. Moreover many of the companies adopt policy measures of a similar nature. Although financial incentives, the provision of facilities and the diffusion of information can be effective levers for change, they are too often considered individually and not as a part of an integrated mobility policy. This reduces their influence in promoting a move away from driving to work alone.

An integrated mobility policy also means an EMP that contains "more sensible" measures, such as parking management. This type of measures is required to heighten the chance on success. However, they face resistance from employers and employees who have a negative attitude towards for example parking management. Communication about EMPs within companies can thus be important, all the more so because the attitude towards EMPs can be crucial for its success. A positive attitude towards EMPs leads to lower car use. Consequently, the benefits, for both the employers/companies and the employees, have to be pointed out in order to emphasize the tangible value that an EMP can bring to both actors. In this way, their attitudes towards EMPs could improve and lead to modal shifts.

In addition, the companies have to adapt their EMP to their location in order to promote a more sustainable mobility. In fact, each company is unique and the promoted transport modes have to be perceived as valuable alternatives to the car by the employees. This perception depends on the location of the companies. The results show that regarding their contextual conditions (e.g. public transport facilities), most companies located in the urban fringe or the agglomeration commute inefficiently. Hence, potential of modal shift exists there. Again, a stronger communication on the potential benefits an EMP can bring would probably be helpful to convince managers of those companies to pursue their efforts in sustainable mobility.

Our research also indicated that some mobility measures are more powerful to reduce car use than others. The financial measures stand out. For cycling infrastructure, like storage and showers, a non significant increase in car use was estimated. Such bicycle infrastructure is in the first place a treatment of the symptoms and does not affect the underlying problems such as distance and complex trip characteristics (e.g. trip chaining caused by dropping-off children; Dickinson et al., 2003). Moreover, investments in cycling infrastructure are less costly and thus more abundant in the less bicycle-friendly urban fringe. Carpooling measures have appeared maybe too soft to change the modal choice of an employee. This is a line of reasoning suggested by Hwang and Giuliano (1990) who categorise this kind of measures as less effective in contrast with the more effective financial measures and parking restrictions.



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## CONTRIBUTION OF THE PROJECT TO A SUSTAINABLE DEVELOPMENT POLICY

The contribution of the ADICCT project in a context of scientific support to a sustainable development policy is twofold.

First, the project recommends some policies and measures in order to reduce the travel demand, by studying the initiatives of the companies to improve the sustainability of the home-to-work travels of the workers. In fact, the research shows that teleworking can reduce the number of trips made, while telecommuting reduces the lengths of the trips. In the same way, offering the possibility to the workers to work with flexible schedules has appeared as a proper way to smooth the travel demand and to avoid the congestion due to the simultaneity of the travels. Companies can also promote carpooling, and the research shows that some policy measures could lead to modal shifts. By increasing the number of passengers by vehicle, the travel demand is also reduced. All these actions act on the travel demand side.

The second contribution of the project is the deliverance of evidences showing that the companies can influence the modal choice of their workers. To achieve this objective the companies have two levers at their disposal. First, the pull measures encourage workers to choose alternative transport modes (walking, bicycle, public transport) by providing to them a tangible value. The aim of such measures is to fill in the possible loss of commodity a modal shift can cause. Measures such as the financial incentives, bicycle infrastructures have appeared to be effective. The second type of measures is the push measures which are disincentives discouraging car use. Parking policy is the main focus of such strategies. Modal shifts are important in sustainable development as it improves the efficiency of the transport system.

The ADICCT-project proves an added value to the INTERACT cluster project, also issued within the framework of "Science for Sustainable Development" (SSD). The latter research compares and deepens the acquired knowledge on sustainable development that is gained through several projects, one of them being ADICCT. The INTERACT project tries to take into account in a balanced way, the social, economic and environmental aspects in order to support a policy aimed at sustainable development.

## CONTACT INFORMATION

### Coordinator

#### **Frank Witlox**

Universiteit Gent (UGent)  
Sint-Pietersnieuwstraat 25  
B-9000 Gent  
Tel: +32 (0)9 264 45 53  
Fax: +32 (0)9 264 49 85  
frank.witlox@ugent.be

### Partners

#### **Bart Jourquin**

Facultés Universitaires Catholiques  
de Mons (FUCaM)  
Chaussée de Binche 151a  
B-7000 Mons  
Tel: +32 (0)65 32 32 93  
Fax: +32 (0)65 31 56 91  
bart.jourquin@fucam.ac.be

#### **Isabelle Thomas**

Université Catholique de Louvain  
(UCL)  
Place Louis Pasteur 3  
B-1348 Louvain-La-Neuve  
Tel: +32 (0)10 47 21 36  
Fax: +32 (0)10 47 28 77  
isabelle@uclouvain.be

#### **Ann Verhetsel**

Universiteit Antwerpen (UA)  
Prinsstraat 13  
B-2000 Antwerpen  
Tel: +32 (0)3 220 42 21  
Fax: +32 (0)3 220 43 95  
ann.verhetsel@ua.ac.be

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## BELGIAN SCIENCE POLICY

Louizalaan 231 Avenue Louise • B-1050 Brussels  
Tél. +32 (0)2 238 34 11 • Fax +32 (0)2 230 59 12 • www.belspo.be/ssd  
Contact : Georges Jamart



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