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Evaluation of measures aimed at sustainable urban mobility in European cities – Case study CIVITAS MIMOSA

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Abstract

The evaluation of measures in the field of sustainable urban transport is a relatively young research area. Within the CIVITAS Initiative –a European Commission co-financed program that supports cities in implementing innovative measures aimed at sustainable urban mobility - evaluation played a key role for the Commission from the beginning. Special horizontal work packages and evaluation support projects were established to support the CIVITAS implementation cities in finding answers to their most vital questions including: What are the outcomes of the measures in the cities? What are successful strategies from which other cities could learn? What are the most cost effective investments? Which measures could serve as good examples for other European cities? In the impact evaluation, the (quantifiable) effects of the measures are of interest. Apart from the direct measurable impacts, in process evaluation the analysis of the mechanisms, why a measure is successful, is investigated. What are the barriers and drivers for the measure and the measure implementation process?

The focus of this paper is the evaluation approach of CIVITAS MIMOSA, a project within the current CIVITAS phase entitled CIVITAS PLUS (2008-2012). The paper concludes with an outline for future improved evaluation approaches that could better bridge the gap between theory and practise.

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Keywords: evaluation; CIVITAS; sustainable urban mobility

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1. Introduction

The evaluation of measures in the field of sustainable urban transport is a relatively young research area. In the European context the project GUIDEMAPS (2004) and the MAX-success project for the first time provided comprehensive tools to actors at the city level for how to evaluate measures in the field of urban sustainable transport (the tool in MAX-success was called: MAX-SUMO; Hyllenius, Ljungberg & Smidfelt Rosqvist, 2004; Trivector, 2008). In Germany, the Research Association for Transport (FGSV) recently compiled an advise paper and guidelines on evaluation methodologies in transport to compensate for a long-standing lack of proper guidebooks and guidelines for the evaluation of sustainable transport measures (FGSV, in press).

Looking into transportation planning practise it sometimes seems that evaluation is unwanted; in other cases evaluation is wanted but resource limitations or inappropriate methodological approaches produce useless results. In an ideal scenario evaluation takes high priority and is conducted properly thereby producing valuable results and lessons to be learned. In the CIVITAS initiative, launched by the European Commission (EC) in early 2002, evaluation plays such a role. This paper presents the evaluation approach of CIVITAS MIMOSA, a project within the current CIVITAS phase entitled CIVITAS PLUS (2008-2012) as a case study. First, CIVITAS and the general approach will be presented to provide a background for the understanding of the MIMOSA evaluation approach. Finally, conclusions are drawn for how the still present gap between evaluation theory and evaluation practise could be better overcome in the future

2. CIVITAS and evaluation

CIty – VITAlity – Sustainability is the slogan of CIVITAS, an initiative co-financed by the European Commission and coordinated by cities: it is a program "of cities for cities". Cities are at the heart of local public-private partnerships within the projects. Political commitment is a basic requirement for receiving co-funding from the EC. Within CIVITAS cities are living 'laboratories' for learning and evaluating. Currently, more than 210 cities across Europe are a part of the CIVITAS community. The initiative finds itself in its third phase of implementation: CIVITAS I started in early 2002, CIVITAS II in early 2005 and CIVITAS PLUS in late 2008 within the 7th Framework Research Program (see also Fig. 1).

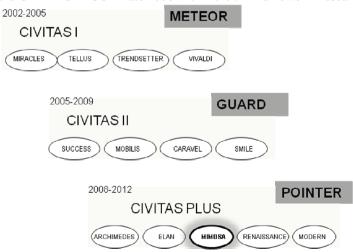


Fig. 1 The three CIVITAS phases, demonstration projects and evaluation support projects.

