e-atomium

Transport & mobility training for energy agencies & local actors

Mobility Management -

Training manual

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THE E-ATOMIUM PROJECT

e-Atomium is a training project funded through the STEER programme which is part of the European Commission's Intelligent Energy Europe programme and will be implemented in Belgium, France, Ireland, Italy, The Netherlands and the United Kingdom. The aim of e-Atomium is to strengthen the knowledge of local / regional managing agencies in the transport field and to accelerate the take up of EU research results in the field of local and regional transport. The beneficiaries of the project are managing (energy) agencies and local actors who want to play a bigger role in the transport field.

The following compendium contains results of EU research-projects and complementary results of national research-projects and is mainly based on the Mobility Management Manual which has been developed by Robert Pressl and Karl Reiter (both FGM-AMOR, Forschungsgesellschaft Mobilität gemein. GmbH – Austrian Mobility Research) within the PORTAL project in 2002. This material was modified for the demands of the e-ATOMIUM target group **in 2006**. The authors especially thank the partners and collaborators of the Treatise and Competence projects.

A complete list of the studied projects, involved consortia, and cited literature is given at the end of the material. All materials can be downloaded from the project website: www.e-atomium.org

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1. INTRODUCTION

Most European local authorities are confronted with increasing problems of congestion and pollution due to the steady growth of urban motorised traffic. People moving out of the cities due to bad environmental conditions, increasing car ownership, and faster travel have given rise to dispersed urban structures, leading in turn to greater volumes of motorised traffic. But transport is also a challenge in terms of climate protection: By 2010, transport will be the largest single contributor to greenhouse gas emissions.

To turn around these trends, reduce these problems efficiently and thus raise standards of living in our cities, it is necessary to:

- carry out a true modal shift from private motorised traffic towards more sustainable modes of transport like walking, cycling, public transport;
- implement urban planning strategies based on principles like urban density, improved mixed use of space and limited new urban developments to areas served by public transport;
- develop the concept of responsible car use and introduce less polluting and quieter vehicles;

At the same time, specific organisation methods and innovative technologies in terms of energy saving and the environment protection must be introduced. It is moreover crucial to raise awareness among citizens about the effect of their choice of transport mode on the quality of urban environment.

The training activities within e-Atomium will address all the mentioned goals by explaining the following themes:

Mobility Management

- School Travel Plans
- Company & Administration Travel Plans
- Tourism Travel Plans

Awareness raising and communication Campaigns

- Target group dedicated communication
- Eco-driving
- Topic related communication
- Organisation of an awareness raising event

Alternative fuels & vehicles

- Biofuels (incl. pure vegetal oils)
- Comparative analysis of all alternative fuels & vehicles
- Environment appraisal of community/municipal vehicle fleets

Demand Management

- Road pricing schemes
- Access management
- Car free cities & town planning
- Vehicle restrictions

This document is mainly addressing the theme "**Mobility Management**".

"The big problem that urban authorities will have to resolve, sooner than might be thought, is that of traffic management, and in particular the role of the private car in large urban centres. … The lack of an integrated policy approach to town planning and transport is allowing the private car an almost total monopoly".

White Paper on European Transport Policy:
"European transport policy for 2010: time to decide", COM (2001) 370.

2. TRAINING GOALS AND STRUCTURE

2.1 Training goals

The trainees should gain the following skills and knowledge:

- To realize the context between energy efficiency and soft transport measures as well as the impacts of an implementation of soft measures
- To realize the context between hard policies and soft policies and to see the value and impact of Mobility Management
- To realize transport problems on site level and to define these problems
- To set up an analysis and implementation programme for these sites and situations
- To give advise or direct consulting of city administrations and other stakeholders for the introduction of MM schemes.

2.2 Training structure

The following content on mobility management is mainly based on the Mobility Management Manual which has been developed in the PORTAL project in the Fifth Framework Programme and MOMENTUM[1] / MOSAIC[2] projects in the Fourth Framework Programme. Complementary elements come from the project MOST[3] and from other mobility management projects that sometimes are subject of other EU-programmes such as SAVE, LIFE etc.

After giving a theoretical framework of mobility management in chapter 3, some case studies are included for your benefit under chapter 4. Chapter 5 gives some exercises and tasks for self study. Though these written materials can only provide information and results to a certain level of depth, recommendations for further reading and for more details will be given under chapter 6. All projects or results and approaches that are mentioned in these written materials are listed under chapter 7 – Literature and websites. To conclude, a glossary with some important Mobility Management concepts is included under chapter 8.

This written material has to be taken as a basis for the related key topic projects of „Mobility Management“ (School Travel Plans, Company travel plans and Tourism travel plans). In these manuals very detailed information on these kinds of travel plans is given.

[1] MOMENTUM - Mobility management for the urban environment
[2] MOSAIC - Mobility Strategy Applications In the Community
[3] MOST - Mobility Management Strategies for the Next Decades

3. MOBILITY MANAGEMENT

3.1 What is mobility management?

Mobility management (MM) activities are a “Soft Policy” approach. MM can be used as independent activities but also together with “Hard policies” like infrastructure investments. Here it can maximise the benefits of the investments.

Mobility Management is primarily a demand-oriented approach to passenger and freight transport that involves new partnerships and a set of tools to support and encourage a change of attitude and behaviour towards sustainable modes of transport. These tools are usually based on information and organisation, co-ordination and require promotion.

The Mobility Management Concept includes a variety of roles and functions: mobility manager, mobility centre, mobility consultant, mobility office, mobility co-ordinator, mobility plan.

And it contains the Mobility Management services: information and advice, consulting, awareness and education, organisation and co-ordination, sales and reservation, transport related products and services.

3.2 Challenges of Mobility Management

MM meets the challenges posed by an ever increasing car mobility and car dependency and supports sustainable mobility in a very economic way, thereby:

- supporting the accessibility of our economic centres,
- improving on the quality of life, health and safety,
- reducing the environmental impact of mobility

MM is a very economical way of promoting sustainable mobility. It can help to secure the accessibility to the economic centres, optimise the use of expensive infrastructure and decrease the need for even more infrastructure investments. MM develops new skills and professions, improving the competitiveness of public transport companies and related workfields.

More specific:

- **Congestion:**
  Congestion causes huge losses, both in terms of lost time, impact on the environment, and decreased accessibility. This can be avoided by promoting higher car occupancy and the use of other transport modes, and by helping to find the most effective ways in which to achieve this.
- **Access:**
  Limited access is one of the main obstacles of growth for some institutions, but also for finding jobs. MM measures will improve access to leisure sites, airports but also improve the mobility of persons without a car, thereby improving their chances for finding and keeping a job.
- **Better use of infrastructure:**
  Enormous amounts of money are spent every year on the construction, operation and maintenance of infrastructure, be it roads, rails or vehicles. MM aims at the better use of these infrastructures, by promoting the use of public transport and higher car occupancy. In this way, infrastructure investments become more economic and new investments, especially in roads, become less necessary.

- **New jobs:**
  MM will develop and test new jobs and new job profiles, thereby promoting economic growth. Mobility management develops new job markets. One example is door-to-door service. In many EU-research works and demonstrations these new services are mentioned. The strengthening of the transport services sector leads to a revival of the labour market as transport services - from car park surveillance to mobility information - need to be delivered on the spot and cannot be transferred to low-wage countries.
- **Health:**
  The more sustainable transport modes include bicycling and walking – and this contributes to health. The sustainable modes also cause much less accidents. So the most effective MM measures will in this way help to improve health and thereby decrease losses caused by health problems
- **Environment:**
  MM will lessen impacts on the environment in terms of land use, emissions, noise and effects on wildlife etc;

3.3 Link with EU policies and contribution to EU-policies

The Field of Mobility Management is linked with European policy in different ways:
European Commission:

- The Citizens Network Green paper
- Developing Citizens Network, 1998
- White Paper on Common Transport Policy
- Towards an urban agenda in the EU
- Common Transport Action Plan 1998-2004
- The Common Transport Policy - Sustainable Mobility: Perspectives for the Future
- Work Programme for Sustainable Energy
- White Paper "European transport policy for 2010 - time to decide"
- Green Paper "Towards a European Strategy for the security of Energy Supply"

European Council:

- Council Strategy on the Integration of Environment Development into the Transport Policy

Committee of the Regions:

- Trans-European Networks, Transports, Information Society Consulting role

Economic and Social Committee:

- Use of Public & Private Transport in the Urban and Pre-urban environment

Mobility Management especially contributes to the common transport policy of the EU but also to many objectives in the fields of employment, environment, health and regional policies. Within the Common Transport Action Plan 1998-2004 and "The Common Transport Policy - Sustainable Mobility: Perspectives for the Future" as well as within the “Work Programme for Sustainable Energy”, the White Paper "European transport policy for 2010 - time to decide" and the Green Paper "Towards a European Strategy for the security of Energy Supply" the following aspects are addressed.

“...to encourage the development of efficient and environmentally friendly transport systems that are safe and socially acceptable.”

MM does not directly support the development of these systems, it directly supports the Use of existing and new systems.

"[…] CTP is to serve the citizens of Europe"

MM serves this goal by targeting all citizens to enhance their mobility choice.
MM decreases the dependence on the car, thereby opening up a wider choice on how to be mobile for each citizen. This is especially important for those groups of the population without a car – young people, old people, many women, poor people and jobless people.

"To ensure that transport systems are safe, environmentally friendly, consumer friendly and quality driven ..."

MM promotes the use of sustainable modes of mobility. MM tools are, among other things, based on information, communication and promotion. So, for the citizen, it becomes much easier to get specific mobility information – e.g. on special fares, timetables, tax incentives and so on. Mobility advice and consultancy is there as a new type of service.
As described in the Work Programme for Sustainable Energy, with Advancing knowledge on innovative measures in urban transport the EC aims to

- The development and introduction of new transport policy concepts in cities, where 80% of the EU population lives, are a major challenge for policy makers.
- Innovative information and awareness campaigns and mobility management initiatives can lead to an increase in the use of sustainable transport modes and to a decrease in car use.
- There is still a lack of understanding of how successful campaigns should be developed and how potential impacts can be predicted.
- In the field of mobility management there is a need to develop new approaches for mobility management in small and medium sized cities and to assess the potential of integrated mobility management and planning approaches.
- Research and co-ordination activities are needed to improve the basic understanding of these issues.

