

BUSTRIP

**Helping cities progress towards
sustainable urban transport**

Pilot actions

Work package 3

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About the document

This document is aimed for partner cities within BUSTRIP and gives background information to WP 3, Pilot actions. It should give the reader a clear understanding of:

- How the pilot actions relates to the SUTP;
- When to perform the pilot actions;
- How to do it;
- What to do;
- What support are possible;
- Contact information.

The document also provides guidance for the cities on the reporting processes and the monitoring and evaluation processes of the Pilot actions. See appendixes 1 to 3 for “Best practise on Pilot action in urban areas”, “Templates for the Pilot actions” and “Pilot action Indicators and Evaluation”.

Introduction

The strategic focus of the WP 3 is to demonstrate a pilot action that will lead to the achievement of targets that will be in the new/ revised SUTP in the partner cities. The implementation of Pilot action results in improved urban transport and mobility. They also raise awareness among stakeholders and inhabitants and lay the ground for future investments for improved service. The Pilot actions will be planned and implemented within three Theme groups that will have close co-operation during the pilot project planning and implementation period.

A pilot action should be a step on the way of implementing the SUTP. The pilot actions are a response by the municipality based on their understanding of their problems. To prepare a detailed pilot action plan, the city together with Chalmers will use the results from the self assessment and the peer review findings. The pilot action will respond to the targets and conclusion in those reports. They will be defined within one of the Theme groups for the BUSTRIP project. The results/outcomes from the Pilot actions will be integrated into the further work with the SUTP's.

Chalmers will support all partner cities during the process of developing, implementing and evaluating the pilot actions. The work package will be an iterative process to create the best possible solution for each city.

The work with the Pilot actions will start from the beginning of the project by verifying the scope for the Pilot action in the cities. Each city has chosen a Theme group in which the Pilot action should be performed. Each city can have one or more Pilot actions in the freight or passenger transport area. Once the proposed Pilot actions have been discussed and verified with Chalmers, a Pilot action working group can be established in the city. The Pilot action planning should start about the same time as the Peer review. Some Pilot actions will therefore be started to be developed in April when their peer reviews are finished and the last ones start in September. The planning and implementation of Pilot actions must be performed in accordance to the work with the peer review results and the SUT Planning and Plan. It is vital to keep a close contact throughout the project between different working groups within and between the cities.

What will the Pilot actions involve?

The cities in the BUSTRIP project will all perform at least one Pilot action. Those actions will be performed during the project period and will be focused on improved practice. They will be an integrated part of the SUTP implementation. The activities for the cities are to:

- Present a Pilot action idea;
- Join a Theme group;
- Establish a Pilot action group in the city;
- Verify the Pilot action idea with the findings from the Self assessment and Peer Review;
- Make a detailed Pilot action plan;
- Identify and consult with stakeholders;
- Evaluate the base line scenario;
- Implement the Pilot action;
- Monitoring and evaluation of indicators;
- Evaluation of the Pilot action;
- Publicize actions and results on web page and in newsletters;
- Provide documents to the WP leader for follow up;
- Provide with input to the Theme group.

What will the Pilot action achieve?

The Pilot action will demonstrate the potential of improvements of the cities as well as providing help for the cities to implement the SUTP. The Pilot actions will:

- Be a good response to the SUTP work;
- Help create a better stakeholder involvement and communication;
- Show good practise on the thematic issues;
- Create a better situation for the area involved in the Pilot action;
- Change drivers, reduce impact and change behaviour;
- Provide lessons learnt on the improving practise for transnational learning.

Responsibilities

The research partner Chalmers University of Technology is the work package leader and responsible partner for WP 3. The work package leader is responsible for proper planning of the implementation of the Pilot actions within the three Theme groups and also for the evaluation of this work package. The work package leader will prepare templates for the planning and for the evaluation of the Pilot actions as well as supporting the cities when performing the planning and implementation of the Pilot actions.

The cities responsibilities are to implement the Pilot action/s in the cities. The cities are responsible for presenting a plan for the Pilot action/s as well as for monitoring and evaluating the implemented Pilot action/s. All processes will be in close cooperation with the work package leader, for support, and with the SUTP development.

Theme groups for the Pilot Actions

Theme groups are going to be established in order to exchange experiences between the cities that work with similar projects. There are three themes; 1) "Intelligent Transportation Systems (ITS), Public Transport and Clean vehicles", 2) "Intermodal transport" and 3) "Mobility management". All three groups cover both personal transport and freight transport. The concept of each group is described below.