From the beginning of CIVITAS, evaluation played a key role for the EC, and special horizontal evaluation support projects were established for each phase (METEOR, GUARD and POINTER). The horizontal projects - in the current phase called POINTER - support the CIVITAS demonstration projects and cities through building up a common understanding of evaluation methodologies and Europe-wide dissemination in cooperation with the demonstration projects, organisation of the annual meeting of CIVITAS forum members and the development of policy recommendations for a long-term multiplier effect of CIVITAS. Further, POINTER is in charge of evaluation support activities such as providing trainings, the final evaluation and interpretation and recommendations including cross-site evaluation and transferability.

CIVITAS MIMOSA is one out of five demonstration projects in the third phase. In each demonstration project there is also a horizontal work package installed that is responsible for the coordination and support of the measure evaluation. In MIMOSA this management of project evaluation lies within the Chair of Integrated Transport Planning at the Berlin Institute of Technology. Fig. 2 presents the structure of the evaluation group within CIVITAS PLUS in the case of CIVITAS MIMOSA. Project evaluation management is the link between POINTER, the special support project for evaluation, and the city evaluation teams known as local evaluation management. All CIVITAS PLUS project evaluation managers meet twice a year with POINTER and the EC in the Evaluation Liaison Group to discuss and adjust evaluation activities at the cross-project level.

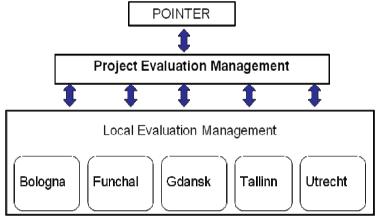


Fig. 2. Evaluation partners in CIVITAS MIMOSA

Thus, the local evaluation management team within the cities receives various forms of support in finding answers to their most vital questions including: What are the outcomes of the measures in the cities? What are successful strategies from which other cities could learn? What are the most cost-effective investments? Which measures could serve as good examples for other European cities? In the impact evaluation, the (quantifiable) effects of the measures were of interest. At the end of the project, a cross-site impact evaluation will be conducted by POINTER based on the reported data of each measure in every city. For this purpose, common indicators and areas of impact were established. Apart from the direct measurable impacts, the analysis of the mechanisms – why a measure is successful – is investigated. This type of evaluation is called process evaluation: Why did a measure become a success in one city while in another city, a similar measure failed? What are barriers and drivers for the measures and the measure implementation process? The results from CIVITAS should be able to convince the city politicians that the measures (if successful) make sense, offer them public support and will bring them votes in the next elections. Therefore, a solid evaluation comprised of valid designs and trustworthy data is necessary.

The evaluation approach chosen in MIMOSA was the result of a dialogue on the European level (Evaluation Liaison Group) and the learning process within CIVITAS.

The overall CIVITAS evaluation approach consists of an impact evaluation part and a process evaluation part. This approach was proposed and performed by the TELLUS project in CIVITAS I (Becker et al., 2007) and has been continued in CIVITAS II by the GUARD project with even more attention given to process evaluation than by METEOR in CIVITAS II (POINTER, 2009a). The demonstration projects (and specifically the cities) worked out an evaluation plan that specifies all relevant evaluation activities. The local evaluation approach includes both impact and process evaluation.

3. CIVITAS MIMOSA

MIMOSA stands for Making Innovations in MObility and Sustainable Actions. 16 partners from 7 countries work together towards three main long-term objectives: the improvement of quality of life, the reduction of transport-related CO2 and NOx emissions and an increase in the modal split towards sustainable modes.

The cities of Bologna (Italy), Funchal (Portugal), Gdansk (Poland), Tallinn (Estonia) and Utrecht (The Netherlands) have implemented in total 69 demonstration measures. The specific objectives are:

- the promotion of clean vehicles and fuels in private and public fleets through large investments and incentive campaigns to reduce the emissions of pollutants;
- the attraction of new customers to public transport through network improvements, fare
 integration, innovative services and security measures to reduce the number of private motorised
 trips;
- the adoption of access restrictions, road and parking management in order to reduce congestion (saving time and money) and to collect resources to be reinvested in public transport;
- the promotion of less fuel-consuming vehicles and more sustainable vehicle usage (e.g., car sharing) as well as healthier and cleaner mobility patterns (e.g., cycling and walking); this again, aims at reducing congestion and the emission of pollutants;
- the improvement of safety and security conditions in transport (for public transport, driving, walking and cycling) often with the help of innovative telematic systems;
- the improvement of passenger and goods transport management through the use of technology and innovative solutions to reduce traffic, inefficiencies and negative environmental impacts (MIMOSA, 2008).