The policy objectives set in the White Paper "European transport policy for 2010 - time to decide" and the Green Paper "Towards a European Strategy for the security of Energy Supply" are the following.

i) Climate Change towards energy savings in the field of transport

The White Paper shows the huge negative impacts of a high share of individual car traffic in the modal split:

"More than half the oil consumed by transport is accounted for by private cars, […]"

Mobility management is effective and cost efficient to reduce car usage.
Shifting the balance of transport modes involves

"[...] urban transport policy in major conurbations, to strike a balance between modernisation of public services and more rational use of the car, since compliance with international commitments to curb CO_2 emissions will be decided in the cities and on the roads." (p. 16)

In many cities, a high awareness exists already for climate protection. Sometimes the share of transport is underestimated and also the potential of soft measures for solving transport problems to reduce the

negative impacts of transport in cities. Mobility management will contribute to convince decision makers and planners.

ii) Transport as integral component in energy policy

The Green Paper "Towards a European Strategy for the security of Energy Supply" suggests a linkage between energy saving activities and transport:

> *"For personal mobility, a long recipe of measures emerges, […] better public-private transport links.... to getting people out of cars and onto their feet or bicycles, and making roads safer and more accessible for non-car users" (p. 7).*

Big impacts on energy consumption in transport can be expected from soft measures as mobility management and travel awareness. At the same time, the required efforts and investments are relatively small and hence, very suitable for start-up projects at the local level.

iii) Integrating Health, Well-Being and Transport

The White Paper also describes the health problems related to motorised transport:

> *"Urban transport ... emission from road vehicles ... which have a disturbing effect on the health of town and city dwellers, in particular nitrogen oxides, which cause peaks in ozone levels, and unregulated small particles. The most vulnerable sections of the population, such as children, the elderly and the ill (with respiratory, cardiovascular or other diseases), are the chief victims [...]" (80).*

By addressing planning – before it happens – the effectiveness of mobility management can be multiplied: problems are prevented before they come up. This results in a high-quality and healthy living environment for all citizens.

The elderly and children will also benefit from the fact that sustainable planning usually implies mixed structures and strengthening of proximity. Walking and cycling get more attractive and important facilities for daily life are within the reach even without a car. This is also essential for female mobility, as women do far more trip chains than men.

iv) Get long-term educational and awareness effects

The following demands are phrased in the White Paper:

> *"[...] the Commission proposes to place the emphasis on exchanges of good practise aiming at making better use of public transport and existing infrastructure." (p. 20)*

> *"[...] identification and dissemination of best urban transport system practice, including urban and regional rail services, and best practice in management of the relevant infrastructure." (p. 85).*

Marketing and especially convincing decision makers can be supported by showing best practice elsewhere. If there are good examples in marketing campaigns in growing sectors such as the car industry, this will state an example. Often, there are great examples of travel awareness and mobility management

v) Personal approaches to raise capacities

Further, the action programme of the White Paper includes the development of

"[...] administrative capacities of the candidate countries, notably by training inspectors and administrative staff responsible for enforcing transport legislation." (p. 104)

Capacity building in the new member states is a core aim and will take place in various ways:

vi) Behaviour change & alternative infrastructure

From the "Action plan to improve Energy Efficiency in the European Union":

"[...] incentives for optimal occupancy of vehicles, promotion of new and alternative infrastructure, modal shifting and modal integration, changing behaviour regarding mobility." (p. 6)

Core of Mobility Management is to achieve a change towards more sustainable mobility attitudes and behaviour.

4. OBJECTIVES AND CONCEPT OF MOBILITY MANAGEMENT

4.1 Mobility Management in relation to Traffic System Management

To reach the described goals and reduce the current problems in transport we can follow quite different approaches. Mobility Management is at present very promising. Its essence can be grasped best by showing its place within two distinct dimensions of transport planning. Each dimension has to be understood as a continuum between two opposite poles. Moreover, the figure shows the relation between Mobility Management and Traffic System Management.

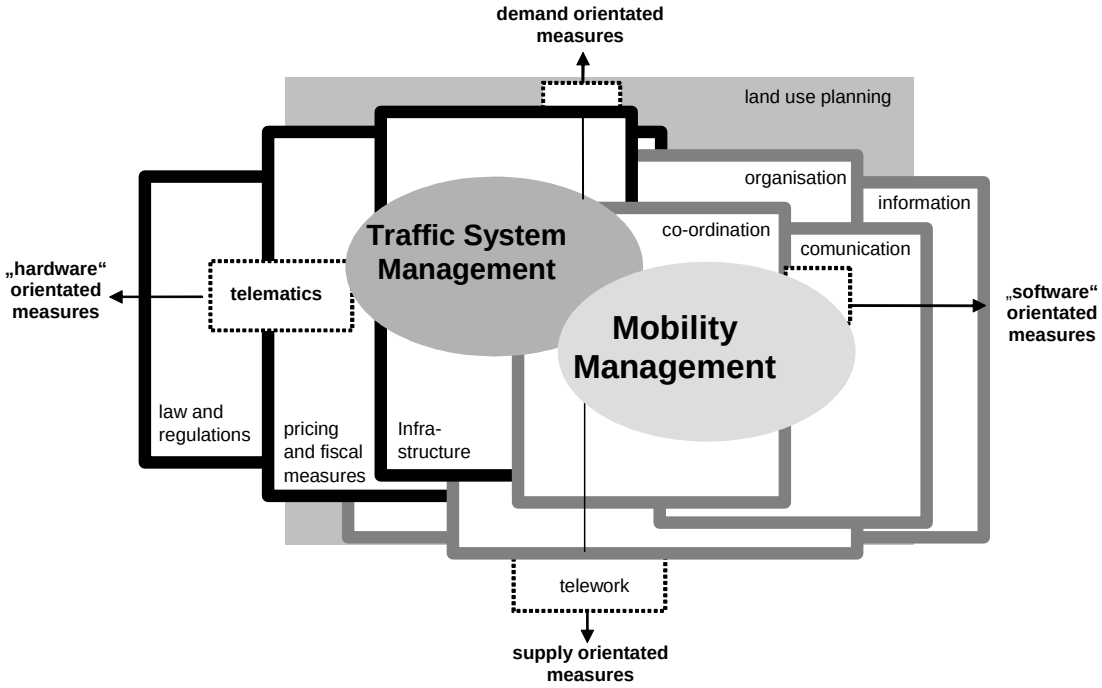

Fig. 1: Mobility Management in relation to Traffic System management taken from the MOMENTUM / MOSAIC Mobility Management User manual.

The first dimension is **supply and demand**. Mobility Management tries to influence pre-trip mode choice. Individual mobility needs, also known as the demand for travel, is at the centre of attention for all measures. This results in services for target groups originates. Mobility Management is differentiated from Traffic System Management in that TSM mainly tries to optimise road capacity by influencing traffic flows.

The second dimension is the distinction between **'hardware' and 'software orientated'** measures. 'Hardware' refers to the construction and regulations side of transport planning (e.g. infrastructure, laws, regulations, tax and pricing schemes), which are considered obligatory to the user. The 'software orientated' measures of Mobility Management emphasise organisation and service. It deals with human mobility behaviour through information, communication, organisation and co-ordination, which have become increasingly important in today's society. Also, the use of mainly existing infrastructure makes MM a less costly approach.

A possibility for discussion or for an assessment exercise for students on these contents can be found under chapter 5.

4.2 Objectives of Mobility Management

The main aim of Mobility Management is a more sustainable mobility. This means to ensure that people's and organisations' existing mobility needs, including the transport of goods, are met, while also meeting the goals of environmental integrity, social equity and economic efficiency.
This can be broken down into several concrete goals:

- to encourage a change of attitude and behaviour towards greater use of sustainable transport modes, i.e. public transport, collective transport, walking, cycling and intermodal combinations
- to improve (sustainable) access for all people and organisations by strengthening the conditions for sustainable modes
- to satisfy mobility needs via a more efficient and integrated use of (existing) transport and land use infrastructure
- to reduce traffic (growth) by limiting the number, length and need of motorised vehicle trips
- to improve co-operation between transport modes and facilitate the interconnection and inter-operability of existing transport networks
- to increase the economic efficiency of the entire transport system

A possibility for discussion or for an assessment exercise for students can be found under chapter 5.

4.3 Common Mobility Management Concept

There are three different organisational levels within MM (see following figure 2):

- **Policy level**: This is where Mobility Management is initiated and where it is supported afterwards. Promotion and lobbying of its ideas and what MM is about has to start on this level. Here the creation of alliances is crucial. For cities/provinces this level decides the laws, the directives for funding, etc. For companies this level is the one of the boss.
- **Management level**: on this level, Mobility Management is organised. It can be done on an urban/regional level when the Mobility Services are provided for the general public in the area. Or it can be done at site level with specific services for site users only.
- **User level**: Here, Mobility Management gets into direct contact with the user. This level includes the implementation of all Mobility Services that are offered to the end user, both on an urban/regional or a site level.

The complete figure is also valid for a company.

It is not necessary to start Mobility Management with all the elements shown in figure 2. Depending on local conditions, one could start at different points and reach different levels of system initiation. Sometimes it is rather fruitful to concentrate resources on one element before building up a full-scale approach step-by-step.

ORGANISATION LEVELS WITHIN MM

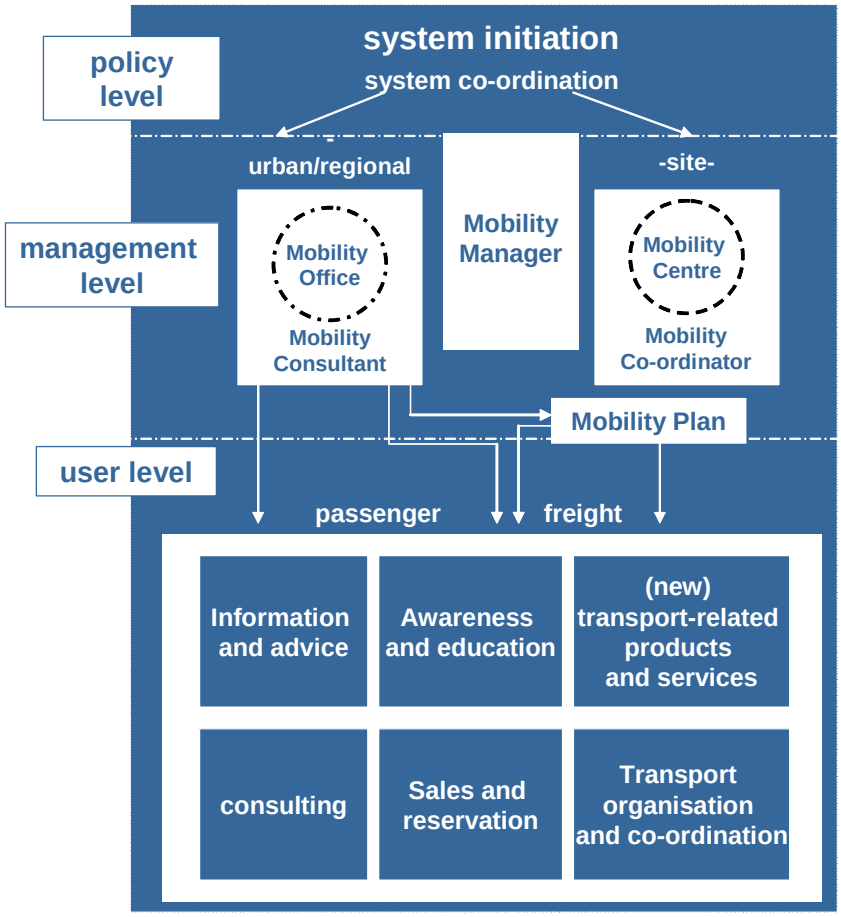

Fig. 2: Organisation levels within MM. Taken from the MOMENTUM/MOSAIC Mobility Management User manual.

