

DEMOCRITOS PROJECT - DEVELOPING THE MOBILITY CREDITS INTEGRATED PLATFORM ENABLING TRAVELLERS TO IMPROVE URBAN TRANSPORT SUSTAINABILITY

CLIENT: *European Commission*

YEAR: *2009 – ongoing*

DESCRIPTION OF ACTIVITIES

DEMOCRITOS is a project sustained by the European - Commission, focused on exploring the possibility to introduce transferable transport permits in order to achieve Greenhouse Gases emissions objectives.

The project introduces the “Mobility Credits Model” as a transport specific platform that will enable travellers, mobility providers, technology providers and transport planners to understand the implications of climate policy and increasing prices for greenhouse gas emissions and to identify new opportunities in urban mobility first and in extra-urban mobility later.

The policy measure

The concept of the “Mobility Credits” was already developed, with the support of Fondazione Italiana Accenture, for the case of Genoa.

The rationale of the Mobility Credits Model is based on: setting a quantitative target (e.g. a threshold of CO₂ production), making the approach path to the target measurable (estimating CO₂ emissions by different mobility behaviours) and finally applying a driving force to achieve the target from the current status.

Accordingly, the four basic pillars of the MCM are the following:

- Setting the target: in case of a metropolitan area, the “sustainable load of GHG (Greenhouse Gases)” in the area is taken into account. The general concept of MCM addresses all externalities associated with transport, but in this context, CO₂ produced from transport will be specifically addressed.
- Distributing credit budgets: the target fixed above is converted into a “total amount of credits”, distributed to all the travellers of the area. Various distributing schemes could be implemented, e.g. an equal amount of credits to each traveller.
- Setting the rules: a set of “consumption” rules is defined, taking into account current travel behaviours. Several dimensions can be included, like vehicle type (size, model, engine,...), trip length, quality of public transport from zone of residence, availability of transport alternatives, time of the day, etc. Accordingly, the speed of con-

sumption of the initial credit grant strictly depends on the mobility choices of travellers.

- Exchanging credits: travellers with needs higher than the assigned mobility budget can buy extra-credits from travellers with unused credits.

The project concentrates mainly on urban areas, on the basis of four case studies: Genova, Stuttgart, Lisboa and Craiova. In fact, at urban and metropolitan level the MCM can be profitably explored in combination with other policies for sustainable transport (e.g. concerning mobility management, congestion mitigation, vehicle emissions and fleet renewal).

Project activities

The project consists of five main activities:

- The theoretical development of the Mobility Credits Platform,
- The design of the MCM System and definition of the technology architecture to support the MCM,
- The analysis of MCM Long term effects on local systems and climate changes,
- The development of local case studies, coordinating activities among sites and defining a common approach for modelling tasks and indicators selection,
- The comparison of results, simulating various policy scenarios.

Beside the above, project management and dissemination activities are carried out.

Once the theoretical approach of MCM is defined, local case studies will be analysed making use of existing modelling tools and developing additional features in order to address the specific issues of simulating the MCM. A set of relevant indicators will be defined for analysing performances and results when simulating a common set of policy tests (as well as site-specific scenarios).

The Consortium

The DEMOCRITOS project is led by the Municipality of Genova, (ITA); other members of the consortium are Quaeryon S.r.l. (ITA), TRT Trasporti e Territorio

(ITA), SSP Consult Beratende Ingenieure GmbH, (GER), City of Stuttgart and Verband Region Stuttgart (GER), TIS.PT – Consultores em Transportes, Inovação e Sistemas, S.A.(PRT), Lisboa E-Nova – Agência Municipal de Energia e Ambiente de Lisboa (PRT) and SC IPA SA – R&D, Engineering and Manufacturing for Automation Equipments and Systems (ROM).

TRT is involved on developing and coordinating modelling activities among sites, thanks to the experience gained developing a prototype of “Mobility Credits Model” for the Municipality of Genova in

2006. Additionally, TRT is in charge for developing the case study for the city of Genova and takes part to the analysis of long term effects on local systems.

More information on the project web-site:

<http://www.democritos.ipacv.ro/>

MCM structure: Example of rules of consumption