The evaluation approach in CIVITAS MIMOSA consists of impact and process evaluation following the common CIVITAS guideline but also of concept evaluation, which is MIMOSA specific and analyses the outcome of research and technology activities (see Table 1). In this paper the focus is on impact and process evaluation, which are conducted in all CIVITAS PLUS projects.

Table 1. Three types of evaluation in CIVITAS MIMOSA

Types of evaluation	Objectives and evaluation procedures
Impact evaluation	Impacts are measured with valid data, and common CIVITAS indicators are used to ensure cross-site evaluation.
Process evaluation	Annual analysis of the measure implementation processes: barriers, drivers, reactions to them and lessons learned from them are assessed.
Concept evaluation	Research and technology development activities are analysed and described for a broader audience as well as put into the measure- and city context.

All measures will be evaluated and some of them selected for more in-depth evaluation; these are called focus measures. Experiences from previous CIVITAS phases showed that the focussing of resources is necessary for solid evaluation including cost-benefit analysis. A complete impact and a more detailed process evaluation should be conducted. The impact evaluation of the focus measures will include at least a before-after study and - if applicable - a control group approach to determine a correct business-as-usual scenario. Within CIVTAS MIMOSA, 20 out of the 69 measures were selected for evaluation as focus measures. Criteria for the selection of focus measures were the relevance to EC policy (European Commission, 2007) as well as to city policy on urban mobility and, furthermore, the level of expected impact, the level of innovativeness and whether it is prototypical for a group of measures. An overview on the selected focus measures in CIVITAS MIMOSA is given in the Appendix.

The well-elaborated evaluation guidelines provided by horizontal support projects (POINTER 2009a, b and c; GUARD, 2006) and the MIMOSA project evaluation manager (Becker, Dziekan, Abraham, Kraffel & Gualdi 2009; Kraffel, Becker, Dziekan & Abraham 2010) follow classic evaluation theory and are already adapted to the CIVITAS community and to the evaluation of urban transport measures conducted by cities. These guidelines include a detailed description on theories of impact evaluation, for instance, the recommendation to use control group designs and before-after data collection. The manuals and several trainings provide knowledge to the people responsible for conducting and reporting on evaluation activities in the cities. In the following chapters the impact and process evaluation approaches of CIVITAS MIMOSA are explained in more detail.

4. Impact evaluation

According to classic evaluation theory (FGSV, in press; Gollwitzer & Jäger, 2009, Bortz & Döring, 1995; European Commission, 1999; O'Flaherty, 1997; Patton 1997 and 2002) the first step to good impact evaluation is to set clear objectives for a measure: ideally these should be in a SMART structure (Specific, Measurable, Attractive, Reachable and Timed). The next step is to ensure that the intervention or measure implementation is clear and relates to its objectives. Ideally implementation is developed based on knowledge about the underlying mechanisms of how a measure will, for instance, change behaviour. This knowledge can be taken from literature or from the experiences of others that are transferred via good practise examples. The latter kind of knowledge transfer is often the most common way in CIVITAS projects. Having clear objectives for a measure allows for the proper selection of impact evaluation indicators that will monitor whether the objectives were reached and to what extent. According to evaluation theory, data collection should be conducted using valid designs. This preferably entails the inclusion of a control group/site and before-after measurements. In CIVITAS common core indicators were developed that ensure cross-site evaluation at the end of the project. Those core indicators are grouped into five effect areas: economy, energy, environment, transport and society (see also

Table 2). For a measure that promotes the use of car sharing, indicators could be: average operating revenue, capital costs and average operating costs from the impact area "economy"; awareness and acceptance levels from impact area "society" and /or average modal split for the impact area "transport". These common core indicators presented in

Table 2 rank as top choices in indicator selection. Furthermore, the cities were given the liberty to introduce other, more measure- or city specific, indicators.