For a more detailed view including practical examples click to the website of the EUROPEAN PLATTFORM OF MOBILITY MANAGEMENT (EPOMM) www.epommweb.org

While this common concept might leave the impression that MM is a rather static concept, the MOST project (under the EU-fifth framework) found, that MM actually is a very flexible concept and that its tools are very complex. A too strict understanding of the elements of MM as defined in the common concept might be disadvantageous to a broad spread of the concept and discourage from replication. Therefore, the MOST project in addition stressed the importance of the process of implementation, focussing especially on the tasks required for successful MM. This regards convincing leadership, qualified personnel, a vision to follow as well as participation of users and stakeholders and more specifically includes: initiating to start MM, "selling" the concept, linking up with and gaining the support of the end-users (considering user-participation), coordination between all important stakeholder, securing finances, involving qualified personnel and possibly external experts, creating ownership, setting up a plan (including status-quo analysis, specification of concrete goals, strategies, responsibilities and milestones), realising planned activities and controlling the process and results, feeding back results, revising the plan if necessary.

4.4 Partners and Clients

On an **urban/regional** level one tries to implement concepts for the whole city or region. Since the area is rather large, one is not able to target services to all traffic streams. You can develop general, broad services (e.g. modally integrated and easily accessible information) or specific ones for special target groups (e. g. a co-ordinated delivery service for city centre shoppers) whereas the latter are more likely to show short-term changes.

As Mobility Management is about services and the integration of modes, you will deal with different partners (i.e. promoters and supporters). Potential partners might have a different motivation but can share some of the objectives and aims mentioned above. MOST showed, that an integration of all relevant stakeholders from the beginning is crucial for the success of the project. Otherwise, delays or a counteractive atmosphere hamper a smooth course later and are harder to encounter.

Local or regional authorities are quite likely to be involved. The transport planning departments, but also the urban development, environmental and economic development departments, and/or road administrations might be included. The police department with their background on traffic safety could be a valuable partner.

All kinds of transport providers are important for the scheme. Fore most are the public transport companies or associations in the region, private transport providers, taxi companies; car sharing organisations or even the car industry can be partners.

User lobbies such as environmental; transport or consumer organisations are often included. Other interest groups, e.g. neighbourhood committees, parent groups, children's lobby, etc. can develop a special interest.

When approaching companies, support by the Chamber of Commerce or other business organisations is quite helpful.

At the **site level** one deals with a (group of) specific traffic generator(s). Examples of possible sites are: companies, schools, administrations, hospitals, shopping centres etc. Whereas destinations like sport arenas can clearly be assigned to the site level, their temporary character and the need for crowd management (a huge mass of people has to be at the same location at the same point of time) call for specific treatment. Here action can be much more focused and you probably will deal with a more limited number of partners. Again, potential partners might have a different motivation but can share some of the objectives and aims mentioned above. In working with site owners/operators, a comprehensive concept of measures aimed at influencing the need for transport to and from that site can be elaborated in a mobility plan (see under 3.3.2, vi)).

- As partners or promoters the site owners/operators are the most important ones. If you clearly show potential benefits, such as less needed parking, better accessibility with different modes, better employee health/less stress for the commute, customer service, image gains, etc., chances are good to motivate them to establish Mobility Management within their organisation or to take over (part of) the funding. A good demonstration of successful examples from other sites is helpful.
- Another approach can be to implement Mobility Management upon an initiative of the site users. For example, students of a university or trade unions could undertake some action. In any case conditions are best if both owners and users co-operate in their effort to alleviate mobility problems at and around their site.

- Local authorities or commercial associations can take the initiative to kick off a broader development at site level. Transport providers are often needed for their services and advice.

In order to involve and coordinate all stakeholders in a structured way, the MOST project utilised a quality management tool, the EFQM analysis[4]. It has been adapted for MM, and the basic questionnaire can be found in the MOST report on Implementation and Evaluation Results (on http://mo.st, MOST Deliverable 5, annex 2). This approach starts with an independent assessment of the project by all relevant stakeholders. They meet in a round table discussion to reflect upon different points of view, which gives a lot of insight into barriers to the implementation of planned measures as well as hints how to encounter them.

4.5 Instruments

i) Mobility Manager

The role of the Mobility Manager is quite important to any Mobility Management scheme. The Mobility Manager's duty is to take overall responsibility for developing and introducing the scheme as well as promoting it and gathering the necessary support. He/she is the key link between both the policy level and the management level in the particular city/region or at the individual site. As an intermediary between the different parties the Mobility Manager has an important co-ordinating function. This role could also include the integration of passenger and freight transport.

The position should be viewed as a role which one or more persons can share the responsibility, rather than a particular person. It is likely that the role of the Mobility Manager will develop in stages, and not always be called a 'Manager'.

Where the Mobility Manager is based depends on the key promoter(s) – it is likely to be the local authority, but other positions, such as a public transport company or a non-governmental organisation, are possible.

Mobility Managers should be sensitive to the political environment in which they are operating and good links to all relevant parties should be maintained. Mobility Manager(s) make the necessary strategic decisions to maintain the development of Mobility Management and develop new concepts. They also keep in touch with other cities/regions to exchange ideas and experiences.

ii) Mobility Consultant

An intermediary role at the management level in urban/regional Mobility Management is that of the Mobility Consultant. This role includes project management (at a lower level than the Mobility Manager) as well as the provision of services. He/she can operate from a Mobility Centre or in close co-operation with it and is actively approaching potential target groups. The Mobility Consultant also gets into contact with sites that do not yet try to implement Mobility Management on their own and offers support.

Besides providing general services such as organising awareness campaigns or undertaking mobility education, the Mobility Consultant advises individuals or traffic generators. The latter includes advice on funding and operational issues (i.e. tools, organisation, experience) concerning the implementation of a mobility plan.

[4] "EFQM Model of Excellence" of the European Foundation for Quality Management, see http://www.efqm.org/welcome.htm

Based on the experiences of its demonstrators, MOST considered a redefinition for Mobility Consultants. This would include 1) those approaching the end-users of transport services, 2) those who try to sell the concept to a traffic generator, 3) those who have specified in this field and who professionally consult all kinds of companies or institutions in how to plan, implement and evaluate MM.

iii) Mobility Coordinator

At the site level we will find a similar role: Mobility Co-ordinator's task includes the implementation of a mobility plan and/or a Mobility Office. He/she will carry out surveys and interviews among the site users in order to develop specific services for this site. The Mobility Co-ordinator also has to ensure the support of the senior management.

From an organisational viewpoint he/she is ideally located centrally within the company's structure. As the name suggests, co-ordinating tasks is very important. Not only co-ordination within the site's organisation (i.e. owners, management, employees), but also with transport suppliers, local authorities, commercial associations, unions and whoever belongs to the alliance of interested and supporting parties.

iv) Mobility Centre

A Mobility Centre is the operating unit at the urban/regional level, where Mobility Services are initiated, organised and provided. The establishment of a Mobility Centre is an important landmark and serves as a crystallisation point for Mobility Management. There are two basic requirements of a Mobility Centre:

- a multi-modal approach in the provision of services
- individual access for the public

A Mobility Centre concentrates all services and thus serves as a platform - a place for communication and exchange. Its presence can give Mobility Management a public face and thus establish its presence in the transport marketplace. User access can be via personal visit, phone, fax, e-mail, information terminals and/or on-line services. The structure of a Mobility Centre will vary according to need and resources. From simple arrangements by, for example, some transport association to more complex forms organised jointly by authorities, public transport companies and others. A citywide Mobility Centre should be located in a central location for easy access, but decentralised ones and branch offices can be closer to target groups or sites. Besides permanent Mobility Centres there can be temporary or mobile ones for special demands and events.

v) Mobility Office On Site Level

At the site level, Mobility Services are offered to only site users. Here, the operating unit is a Mobility Office, which differs from a Mobility Centre because services are not offered to the general public. Its form can vary from a simple help desk, which employees can reach by phone, to a 'drop-in' advice centre with its own room. The Mobility Office can also be responsible for the set up and implementation of a mobility plan.

To run a Mobility Management scheme, different roles have to be filled by various people at the management level. In smaller schemes or in the beginning just one actor might perform these roles. In larger schemes functions can be split up between more persons as a more complex organisational structure develops.

For the every-day running of a Mobility Centre or a Mobility Office, staff is needed to carry out services in direct user contact via all modes of communication. Also, some conceptual work could be their responsibility. The number of staff will depend on the size of the scheme, ranging from one to a few in the beginning up to more than a dozen in a fully developed urban Mobility Centre. In a Mobility Office staff is

especially needed for larger sites or clusters of sites serviced together. Whatever the exact framework, all personnel need to possess good, customer-orientated social and communication skills.

The establishment of a mobility centre or a mobility office is a quite ambitious task and, hence, might keep replicators from starting off MM. MOST could demonstrate, that it is already promising to provide an operational headquarter, from where MM activities are organised, and which can be approached for all questions concerning the planned MM measures. The County Council in Surrey, for instance, established 3 expert groups of specialists, who can be approached by schools whenever they need advice with respect to MM. In this way a supportive system has been set up which is financed by the county.

vi) Mobility Plan

A mobility plan is the most common instrument for site Mobility Management. It is a comprehensive and directive document that indicates how to implement a Mobility Management scheme for a specific site.

In general, a mobility plan can adopt all measures that help to reduce motorised vehicle trips to and from the site. The mobility plan can be limited to certain types of traffic such as visitor traffic or commuter traffic of a company. Setting up a mobility plan generally requires a survey that gives an insight in the travel patterns to and from that site as well as the traffic conditions around the site.

The mobility plan sets out who is responsible for implementing the measures, how they are to be implemented and the time schedule for implementation. Also, a mobility plan should include an explicit statement of its aims to be reached in a certain time span to act as a motivation, convince financiers and provide targets for later evaluation. It is important to gain an agreement among those affected by the mobility plan and to consult with all levels in the organisation to ensure that the measures selected will have as much support as possible.