The Theme groups will meet on a couple of occasions. The first meeting will be at the kick-off meeting, where the cities belonging to the same theme groups can discuss their point of views on the topics. The second meeting will be held in the early autumn 2006, at the same time as the "kick off" for the pilot action and SUTP. The work package leader, Chalmers, will continuously inform participating cities about actions in the different cities and keep the dialogue open between the cities.

Intelligent Transportation Systems (ITS), Public transports and Clean vehicles group

Definition of Intelligent Transportation Systems – ITS

Intelligent Transportation Systems include the application of advanced information processing (computers), communications, technologies and management strategies, in an integrated manner, to improve the safety, capacity and efficiency of the transportation system.

<http://www.trans.gov.ab.ca/>

The Theme group for ITS, Public transport and Clean vehicles has a strong technical focus. The aim of this Theme group is to promote and enhance the effective usage of the public transport system through ITS and other new solutions. But it is also about developing a clean and fair transport system and to promote the use of clean and energy efficient modes. The ITS should be used as a tool for improving the efficiency of the transport system.

Some applications are:

- Traffic and Fleet management;
- Parking management;
- Road Pricing and Access restrictions;
- Traffic and traveler information;
- Public transport priority schemes;
- Speed control;
- Monitoring freight transports.

Intermodal transport systems group

Definitions of Intermodal transport

A movement of goods using more than one means of transportation. The most common intermodal arrangement is for goods to be moved by truck at their origin, transferred to rail for the long haul between regions, and transferred again to truck near their destination.

www.epa.gov/smartway/glossary.htm

Intermodal freight transportation utilizes more than one mode of transportation (road, rail, sea, air, etc.) to move goods between an origination and destination. **Intermodal passenger transport** applies the same concept to moving people. Some modes of transportation have always been intermodal; for example, most major airports have extensive facilities for automobile parking. Urban bus systems generally serve train and subway stations and often extend to the local airport. A major goal of modern intermodal passenger transport, at least in developed countries, is to reduce dependence on the automobile as the major mode of ground transportation and increase use of public transport.

http://en.wikipedia.org/wiki/Main_Page

Intermodal transport systems have, according to the definition above, two focuses: freight transportation and passenger transport. The aim of this Theme group is to raise awareness, the changing of urban transport habits and encouraging close stakeholder co-operation.

Examples of actions within this area are:

- Reallocating space for public transport, cycling, walking;
- Improving cycling and walking, ensuring safety and security;
- Developing attractive public transport services;
- Coordinating transport services and improving the quality of interchanges;
- Providing traveller information that facilitates travel choices, that are easy to understand;
- Developing the pre-requisites for effective and efficient intermodal freight transport;
- Promoting intermodal transport for both passenger and freight transports.

Mobility management group

Definition of Mobility Management

Mobility Management is primarily a demand-orientated approach to passenger and freight transport that involves new partnerships and new tools. The aim is to support and encourage a change of attitude and behavior towards sustainable modes of transport. The tools of mobility management are based on information, communication, organization and co-ordination. These tools require promotion. Mobility Management, which is both a novel and promising concept to promote sustainable transport, varies from country to country both in terms of scope and level of implementation.

www.epomm.org (European platform on Mobility Management)

The mobility management theme group includes issues about **optimised freight transport** and **reduced and rationalised use/need of vehicles**. These two areas are highlighted in the EWG report and are very important factors for a city aiming towards sustainable urban transport. The mobility management Theme group aims at developing mobility management systems for areas and organisations in order to decrease private car usage and prevent urban sprawl.

Actions within this theme group could involve:

- Optimise freight transport and logistics;
- Optimising the use of infrastructure;
- Applying financial instruments such as road and other pricing, incentives, local taxation – charging the use of private vehicles;
- Promoting behavioural change through awareness raising campaigns, information provisions, marketing etc.;
- Providing door-to-door access choices across the urban agglomeration;
- Promoting a compact city.
-

Relations between Pilot Actions, SUTP and the other WP

The BUSTRIP work packages 1 (self assessment and peer review) and 2 (sustainable urban transport planning and plan) are strongly interconnected with WP3. Work in WP1 where the cities current situation is assessed and areas for improvement are identified and the process of developing or revising the cities SUTP should be directly connected to the pilot actions performed. Pilot actions are some of the concrete measures to put SUT-plans into action and need to be embedded in the SUTP. To gain time, work with WP3 will start parallel with WP2 (see the time plan below). The experience gained in the WP 1-3 will be collected and documented in WP4 (SUTP toolbox) to create tools for future SUTP development in Europe. For cities with no SUTP, the pilot action will have to be in line with targets planned by the city for their further work with implementing a SUTP.