Table 2: Common core indicators in CIVITAS PLUS (based on POINTER, 2009b)

Evaluation areas	No.	Indicator
	1	Average operating revenue
ECONOMY	2A	Capital costs
	2B	Average operating costs
ENERGY	3	Vehicle fuel efficiency
	4	Fuel mix
	5	CO level
	6	NO _x level
	7	Particulate levels
ENVIRONMENT	8	CO ₂ emissions
	9	CO emissions
	10	NO _x emissions
	11	Small particulate emissions
	12	Noise perception
	13	Awareness level
	14	Acceptance level
SOCIETY	15	Perception of service accessibility
	16	Relative travel cost
	17	Perception of security
	18	Accuracy of time keeping
	19	Quality of service
	20	Transport safety
	21	Traffic flow (peak)
	22	Traffic flow (off-peak)
TRANSPORT	23	Average vehicle speed (peak)
	24	Average vehicle speed (off-peak)
	25	Freight movement
	26	Average modal split (vehicle/ km)
	27	Average modal split (passenger/ km)
	28	Average modal split (trips)
	29	Average occupancy

Although well-prepared guidelines and trainings were provided to the local evaluation teams, still many discrepancies can be reported when comparing evaluation theory to evaluation practise.

In practise it was often seen in the actual planning and conducting of evaluation procedures, that the selection of an indicator was not linked to objectives. For example, a measure aims to achieve an increase in public transport users, but in the local evaluation plan no indicator on modal split or public transport usage was included. Another problem is that in the cities, the focus is on production of "output". In other words, it seems to be more important for the local evaluation teams, for instance, to count newly purchased buses or numbers of distributed leaflets than to look at the overall outcome of the measure. Some outcomes in this case could be changes in modal split or at least changes in attitudes towards public transport use.

In projects as comprehensive as the CIVITAS projects that really implement innovative measures, it is not uncommon for the planned implementation to change during the course of the projects, thereby, influencing evaluation. One possible scenario is that the government did not approve a planned change in legislation, and therefore, a measure could not be implemented as initially planned. This was the case for

a measure in the MIMOSA city of Bologna where mobile gates to control reserved bus lane violations by private cars were to be implemented. However, intended change of legislation was blocked and therefore the measure was stopped.

When reviewing the evaluation designs in some cases it becomes evident, that before data was not sufficiently collected and only the after measurements have been conducted. But what does a calculation of P&R users after a new quality bus line is implemented tell us if there is no before situation to compare to? Furthermore the evaluation approaches (Becker et al., 2009) show that a control group/site approach is seldom used, and/or some samples are too small to provide relevant and statistically significant data.

Another methodological evaluation problem that the cities face is that sometimes the effects of complex measures bundles cannot be disentangled. For instance, a new integrated public transport fare system is implemented through several measures such as an information campaign, the improvement of some public transport transfer stations, changes in the tariff system and so on. But in order to follow the CIVITAS MIMOSA evaluation structure, the information campaign must be evaluated alone since only this measure is co-financed by the EC.

Local evaluation teams could very well profit from each other's knowledge and experiences. However, a lack of communication and of knowledge transfer activities has been identified. To partially overcome this deficit a new communication instrument was developed and successfully exercised within MIMOSA: the method of peer-review sessions. Local actors (site leaders, measure leaders, dissemination managers and evaluation managers) participated in guided sessions to review the drafts of measure results reports of other partner cities. They commented on measure descriptions, indicator selection and evaluation approaches. The working session and the intensive feedback provided by their peers was highly appreciated.