Originally, a mobility plan was thought to be a site level instrument, but - as MOST could show - it also proved to work well also for long-term and large-scale applications, e.g. for a certain quarter of the city or even for whole regions (e.g. Lund, where the overall reduction on the whole region's car km per year is a reduction 3.9 million km. This equals a reduction of 1 % of car kilometres travelled, compared to a usual annual growth by 1 to 2 %). It is also conceivable as a comprehensive and directive document of MM measures for a certain target group (e. g. youth, mobility impaired, etc.).

A very extensive collection of measures for companies as well as some European companies that implemented MM was compiled in the TOOLBOX[5] project; www.mobilitymanagement.be.

The following titles provide a huge number of sub-measures which are described into more detail on the website:

- Reduce the necessity of home-work trips
- Reducing the necessity of non-work trips in combination with work trips
- Provide convenient collective transport
- Making collective transport more attractive
- Promote car-pooling
- Improve infrastructure for cycling and walking
- Make cycling more attractive
- Provide alternative modes for work related trips
- Parking management

[5] TOOLBOX - Toolbox for Mobility Management in companies

- Energy efficient car use

Mobility plans usually build upon a status-quo analysis and must specify concrete goals in order to be more focused and to provide for the possibility to monitor its impacts. The planning of strategies can take place alternatively in interdisciplinary working groups or by mobility or transportation experts. But it is essential that the mobility plan clearly indicates responsibilities and schedules, which allow for continuous controlling. If the results of this controlling process (usually based on regular self-assessments) require it, the mobility plan should be flexible enough to allow a revision and adaptation to the new insights gained.

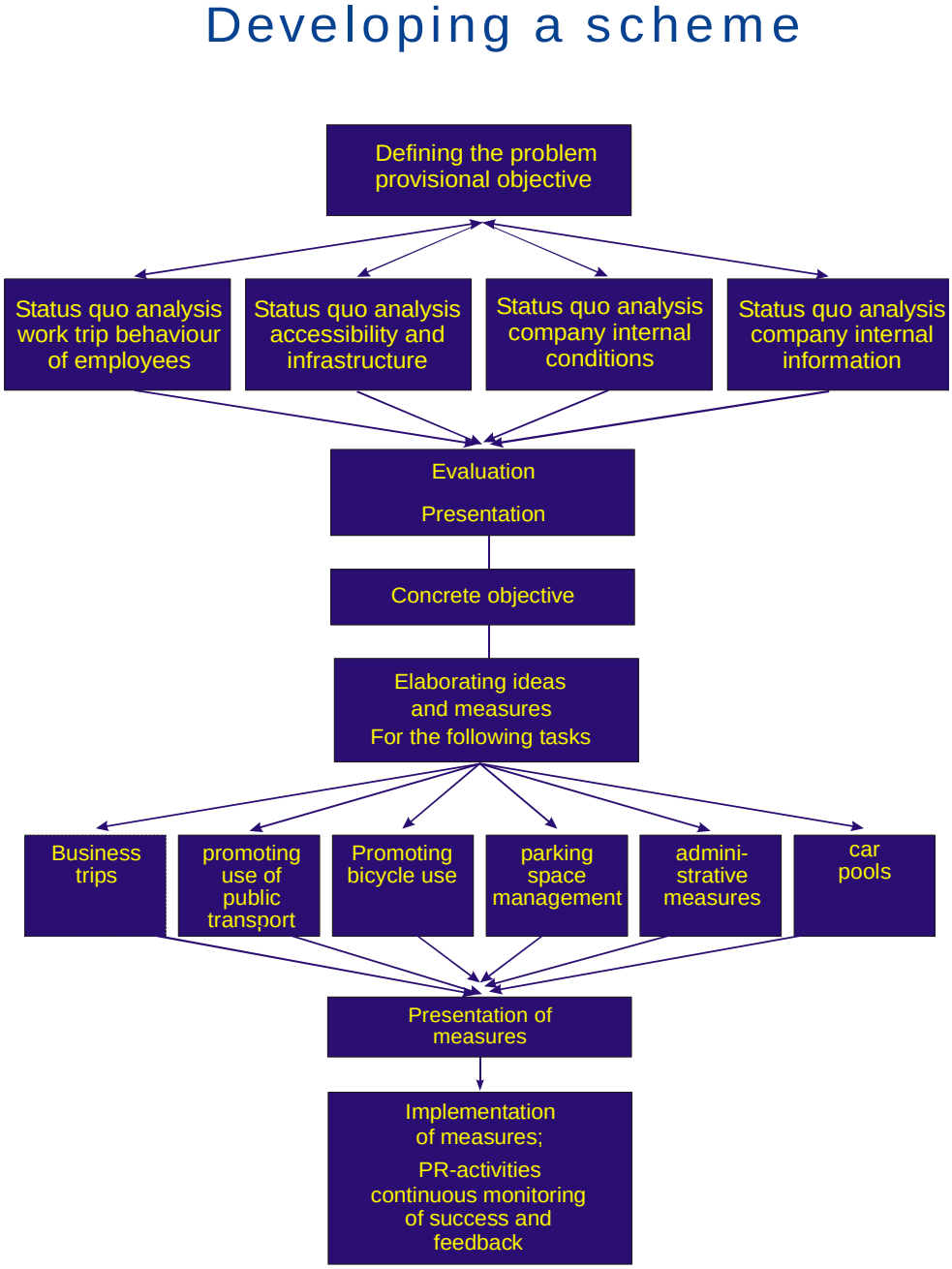

Fig. 3: Scheme for a Mobility Plan for Companies. Taken from the Swiss NFP 25,adapted by FGM-AMOR within the COSMOS[6] project.

[6] COSMOS - Development of a Training Course for Mobility Consultants

4.6 Services and Target Groups

While Mobility Management is all about influencing attitudes and behaviour towards more sustainable modes, the provision of services is at the centre of the approach. In fact, Mobility Management services are the most important products of MM. Six different types of Mobility services can be distinguished. Each service is likely to be made up of a number of activities. Since many services will be new and as they are voluntary for the user, effective marketing is crucial for their success.

i) Information and advice

Information is the core service of Mobility Management. It includes not only information on local, regional and national public transport but also all other sustainable modes such as walking, cycling, car pooling, car sharing, ridesharing, taxis etc. The integration of all information within a central location offers a faster and more efficient provision of information to the user and hence helps to dismantle access barriers.

Advice is characterised by further customer interaction, processing and interpretation of information on the part of the service provider.

Examples: Door-to-door timetable, fare and route information either personally, by phone, fax or Internet; information on walking routes, bike paths, stands, rental and/or repair shops; conditions and fares of car-sharing; freight facilities and road closures, accessibility guides, sustainable travel.

ii) Consulting

Consulting comprises tailor-made and in-depth advice for customers, who can be individuals, households, companies, schools, administrations, etc. It includes surveying the initial situation, assessing alternatives and preparing recommendations.

Examples: Comparison of travel time, costs and ecological impact of various modes for certain household trip purposes, how to introduce job-tickets or car-pooling for companies, preparation of a comprehensive mobility plan for a company, administration, shopping centre, etc.

iii) Transport Organisation and Co-ordination

This field involves the organisation of new forms of sustainable transport or the co-ordination and improvement of existing services. These would be targeted to specific user groups such as night buses for leisure trips or new paratransit for the rural population. Transport organisation is particularly important in site Mobility Management.

Co-ordination is an important factor for the integrated use of transport modes. There must be co-ordination between different providers and local authorities, public and private interests.

Examples: Co-ordinated scheduling and fares; car pool matching; city logistics for freight transport; special transport for mobility impaired persons, work buses, delivery service.

iv) Sales and reservation

The sale and reservation of mobility-related products and services can be done in person at an office or sales desk or through remote access by phone, fax or Internet.

Examples: Public transport tickets and reservations; car sharing and ridesharing booking; bike and car rental; sale of mobility related products; hotel and tourist information.

v) Awareness, education and motivation

Awareness includes all activities that draw people's attention to the existence of sustainable modes and their potential to fulfil individual mobility needs. A strong focus is on social marketing to promote alternatives to solo car use. Education is a life-long duty. Various educational tools can help people see the advantages and disadvantages of various modes of transport.

This applies not only to those in school. As mobility awareness and behaviour are not a question of a purely rational choice, it is important to motivate the targeted users to test alternatives to the individual car. Emotional values and personal benefits are important issues to address.

Examples: Mobility education in kindergartens and schools; publicity campaigns for various modes; activity days (e.g. a car-free day), ecological impact of traffic.

vi) Transport related products and services

This includes the organisation of (for the particular region) innovative products and services, which make using sustainable modes easier and/or more comfortable. It is not the organisation of transport itself, but accompanying services such as tickets combining the entrance and public transport to an event, for example.

Also, incentives to promote and stimulate the use of the sustainable modes fall under this category of services.
Examples: Combined tickets - ‘event + transport’; guaranteed ride home for participants of car-pooling; a city-wide delivery service; financial bonuses for users of sustainable transport.

4.7 Important fields of implementation

Companies and Organisations

Large companies or administrations cause a lot of traffic, as their employees need to commute to and from work. Commuter trips have in common, that they take place in certain time intervals in the morning and evening. The main target group of MM in companies, the commuters, is relatively easy to approach: they have the same destination (their employer), they often have similar schedules to start and finish working and they can be informed and motivated by using communication channels in their workplace. These are characteristics that increase the chance of success of Mobility Management in companies.

For the companies, there are several positive consequences of a change in the mobility behaviour of their employees, e.g. Cost reduction, better accessibility to the company for employees, freight and visitors, health and safety, image (MM can help companies to communicate their commitments to society and to show their ethical business practises).

Health Institutions can be regarded as one type of companies. A specific characteristic is their organisation of work into shifts. Hospitals attract a great number of visitors, need good access for ambulances, need to be adapted for various disabled persons and have a large number of employees. At the same time it should provide a tranquil atmosphere - where people can get well again. The location of the hospitals and other health institutions is often far from optimum to provide for all these needs.

Educational Institutes

Since children are the policy makers of tomorrow it seems obvious to try and influence mobility behaviour at a young age. Once they are used to a more sustainable way of travelling, they are likely to keep this behaviour as adults later on. Parents and teachers can well be influenced via their own (school) children, especially as safety is of utmost importance to them. To encourage young people to participate in the development of alternative services, schools in particular need to ensure that learning about mobility management is fun and exciting and that classroom activities are applicable to 'real life'.

Similarly to companies, travel to educational institutions is easy to target, as there is the same destination of travel and similar schedules for large numbers of people every day. The examples in MOST have shown, that school mobility management can achieve changes for one-day interventions like a car free school day, with a decrease in car usage from 60 to 16 % in favour of biking or walking. In the long run

(i.e. continuous MM activities in addition to one-day events), car usage still can stabilize at a percentage of 5 to 10 points lower than without any MM activities.

Tourism

Tourism in itself is a "mobility creator", challenges of tourism both for tourists and their destinations are diverse: On, or better, before arrival in an unfamiliar area (often both geographically and linguistically), tourists need clear, concise and up to date transport information to enable them to arrive at their final destination, and to visit the attractions that they want to see. The cities and regions that receive tourists, on the other side have to deal with a massive population increase during peak season months, which places considerable strain on their transport systems and often on the environment that visitors come to enjoy. Coping with seasonal or irregular demand is necessary also not to interfere with regular traffic flow. Besides the importance of keeping the quality of life in general, many sites or cities depend on tourism economically, hence being motivated to implement MM.

Site Development

As habitual travel behaviour is hard to change, site development offers the chance to include mobility management strategies and services into the travel planning right from the start. In particular, information about the role of mobility management in the initial planning stages of a development, or the influence on companies' decisions about their location can be obtained. The regional approach and, hence, the conjunction with adjacent neighbourhoods and surrounding urban or regional areas, is a characteristic of site development. This often requires taking various interests into account and starting a mediation process. MOST could show, that it is inevitable to carefully take into account all kinds of side effects, that the MM measures will have on those adjacent areas in order to make them see own benefits instead of rebel against the new ideas.

Frequent changes during the planning phase make site development a tough and sometimes tiring process that requires high flexibility and the ability to quickly elaborate alternative solutions for the good. Still, successes as of demonstrations in MOST (PTA, a new business park in Malaga with an increase in the usage of public transport from 9 to 12 % and in car pooling from 13 to 19 % with a decrease in solo car driving from 74 to 63 %, or the residential car free housing area in Münster Weißenburg with an increase in car sharing among the residents of 9 to 34 % upon moving in) make this a very promising approach.

Temporary Sites

Organising is at the heart of mobility management – the demanding task to find a convenient way for each person bustling around the city, that leaves everyone happy with his choice but at the same time maintains the city as a pleasant place to be.

This is even more true for big events, those times when a larger crowd than usual flocks to the city in search of adventure. Occasions such as the European Soccer Championship in Rotterdam or the Holy Jubilee Year in Rome require an exceptional need for organisation. And mobility is always an essential art of the challenge. Thus, events and mobility management seem to be a perfect match. Festivals, fairs, large sports or cultural events nowadays play an increasing role in strengthening the city's economic base and quality of life. A different 'event' aiming for the same targets, is the upgrading of city (transportation) infrastructure, often causing a disruption to mobility first - an example for successful MM in such a case are the activities of Leipzig during the reconstruction of tramways within MOST: during constructions, there are 3 times as many information requests to the public transport provider as usual but not more complaints.

Clear and accurate multi-modal information in a personal form needs to reach the customer, before he or she starts the trip. It should be accessible via the Internet and can be provided by temporary mobility centres or mobile consultants, best approaching the customer in his/her national language. The organisation of specific transportation services as shuttles or group taxis is a basic task. How to handle parking questions, a simple integration of ticketing and transport are further issues to tackle. This can lead to a modal share of the car much less than at normal days: during the Rotterdam marathon, the car was only used by 26 % to access the city centre compared to 42 % normally. On the other hand, public transport was used by 71 % of the visitors compared to 44 % on a normal day (see MOST deliverable 5).

As examples in MOST show, temporary events are perfectly suitable to test alternative solutions - and finally become long-term institutions like the "mobility shop" in Porto, which had been established for being the Cultural Capital in 2001 but will become a regular mobility centre.

Mobility Centres

See chapter 3.3.2 Mobility management Instruments and chapter 4.2. Mobility Centres.

4.8 Monitoring and Evaluation, the key to success

Evaluation is a powerful tool to measure progress against objectives, improve on the MM scheme, to compare expected to actual impacts, to track results over time, and especially to report back to policy-makers and funding bodies about the impacts of MM. To assure that adequate attention, resources, and expertise are brought to bear on monitoring and evaluation, it should be built into the earliest planning activities: it is advisable to set aside up to 10 % of the planned budget.

The impacts of mobility management approaches can only be seen in the continuous development over time. Therefore, the situation *before* the implementation of mobility management activities has to be compared with the situation shortly *thereafter* and with the changes in the long-run. The MOST consortium designed a **M**onitoring and **E**valuation **T**oolkit - the MOST MET - as a step-by-step guidance for self-assessment of impacts of mobility management instruments and services (see figure 4). The aim of the MOST MET is to support users in their assessment of the success of Mobility Management activities.

The MOST MET provides a stepwise Assessment Strategy and offers examples for indicators for the assessment. It shows sample surveys that can be used for monitoring and finally ways to evaluate the collected monitoring data in order to calculate the impacts achieved by the mobility management approach.

It is important to stress, that evidence for the effectiveness of MM can be found on different assessment levels, as is shown on the right in fig. 4: how many people know of a service, how many use it, how satisfied are they with it, do they accept a travel advice and test the new travel behaviour, are they satisfied with the travel option, does this result into a permanent behaviour change and, lastly, which impact can be seen on the broader level, the traffic system or the environment. Changes that actually reflect an actual behaviour change have a high potential to convince decision makers and funding bodies of the effectiveness of MM. In MOST, the achieved reductions in car usage range between 7-15%. This is consistent with trip reduction results from other employer worksite MM evaluation studies. Even larger changes can be achieved for temporary events as during the Rotterdam marathon (reduction by 38% compared to a normal day).

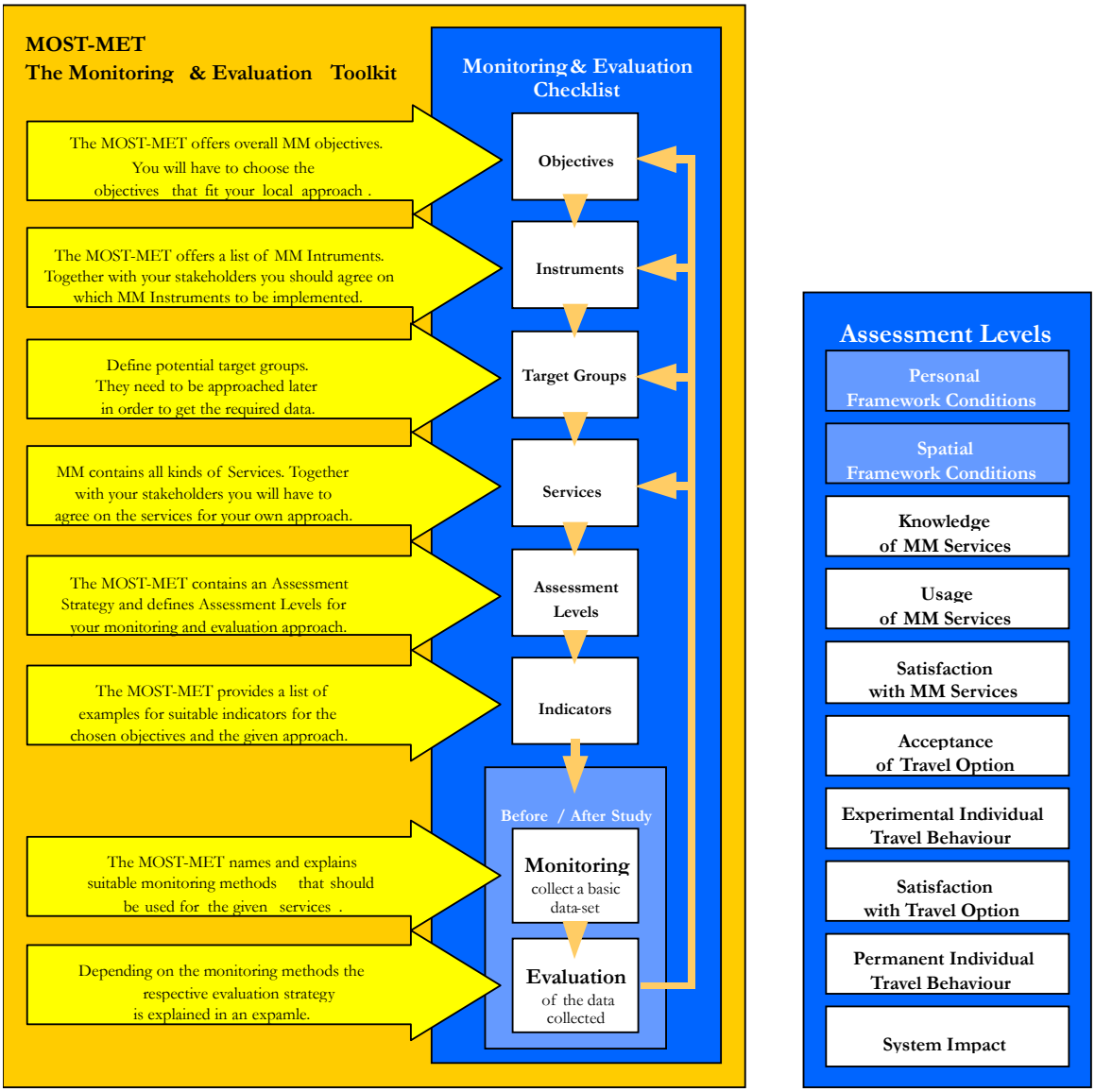

Fig. 4: The MOST - MET and its Assessment Levels. Taken from the MOST Final Newsletter, edited in 12/2002.

5. CASE STUDIES AND STUDY SITES

5.1 Mobility Management in Companies – 2 Austrian Examples

The Styrian Health Insurance Company – GKK

GKK is an outpatient medical centre situated in the multi-functional city centre of Graz. There is extensive parking management in the surrounding area with a maximum parking time of three hours. There are good public transport connections to the sites and GKK is also connected to the city's cycle route network. The first MM target group were the 1000 GKK employees, about 70% of whom live in Graz itself. The second target group has been the GKK clients/patients who come to the out-patient medical centres. The core measure for employees is an internal parking management system. Each employee who wants to get a permanent parking space has to fulfil certain criteria and he has to pay (36,- Euro / month). Besides a handicap the main criteria is the difference in time between the use of car or the use of any other mode of transport for the home to work trip. Other implemented measures are cycle parking facilities and special events such as free public transport tickets for one month and biker's maintenance services or a 'bikers' breakfast. Mobility management for patients/clients has focused on providing information in various forms (including tailor made mobility advice plus incentive tickets).