As a part of the focus measure impact evaluation, a cost-benefit analysis will also be conducted (Kraffel, Becker, Dziekan & Abraham, 2010; POINTER 2009d; Preston, 2009). The idea behind this request from the EC is that they expect facts to be extracted that could be distributed to other European cities regarding the effectiveness of CIVITAS measures. This was meant to encourage other take-up cities to implement similar measures. Future data will show whether or not this is a feasible approach.

Impact evaluation provides data on **what** the effects of a measure or measure bundle were. But **why** a measure was a success or even more importantly **why** it failed, can only be answered by process evaluation

5. Process evaluation

CIVITAS PLUS is a transition programme. It aims to achieve a fundamental change in society with regard to more sustainable urban mobility and transport systems. This change in thinking, organising and acting is called transition. Therefore throughout all phases of the measures, the preparation, implementation and operation, the drivers and barriers, as well as information communication and participation processes are playing a crucial role. (POINTER, 2009e).

The main objective of process evaluation is to gain insights into the 'stories behind the figures' and to learn from them. Throughout the course of former CIVITAS projects, evidence showed that the factors influencing the outcome of the measure, such as the drivers of and barriers to success are of high importance both to the demonstrators and to the evaluation team. Especially in cases where implementation could not be carried out as planned, information on why it did not work out is crucial for follow-up projects (see CIVITAS I TELLUS project, final evaluation report: Becker et al 2007).

Process-related evaluation analyses the actual implementation of the measures and the reasons for changes and deviation from the plan.

Together with the results of the impact evaluation, the documentation of the process evaluation will be the basis for the information and recommendations for other European cities. This is one common goal of the CIVITAS initiative. To accomplish this task, relevant data must be provided at the measure level; data must be collected and analysed at the city level, and the results must be assessed at the measure, city and EU level

The CIVITAS PLUS process evaluation design is set to construct three building blocks with different areas of focus and different deliverables: Measure Process Evaluation Forms (MPEF), Focus Measure Process Evaluation Forms (FMPEF) including learning history workshops and Process Topics & Issues (Fig. 3).

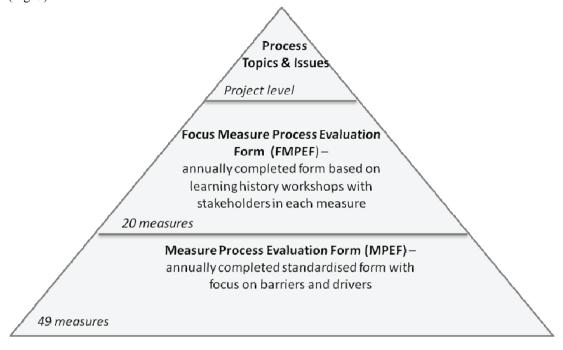


Fig. 3. Process evaluation building blocks within CIVITAS MIMOSA

Measure Process Evaluation constitutes the basis of the process evaluation. All 336 CIVITAS PLUS / all 69 MIMOSA measures will be assessed in the same way with information gathering based on a semi-closed questionnaire once a year. Besides general administrative information and content information, the questionnaire (The Measure Process Evaluation Form = filled in questionnaire) also contains a section on content regarding the reporting period: this is the part containing information and statements concerning barriers/drivers during the process, actions taken and success/failure analysis for the respective reporting period (POINTER, 2009e).

The Focused Measure Process Evaluation Form includes an in-depth analysis of the previously selected focus measures. It is characterised by an information gathering approach with the method of 'learning history' (van de Lindt, Emmert & Roelofs, 2009). 'Learning history' workshops are carried out once per year with all stakeholders involved in the measure. The Focused Measure Process Evaluation Form is structured in the same way as the Measure Process Evaluation. It contains further detailed information and statements concerning barriers/drivers and success/failure, which are to be filled out based on the outcome of the learning history workshop. So far, the experiences with learning history workshops have been very promising and positive for the MIMOSA project. Although much extra effort to prepare the

workshop and to gather relevant stakeholders is required, it provides valuable insights, and in some cases, has even positively influenced the further development of the measure implementation.

The third building block in process evaluation in MIMOSA is a detailed analysis of important topics and issues that were relevant for the process. As a method for data gathering, MIMOSA chose a written approach for the first report in which the project evaluation management team collected and integrated statements provided by local evaluation teams. The first topics and issues report was entitled "A complicated start / a start with barriers - what were the reasons that MIMOSA could not take off as it was planned after signing the contract". The data-gathering method changed in the second process topics and issues round to a moderated workshop during a consortium meeting with participants from all cities. The second analysis focussed on "citizens and stakeholder participation" as a crucial factor for measure success. The third topics and issues workshop will probably deal with the question of "upscaling and transferability" of successful measures within MIMOSA.

All results will be used for a final process evaluation both on the measure and on the city level, and these will be reported together with impact evaluation results in measure results reports. Those final reports are due by the end of the project.

6. Conclusion

In MIMOSA and also in CIVITAS PLUS, generally speaking, many efforts are undertaken to apply good evaluation practise in order to show the effects of implemented measures and to provide information and lessons learned to other cities and future projects. However, despite comprehensive plans, support activities and preparations provided by evaluation management, the evaluation activities and results conducted and reported in the end (may) deviate from the guidelines. It is important to state that there is a gap between ambitious evaluation ideas and concepts based on classic evaluation theory and actual evaluation activities conducted on the local level within the cities. Reasons for this are multifaceted, for instance timing problems, resource limitations or a lack of skills at the local level.

What can be done to improve the evaluation approach in CIVITAS even further and to bridge better the gap between theory and practise?

Evaluation experts, also at the local level, should be involved in the planning of the description of work from the first idea on. Third-party evaluation could provide neutral and competent support to the local evaluation team.

The willingness to evaluate and the acceptance of evaluation as a useful and essential component of projects are key issues. Therefore, the increased understanding of the urgency and helpfulness of evaluation needs to be fostered even more by direct contacts and trainings on the local level. It is essential to provide good examples, thereby marketing a different, more modern view on evaluation not as an end in itself but as an opportunity to influence a measure even during its implementation and to productively learn from impact and process evaluation results.

Another problem that occurs in MIMOSA is that the final reports on the measure results must fulfil two – sometimes opposite – objectives: first to justify the tax payers' money invested in the measure and second, to outline exactly what the measure was about and how it was evaluated. The latter implies also that "bad" results or not satisfying results need to be reported and the processes need to be analysed. In the case of some cultural contexts, this still requires a change in attitude.

Discussions and experience exchanges in the Evaluation Liaison Group have led to the tentative conclusion that current CIVITAS period projects are trying to make the best out of too few resources spread out over too many measures. From an evaluation point-of-view, it would have been better to finance a bigger citizen panel in each city that could catch the effects of many measures in a city in an efficient way, planned and monitored by the project evaluation manager. Therefore, a proposal for setting

up future projects is: a) to allocate an overall evaluation budget (on the project evaluation management level and/or even POINTER level); b) to ensure that cities allocate sufficient budgeting on the local level for evaluation; c) to focus on measure bundles and, thereby, to have fewer numbers of measures to evaluate.

However, in the broader scope, CIVITAS is a forerunner in the evaluation of measures aiming at sustainable urban mobility in European cities. The programme is defining standards and sensitising cities to the importance of evaluation: evaluation not as end in itself but as a valuable information source to adjust measures while they are being implemented and to learn from the process. In CIVITAS many experimental and innovative measures have been implemented and tested under real circumstances. Those measures are well documented and evaluated, and all information is accessible for the public in English. It is a great resource for further steps towards a common sustainable urban transport policy and the implementation of measures aiming at sustainable urban mobility.