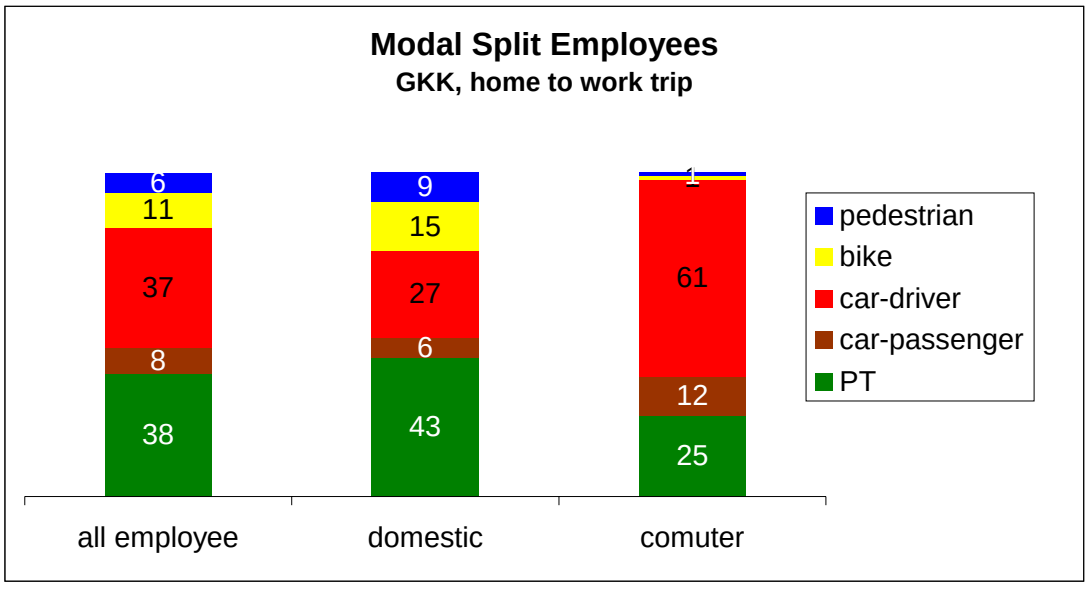

Fig 5: Modal split data for domestic and commuter employees at GKK company. Taken from the PROSITrans[7] project (final report).

Wolford

Wolford is located in Bregenz, Austria (Textile and lingerie industry) with approximately 1,300 employees. The company had no acute transport problems, but wanted to portray a more environmentally friendly image.

Strategy: Promotion of a more bicycle-friendly atmosphere. This involved the following measures:

- Relocation of cycle parking to the office entrances (underground cycle parking)
- Relocation of car parking away from the office entrances

[7] PROSITrans - Products and Services to increase the use of the sustainable transport modes in irregular transport flows

- Integration of the company bus system with the public transport system
- Establishment of a cycle service, maintenance and air pump station
- Changing facilities and showers for cyclists
- Free roadworthiness check for bicycles
- Company pool bicycles
- Cycle excursions for employees
- Cycle market
- Information on cycling provided
- Employee competitions for cyclists
- Success

From 1993 - 1996 the proportion of employees cycling to work rose from 18% to 35%. Over the same period, the proportion travelling by car fell from 34% to 22%.

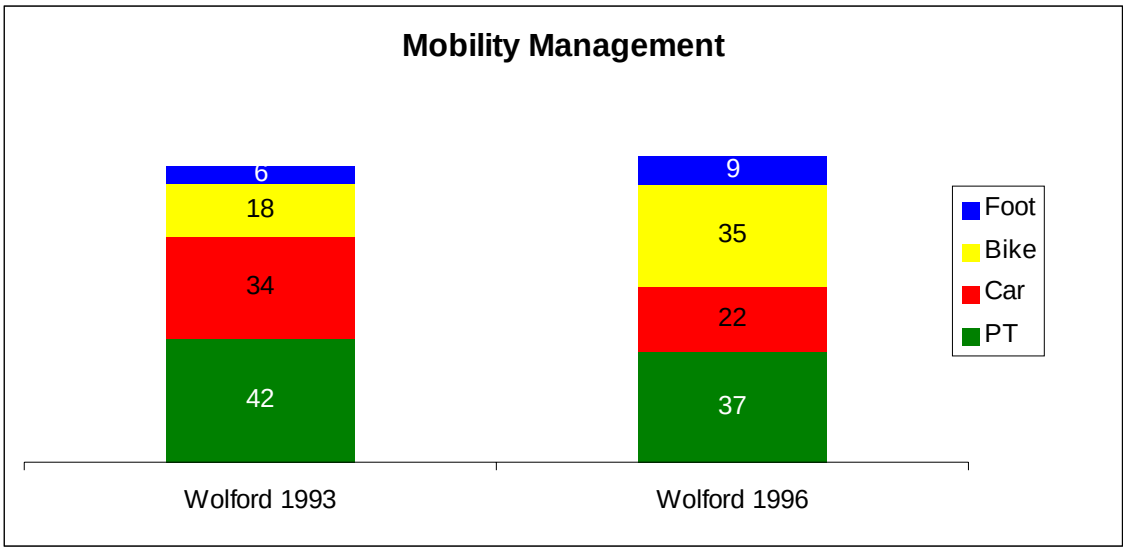

Fig. 6: Success of Mobility management measures at the Austrian Company of WOLFORD. Taken from the TOOLBOX[8] project (website).

A tool, which is well worth to work with if companies want to design their own mobility plan, is the TOOLBOX. The TOOLBOX has been developed under the SAVE-programme (EU-funded). It is web-based and free of charge. It contains a huge collection of international examples, a wide variety of measures, checklists and questionnaires and a decision support system. The Toolbox is available in five languages under www.mobilitymanagement.be.

5.2 Mobility Centres

Introduction

Mobility centres, shaped after a model of a point of information on all questions of mobility and transport, are developing dynamically. In Germany, mobility centres have been launched in several, also smaller, cities in the 90's. The number of mobility centres is on the rise with about 25 existing centres, which differ sharply according to size, services and access. Especially in the last two years there have been new openings, particularly in medium sized cities, e.g. in Münster, Freiburg, Bonn, Potsdam, Ulm or

[8] TOOLBOX - Toolbox for Mobility Management in companies

Osnabrück. In numerous further places planning is pursued to their implementation. But also in other European countries, the idea is gradually taking root. The first mobility centres exist already in Austria, Switzerland, Italy and the Netherlands. Further countries e.g. Great Britain or Belgium are interested and can build on a good basis of information provision in public transport. Some projects (Graz, Bologna) served as a European demonstration project as a pilot in their country. In the new European project MOST, among others the first Eastern European mobility centre shall be established in Prague.

A mobility centre initiates, organises and provides mobility services for individuals and organisations and is the most important instrument of mobility management on the urban/regional level. It can thereby be the focus point for the supply side in the sense of co-operation of different transport providers and for the demand side in the sense of the integration of different mobility services. However, the term mobility centre is not used consistently in practice. Although it is agreed that mobility centres represent the interface to the (potential) customers, the definition of (quality) standards has not yet taken place. In the user manual of the projects MOMENTUM and MOSAIC only two prerequisites are being set up: the provision of multi-modal mobility services as well as a simple public access. For Thiesies, five service areas belong to the basic offer of a mobility centre. The fact that mobility centres are often developed under local conditions has an effect on their offer. The central question is, which standards must be fulfilled in order to speak of a mobility centre.

Experiences from the operation

Information provision and ticket sale for public transport is the core business of the mobility centres –at least two thirds of the customer inquiries belong to this field. Statistics from the ”MobiCenter” Wuppertal show that 80 % of the questions are concerning the responsibility of the local public transport company and at the same time 2/3 of the information are concerning the timetable. The further services, information about Car-Sharing or about intermodal transport, constitute only 2 % of the inquiries. A significant part of the mobility centre’s services is used only little. The statistics of the ”Verkehrsinsel” Frankfurt indicate a similar distribution. Here also timetable and fare information are the most frequent requests. Only 10 % of the inquiries refer to individual traffic (e.g. route recommendations).

Comparable results have been found during the evaluation of the mobility centre mobilé in Münster.

“mobilé – the Service Centre for clever transport use” is run by the City of Münster and the local public transport company. It was launched in co-operation with further mobility providers in March 1998. With the complete, co-ordinated and multi-modal information provision the Service Centre – directly located within the pedestrian zone – wants to demonstrate alternatives to private car use and support a sustainable modal choice. mobilé is a central component of the urban overall traffic concept "münster.mobil", which focuses on a strong and environmentally sound mobility planning.

Analyses of the long-term usage patterns of mobility centres involved in MOST also showed, that the services requested most often relate to local public transport services (time tables, fares and tickets). Still, the customers appreciate the opportunity to receive information about all kinds of alternative modes like car sharing, bike tours, hiking etc. although they do not often make use of these services (availability of multi-modal information is among the most important offers according to the opinion of the users). The knowledge of the mobility centres ranges between 25 and 40 % city wide. Rising numbers of contacts indicate the acceptance of their services:

Customer contacts (per month)	1998	1999	2000	2001
Mobil Zentral Graz (phone and personal contacts)	2165	2571	3429	3966
mobilé Münster (phone, personal, email contacts)	859	2150	4150	4765

In Wuppertal the total number of customers is around 11.000 per month. *(Graz has about 240.000 inhabitants, Wuppertal 370.000, and Münster 280.000)*. Dedicated surveys in Bologna, Wuppertal and Graz show a high level of satisfaction with the mobility centres (in the upper quarter). (Data and table taken from MOST D 5)

There are two Mobility Centres, which are well worth for a study visit not only because of the centres itselves but also because of additional Mobility Management related topics.

The Mobility Centre in Graz, Austria named MobilZentral shows a wide range of services such as multi-modal transport information (national and international), sales / reservations of tickets and maps / literature, bicycle rental, car-sharing procurement, etc. The staff is also active in coaching and consulting mobility generators. Visitors for a guided tour are welcome. www.mobilzentral.at

Graz itself is interesting for a visit due to the fact that it was the first city in Europe which implemented an area-wide 30 km/h speed limit. Also some companies implemented mobility plans. In Graz educated Mobility Consultants are working for the citywide operating transport operator.

Another Mobility Centre (MobiCentre) that could be recommended for a study visit is situated in the German city of Wuppertal. Besides a similar offer on services as the above mentioned Mobility Centre in Graz there are Mobility Consultants working supported by the „Toolbox for Mobility Consultants“ (TOMY). TOMY is a portable unit consisting of a computer with printer and programmes which enable consultants to give advice in different locations outside of the MobiCentre.

Table 1: MobiCentre Wuppertal (Hoffmann 1998). Taken from the MOMENTUM project - Second Deliverable: Blueprint for Mobility Centres

Information about…	
Timetables	68%
Fares / Tickets	26%
Car Sharing	2%
Intermodal Transport	2%
Cycling	0,5%
City / Tourist Information	0,5%
Other	1%

Considerable work has been undertaken by London Transport to establish the cost-effectiveness of its Telephone Enquiry Line, which, together with other work, is reviewed by Le Jeune (1992)[9].

An initial recruitment questionnaire was undertaken to establish a sample of callers that would be willing to participate in a telephone interview. Those who agreed to be interviewed were contacted again within three days to determine their views on the service and, in particular, how they had made use of the information given.