CIVITAS MIMOSA will definitely act as a catalyst for an evaluation-friendly atmosphere in the cities of Bologna, Gdansk, Funchal, Tallinn and Utrecht and hopefully also beyond. It will show that good evaluation is worth the effort to bridge the gap between scientific research and applications in real life. The final results of CIVITAS MIMOSA will be available in early 2013 (see www.civitas-mimosa.eu).

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Internet Sources: www.civitas-initiative.org www.civitas-mimosa.eu

7. Appendix

Table 3: Focus measures selected in CIVITAS MIMOSA

Number	Title	Short description
BOL 1.1	Mini-fleet of Clean Vehicles for PT	Initially, a feasibility study to analyse different clean technologies will be conducted. In a pilot study, a mini-fleet with low-emission buses will be installed for a 2-year period.
BOL 1.2	Cleaner Private Vehicles	Implementation and modification of incentives funding system to promote private vehicle renewal.
BOL 6.1	Car Sharing	Increasing car-sharing fleet including equipment with alternative fuels by increasing reserved parking space and marketing campaigns.
BOL 8.3	Cisium: New Traffic Control Centre	Interactive, real-time traffic communications via TMC protocol including web-based dynamic traveller's support.
BOL 8.5	Stars: Automatic Enforcement of Traffic	Equipment of new crossroads with the automatic enforcement system (Stars) to detect and fine red light crossing.

	Lights	
FUN 1.2	Electric and Hybrid Vehicles	Implementing a service of rental electric scooters/bicycles and offering of more attractive conditions for "green" vehicles for parking in the city centre.
FUN 2.1	Green PT Line	Implementing green PT service in the western part of the city with high standard in terms of environment, accessibility, safety, service levels, information and service quality.
FUN 2.2	Control System for Dial and Ride Service	Experimentation with a multi-purpose dial-and-ride service with 5 new vans granting complete accessibility to the disabled and people with physical limitations (chronic or temporary).
FUN 6.2	Bus and Bike	Providing tourists/citizens the opportunity to transport bicycles in buses that lead to the only bicycle path in Funchal.
GDA 4.1	Mobility Management: Marketing Tram	Installing an innovative web-based social network to raise awareness of alternative travel options and promote public transport.
GDA 5.1	Safety and Security: Anti-Vandalism	Use of CCTV on PT vehicles to capture acts of vandalism and developing a new system liaison between PT driver, police and operating company.
GDA 6.1	New Cycles	Introducing a new style of city bike for everyday use and placement in 'for hire' locations while promoting cycling as a realistic and 'cool' way of getting around.
TAL 5.1		Build an optimised and user-friendly infrastructure for public transport activities that will encourage people to use public transport especially infrastructural improvement of bicycle tracks and crossings.
TAL 6.1	Eco-Driving Training Programme for Bus Drivers	Carrying out eco-driving training courses for bus drivers and trainers after the adaptation of the training programme to Tallinn conditions.
TAL 8.1	Bus Lane and Red Light Cameras	Installation of red light cameras to decrease crossings during red traffic light and illegal use of bus lanes.
UTR 4.1	Mobility Management Policy	Enlarging the circle of private organisations in the area of mobility management, thereby, signing contracts with private organisations with respect to a joint undertaking in public-private partnerships.
UTR 4.3	Rewarding Mobilists for Avoiding Rush Hour	Car drivers are rewarded if they avoid rush hours during given months during major road construction projects.
UTR 5.1	Utrecht Road Safety Label	Development of traffic and road signs for a recognisable, uniform school environment and improving road safety behaviour of children and their parents.
UTR 7.2	City Distribution by Boat	Conducting of market survey/ feasibility study to identify new customers/ suppliers for waterborne transport in the city centre. As a result, there may be enough potential for using a second boat, next to the zero-emission boat that will be put into operation.
UTR 7.4	Distribution Centres for Fresh and Perishable Goods	Implementation of enhanced bundling of fresh and perishable goods to catering businesses in the city centre and stimulating the deployment of cleaner vehicles for freight transport.