[9] Le Jeune B (1992). *Information: a cost-effective investment?* PTRC Seminar, November 1992. The design of passenger information systems.

A key question which callers were asked was what they had actually done after they had made their inquiry. 68% said that they had made the journey about which they had enquired. More significantly, 13% said that they would not otherwise have travelled had they not been given the information requested.

Using this 13%, an average value of £2.75 was estimated for the amount of travel generated by a typical telephone enquiry call. Relating this to a cost of about 60p for answering each call, it was demonstrated that the cost of the Telephone Enquiry Line was being recouped almost five-fold by the value of travel generated.

5.3 The Toolbox for Mobility Management Measures in Companies

The SAVE -II project “Toolbox for Mobility Management in Companies” aimed at developing a freely available search facility providing a complete range of mobility management examples and solutions for companies. It has been developed for use across Europe, in English, French, German, Italian and Dutch, thus contributing to cross-border development of company mobility management.

Essentially, the toolbox is a search facility, so that the user can quickly find advice on selected mobility management measures. Each measure is described on an easily understandable "fiche" and linked to a database of examples so that the user can find out more information about successful implementations of these measures across Europe. The toolbox is available on the Internet (www.mobilitymanagement.be). Texts are taken and modified from the Toolbox Final Report.

Description of the product

The heart of the facility is a structured database of company mobility management measures. It is composed of a series of fiches, one for each of over 40 measures. All of the fiches use a standard form and the information is provided in a user-friendly, accessible manner. For each measure, the user is presented with a short description, followed by some possible actions. Further sections describe suitable conditions when the measure may be appropriate and frequently asked questions. Finally, each fiche includes illustrated examples of successful implementations of the measure.
Depending on the degree of detail the user would like to obtain or his motivation, he can opt for several ways of searching for measures:

- go directly to the database of measures and browsing for information (“measures database”);
- finding the measure that responds directly to a given mobility problem (“quick solution catalogue”);
- finding a selection of measures that have been implemented by some well known companies throughout Europe (“famous examples”);
- more detailed customised advice using the toolbox “decision support system”.

The more detailed advice of the decision support system comprises:

- A travel survey package, giving companies the necessary tools for organising a travel survey among employees;
- A system that suggests the most appropriate customised mobility management measures on the basis of a questionnaire filled out by the company (possibly, but not necessarily on the basis of a travel survey among employees)
- Linked to the latter, an estimate of the costs and benefits of the suggested measures including financial, energy and emissions savings.

Furthermore, a short introduction text (“about”…) explains the principles of a company mobility plan and how to go about developing such a plan.

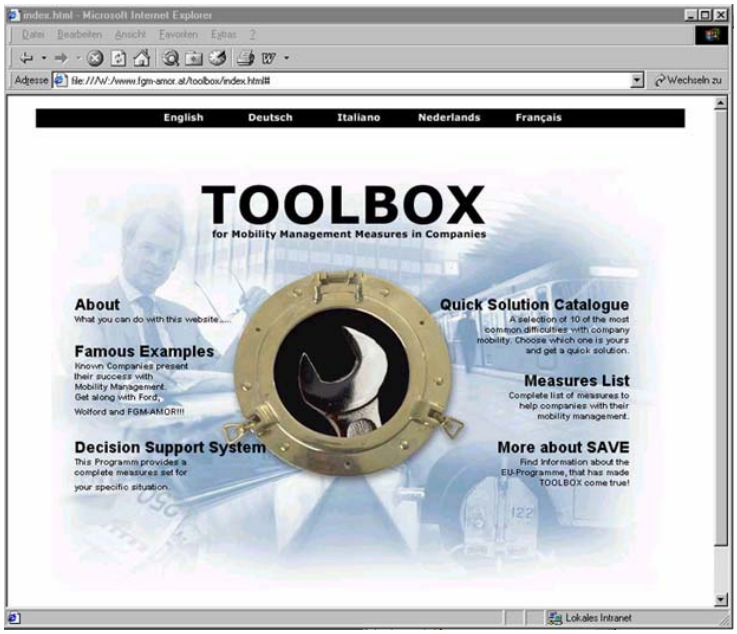

Fig. 7: Toolbox website

The main benefits of the project are:

1. For the individual company:
   - The possibility to invest less in the planning process of making a company mobility plan and find out quickly information on mobility management solutions with examples of good practice from across Europe;
   - An interactive system sensitive to the situation of the company and the travel patterns of its employees;
   - A possibility to save money through reduced parking and vehicle use, and to realise environmental and image benefits.
2. For the development of company mobility management in general and, subsequently, energy saving:
   - A freely available tool for the promotion of company mobility management;
   - The possibility to obtain a higher participation of companies to mobility management, thus increasing the effect of promoting mobility management.

The toolbox also has its limitations. Although the Decision Support System is sensitive to the particular circumstances of the company and takes into account a large amount of company specific data, it is intended only as a guide to the company and only aims to estimate the benefits of the various measures. A particular limitation is that the system always suggests measures in isolation. Most company mobility plans will consist of a combination of different types of measure however this combination will be different from site to site and therefore cannot be represented by the Decision Support System.

To conclude, the main benefits of the toolbox are in the educational field. The facility mainly serves the promotion of the concept of company mobility management. It is not to be considered as a technical tool giving accurate previsions about results of a company mobility plan.

5.4 The Smash Events Project

The LIFE Project “SMASH-EVENTS” aimed at developing a standard for integrated environmental management for large events. More particularly, it tended to add the aspect of mobility management to already existing practices in reducing the environmental impact of large events. Following texts are taken and modified from the „SMASH-EVENTS“ layman report.

The SMASH integrated sustainability approach for large events means:

- Dealing with both short time and long time effects of the event on the environment.
  - Short time effects on the direct environment: waste, noise, nuisance and pollution during the event;
  - Long time effects on the environment as a whole: vehicle emissions, production of waste, consumption of energy, lasting impacts on the natural environment;
- Taking into account all generators of environmental damage: waste and energy production, water consumption, pressure on the soil, and (introducing) transport;
- A preventive approach, influencing choices of the organisers and behaviour of the visitors before the start of the event.

The development of a standard for integrated environment management was achieved through:

- A study of existing practiced in western Europe;
- Implementation and evaluation of demonstration projects in 4 European countries (Belgium, Austria, Germany and Italy), for different kinds of events;
- Exchange of experiences in an international group including event organisers, public authorities, transport specialists, waste management offices, communication and training specialists.
- The development, testing and finalisation of implementation guidelines and checklists that can help organisers and authorities to evaluate the environmental quality of the event.

The demonstrations within SMASH-EVENTS:

Austria: the Provincial Exhibition of Styria in Weiz and Gleisdorf and similar fairs from 2001 to 2003

The Provincial Exhibition of Styria, under the motto “Energy at your fingertips”, aimed at demonstrating several aspects of energy. Visitors had the possibility to experiment, create and play primarily with the four elements water, fire, soil and air. As an educational aspect, a child care centre / playground named “FunErgy Park” was provided for the visitors. This child care centre not only used specially developed toys but was completely based on an "eco-educational" concept covering the fields of energy, mobility and environment protection. A special bicycle rental outlet was provided during the opening time of the exhibition. The rental of bikes was for free for visitors of the exhibition.

Within the exhibition itself, about 80 small scale sub-events took place, too. The Provincial Government of Styria placed these events under the common theme of “G’scheit feiern” (celebrate in a clever way). The guidelines of “G’scheit feiern” include waste management (waste prevention, use of eco-dishwashers etc.), the use of rural organic products and mobility management (shuttle bus, car-pooling, etc...). 8 of these events (with a total of 48000 visitors) were treated by the SMASH-team.

Implemented measures include among others:

- shuttle services (e.g. horse-drawn carriages and taxis on demand).
- special incentives for public transport and bicycle users (free refreshments + participation in a raffle).
- communication by mass media (advertisements on regional radio stations, spots on regional TV-stations and reports in local newspapers).
- information on the accessibility via Internet and other communication carriers.

Belgium: music festival Sfinks and followers

The main test site selected for Belgium was the Sfinks world music festival. Sfinks takes place every year around the end of July and lasts for 4 days. The event location is the municipality of Boechout at approximately 15 km from Antwerp. Sfinks attracts 50.000 visitors per year. Until 2001, only limited attention was given to mobility or environment problems.

In 2002 and 2003, an extensive action plan was developed and implemented, including both environment and mobility oriented actions. The action plan has been defined in co-operation with the organisers of the event. Implemented initiatives include:

- Mobility management: additional night bus services, combined ticket for bus and entrance fee, signposting for cyclists and public transport users, guarded cycle storage facilities, carpool service via Internet, last minute carpool service, taxis for the return trip of passengers arriving by public transport, signposting for car traffic to avoid rat running;
- Waste management: introduction of reusable cups, introduction of waste deposit islands, agreements with sponsors not to distribute leaflets to avoid paper waste;
- Energy, water and soil protection: water saving sanitary and taps, connection to the sewage system for wastewater, green energy and test of solar energy, soil protection;
- Communication: extended information on the festival website, information stand on the festival ground, environment animation team.

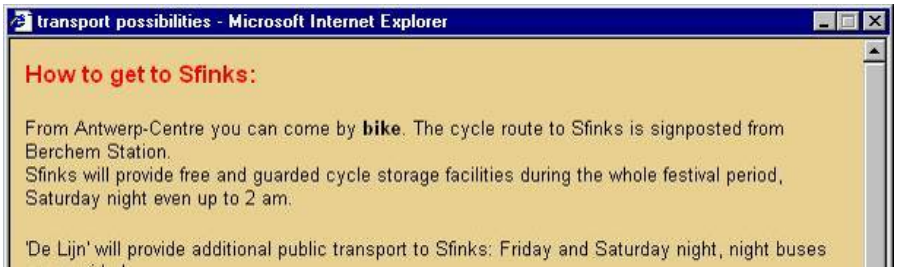

Fig. 8. Extensive information about sustainable mobility before and on the way to the event

Parts of the Sfinks approach were applied in 2003 to 8 other important events:

Germany: skating event in 2002 and 2003

The German demonstration was the “Nürnberg Nite-Skate”.

The Nite-Skates are a series of single-night skate run events in the summer season in Nürnberg. From the first event with 5.000 participants it developed very fast to a well known fun party with up to 40.000 skaters. The Nite-Skates start and end in a "party zone” with stages for bands and D.J.’s, beer gardens and the usual catering facilities.

The 2002 Nite-Skate was being broadcasted as usual by the local Nürnberg Radio station "Hit Radio N1”, operated by Funkhaus Nürnberg, a SMASH-events project partner. N1 is not only broadcasting about the event, but also acting as an event organiser for the pre- and after-skate parties.
Implemented measures included:

- "Bike & Skate": a huge guarded bicycle-park right behind the central stage and a large promotion campaign on air for coming to the event by bicycle;
- “NO-Flyers”-campaign” addressing the sponsoring partners of the Nite Skate;
  “Be SMASH!”: extensive on air promotion with spots as well as interviews and reports, extended later to all N1-events under the banner of the “Be SMASH” campaign. The goal was to establish a brand name for environmental friendly events and to spread this behaviour among the N1-listeners community;
- The SMASH-evaluation survey was conducted by N1-Cheerleaders;
- Improved information about Sustainable Transport on the Website, including car-pool matching system;

Nite-skate Nürnberg: the focus on mass communication about “environment friendly skating”

Italy: events in and around a national park

The Italian demonstrations addressed several events, all in the surroundings of the National Park Dolomiti Bellunesi, a popular leisure destination in Northern Italy. The Feltre Artisan Fair was the main demonstration. In 2002, the following measures were implemented, all concerning mobility management:

- A combined ticket transport plus entrance fee;
- A shuttle bus connection between the train station and the park visitor centre and the Fair site;

- A mass communication campaign for a special train offer and the combined ticket under the motto “to the Fair with the driver”;
- Extensive information on the accessibility via Internet and other communication carriers.

The mobility management measures were extended to several spring and summer activities organised by the National Park Dolomiti Bellunesi.

Events in the national park Dolomiti Bellunesi:
extensive promotion campaign for the train, and shuttle service from the train station

6. EXERCISES AND TASKS FOR SELF STUDY

The idea of the following exercises is that the students should find results for the below mentioned practical oriented problems in team-work.

6.1 Software orientated measures

Possibility for discussion or for an assessment exercise for students:
Allocate and discuss the listed measures to the following blank matrix:

- Concentration of residential areas and transport attractive activities around heavy public transport corridors
- Establish „Mobility centres“
- Prohibited use of road facilities (roads, lanes, turning movements) at special times of the day
- Road pricing and toll rings
- Awareness campaigns related to use of public transport, car-pooling, cycling, walking
- Infrastructure (bus lanes, terminal facilities, quality buses, automatic ticket machines).
- Cyclist and pedestrian infrastructure
- Information infrastructure (databases and equipment providing route, bus stop and schedule info)
- Dissemination of results of examples of Mob. Man. Measures, in order to promote local start-up of such measures
- Active provision of information about public transport supply (household info, web-bases route info, general info)
- „Demand-positive“ pricing policies, like student and elderly discount
- Co-ordinated activities by organisations, companies etc to promote use of public transport, car-pooling, walking and cycling.

	Demand orientated	Supply orientated
Hard policies		
Soft policies		

6.2 Design a Mobility Plan for a Company

The company is situated in the multifunctional city centre of a City with about 300.000,- inhabitants. The company is a big store and employs 550 people (balanced gender). Parking in the companies surrounding is limited for a maximum of 3 hours and you have to pay 1,8 Euro per hour. The company itself only has 25 own parking spaces.
The access of the company by public transport can be estimated as good.

Design a mobility plan for this company including the following items:

- Measures to reduce home-to-work solo-car traffic.
- Measures to encourage non-motorized modes of transport
- Measures to encourage public transport use
- Consider constructional, organisational and financial measures. Establish an awareness and information plan and implement some „testing new behaviour“ actions.

Maybe it is helpful to use the „Toolbox for Mobility Management in Companies“ www.mobilitymanagement.be. Further, you can find much more information on the development of Company Travel Plans in the Company Travel Plans manual developed within the e-ATOMIUM project.

6.3 Design a Mobility Plan for a School

A school with about 1200 pupils (primary and secondary level) has big traffic problems in the morning when school starts. In the direct surroundings of the school already some severe accidents happened. The current situation is that most of the pupils are brought to school as car passengers even though the public transport access is very good.

Design a mobility plan for this school that includes

- measures to reduce home-to-school-car traffic
- measures that increase safety in the schools area
- an awareness plan
- suggestions for teaching contents for the field of mobility (special view on the above mentioned problem)

Maybe it is useful to have a look at www.epommweb.org. Further you can find much more information on the development of School Travel Plans in the School Travel plans manual developed within the e-ATOMIUM project.

7. RECOMMENDATIONS FOR FURTHER READING

For further reading the following literature from EU-funded projects is warmly recommended:

From MOMENTUM / MOSAIC:

- The Mobility Management User manual
- Second Deliverable: Blueprint for Mobility Centres
- Maxi Brochure: Mobility Management

From INPHORMM

- The final Report
- The Resource Pack for Sustainable Transport

From PORTAL

- The Mobility management and travel awareness manual
- The PORTAL website: www.eu-portal.net

From TAPESTRY

- Deliverable 2 – State of The Art Review
- Deliverable 3 – Common Assessment Framework
- Travel Awareness Publicity And Education Supporting A Sustainable Transport Strategy In Europe- The Assessment Guide Volume 2 – Toolkit and Guidelines on Measuring Change – August 2001

From MOST

- Deliverable 5 – Implementation and Evaluation Results of MOST (on project as well as individual partners' level), available only after EC approval
- Deliverable 6 - The Framework for Mobility Management across Europe (local, national and European level analyses results), available only after EC approval
- Deliverable 7 - Key Recommendations of MOST (on the basis of all results)
- Deliverable 9 - Final Report
- MOST MET - the Monitoring and Evaluation Toolkit on a CD rom, available only after EC approval
- MOST web site (http://mo.st)

8. LITERATURE AND WEBSITES

The following literature and websites have been used to set up these written materials. Here you can find further information, project results and good / best practice case studies. Please note that websites may be closed after a certain period.

ADONIS Analysis and Development Of New Insight into Substitution of Short car trips by cycling and walking (Final report, 1997)

CAMPARIE Campaigns for Awareness using Media and Publicity to assess the responses of individuals – Final Report (2000)

COSMOS Development of a Training Course for Mobility Consultants - Manual (1997)

CULTURA Cultura for a new mobility through mobility management, awareness measures and campaigns for changing mobility behaviour. www.mobility-cultura.net

EMOTIONS Emotions for clean urban transport – Final report (2004)

EMOTIONS EMOTIONS Photo CD

GOAL GOAL – Healthy without car and noise – Final Report www.goal-graz.at

ICARO Increase of Car Occupancy through innovative measures and technical instruments – Implementation Guidelines for Increasing Car Occupancy (1999)

ELTIS Interactive Guide to current measures -

EPOMM European Platform on Mobility Management – www.epommweb.org

IMPACT Information packages for energy-efficient mobility – Final report (1998)

INPHORMM Information and publicity helping the objective of reducing motorised mobility - Final Report (1999) and The Resource Pack for Sustainable Transport (1999)

MOBILE Innovative Mobility Concept for a Medium Sized European City to improve the Quality of Living and of the Environment – Maxi Brochure (1999)

MOBILSERVICE Plattform für eine zukunftsorientierte Mobilität - http://www.mobilservice.ch

MobilZentral Mobility Centre of Graz www.mobilzentral.at

MOMENTUM Mobility management for the urban environment: The Mobility Management User manual and The Maxi Brochure: Mobility Management (both together with MOSAIC), Deliverable 1 – State of the Art (1998 – revised) and Deliverable 2 – Blueprint for Mobility Centres (1997); Final report (2000)

MOSAIC Mobility Strategy Applications In the Community see MOMENTUM
Link from http://mo.st

MOST Mobility Management Strategies for the Next Decades: Deliverable? - (not yet published) http://mo.st

PORTAL Mobility management and travel awareness www.eu-portal.net

PORTAL PORTAL Photo CD

PROSITRANS Products and Services to increase the use of the sustainable transport modes in irregular transport flows – Final report (1998)

SMILE Sustainable Mobility Initiatives for Local Environment - http://www.smile-europe.org

TAPESTRY Travel Awareness Publicity And Education Supporting A Sustainable Transport Strategy In Europe- Deliverable 2 – State of The Art Review http://www.eu-tapestry.org/

TAPESTRY Travel Awareness Publicity And Education Supporting A Sustainable Transport Strategy In Europe- Deliverable 3 – Common Assessment Framework

TAPESTRY Travel Awareness Publicity And Education Supporting A Sustainable Transport Strategy In Europe - The Assessment Guide Volume 2 – Toolkit and Guidelines on Measuring Change – August 2001

TOMY Toolbox for Mobility Consulting – Final report (1998)

TOOLBOX Toolbox for Mobility Management in companies – Final report (2001) www.mobilitymanagement.be

WALCYNG How to enhance Walking and Cycling instead of shorter car trips and to make these modes safer

9. GLOSSARY

The contents of the glossary are taken from the projects MOMENTUM / MOSAIC and ADONIS

Attitudes: a more or less stable set or disposition of opinion, interest, or purpose, involving expectancy of a certain kind of experience, and readiness with an appropriate response.

Awareness: mere experience of an object or idea; sometimes equivalent to consciousness
Behaviour: the total response, motor and glandular, which an organism makes to any situation with which it is faced.

Campaign: a series of planned activities with a particular social, commercial or political aim. To promote a particular product or event to occur.

Demand orientation: the focus for all measures within Mobility Management are individual mobility needs, i.e. the demand for travel to reach spatially separated places. Because Mobility Management tries to influence pre-trip mode choice, the resultant Mobility Services target certain groups or trip purposes.

MET: Monitoring and Evaluation Toolkit

MM: Mobility Management

Mobility Centre: the operating unit for Mobility Services on an urban/regional level. Characterised by a multi-modal approach and public access by various means. Can be implemented in various forms and sizes.

Mobility Management Scheme: a project or (comprehensive) programme of Mobility Management for a certain region, city, quarter or site. Usually goes through a number of iterations. Through a MM scheme, a number of Mobility Services are introduced.

Mobility Office: the operating unit for Mobility Services at the site level. Characterised by a multi-modal approach and access only for site users. Can be implemented in various forms and sizes.

Mobility Plan: comprehensive document that indicates how to implement a Mobility Management Scheme for a specific site. The most common instrument for site Mobility Management. In general, can specify all measures that help to reduce motorised vehicle trips to and from the site. Should also be conceivable as a plan for a quarter of a city or for a certain target group.

Mode Choice: road users' selection of different modes of transport.

Motivation: term employed generally for the phenomena involving movement, energy and motive force. First there is the notion of movement – essentially to do with behaviour. Second, motivation embodies the idea of energy, implying direction or focus. Together, these two components comprise the concept of motive force – to get up and do something. We are motivated to de some things but not others because of the benefits which this will bring to us.

Perception: the process of becoming immediately aware of something.

Site: the place where a specific traffic generator is located, for example a company, administration, school, hospital, shopping centre, stadium, or event.