Goals and benefits for the cities with WP3

The goal for the cities with WP3 is to plan and implement a Pilot action that correspond to the plans with the SUTP and demonstrate how actions can address the drivers and impacts within the SUTP.

Examples of benefits for the cities are:

- A good way of testing some of the principles in the SUTP;
- A starting point for the actual implementation of goals within the SUTP;
- An opportunity for marketing of the SUTP;
- Improvements in the city within the area of the pilot project;
- Learning from other cities as well as showing a good example;
- Increased cooperation between different cities;
- Increased cooperation between actors in the city;
- Increased knowledge of stakeholder involvement.

What to do and how

The participating cities are expected to do the following (see also the work plan for WP3):

Actions

1. Verify the theme group and pilot action proposal

The verification of the theme group will enable the city to start the communication with other cities within the same area of interest. The pilot action ideas presented in the beginning of the project will be discussed with the other cities during the first Theme group meeting and with the WP leader, to be able to get a wider view and perhaps some more ideas. The final verification and description of the Pilot action will take place when the Self assessments are finalized and the Peer Review has started, to be able to verify the relevance of the actions.

2. Establish a pilot action group

The Pilot action group will consist of 3-5 persons in each city. The city co-ordinator may lead the Pilot action group and the rest of the group will consist of actors involved in the implementation and decision-making (when necessary). Chalmers will not attend the meetings but will assist with telephone and written support when needed. One person from the Peer review team will contribute to the evaluation of the Pilot action. The pilot action group will make a detailed plan and set goals and targets for the Pilot (see action 4). The group will have continuously contact with the inter-sectoral group working with the SUTP.

3. Find out the possibilities for a pilot action and connect it to the SUTP (important)

The Pilot action idea presented in the beginning of the project will be discussed after receiving the results from the self assessment and, as far as possible, the Peer Review. Since the project period is quite short it might be necessary to start to define a Pilot action before the results of the Peer Reviews are finished. The exact number and content of each city's Pilot actions will depend on the SUT planning and the outcome of that process. It is important that the Pilot action respond to the content of the

planned SUTP and respond to the city's objectives. A screening to find the best suitable target area for the Pilot action will be performed.

4. Make a plan for the pilot action (time plan, steps, implementation, evaluation; see template for documents)

Chalmers will support the preparation of the detailed pilot action plan. The plan will be based on earlier experiences and the results of the self assessment and peer review results. A description of the contents of, and a template for, the Pilot action plan is found in Appendix 2. To choose indicators and describe the Pilot action are important steps in this action.

5. Identify stakeholders

The number and type of stakeholders in the Pilot actions varies between the cities. At an early stage of SUTP-development, stakeholders should be identified and routines for stakeholder involvement be developed. Stakeholders affect or are affected by decisions concerning transport and can be pedestrians, cyclists, car owners, NGO:s, transport/hauler companies, bus operators etc. Special efforts should be made to collect the views of stakeholder groups that traditionally do not make their voice heard, like children, elderly or public transport users. A balanced gender representation is important. When a Pilot action plan is defined, the stakeholders can be identified. The Pilot action group will identify the stakeholders affected by the pilot.

6. Consult with stakeholders

The communication with stakeholders is very important for achieving a successful project! Meetings and workshops with stakeholders and interested parties are good to be able to communicate the pilot action plan and to get comments on the work. The Pilot action plan has to be an iterative process and correspond to the (relevant) ideas and opinions of the stakeholders, without changing the objectives, to achieve good results. If there are existing action groups with stakeholders within the city, they can preferably be used for this purpose. The most important thing is to get a wide range of actors in the communication. If the city has no tradition and experience of involving stakeholders in planning processes, it might be difficult to know who to involve and how to reach these groups. In such a case, a good starting point is to try to list all groups in society that can be affected by a certain transport measure identifying ways to reach and inform the various groups. The Pilot action group is responsible for the stakeholder consultation.

7. Evaluate the base line scenario for the pilot action (Important)

WP leader, Chalmers, is responsible for the evaluation of the pilot actions. Each Pilot action will be evaluated by one of the peer review team members using the evaluation template. The Peer Reviews will provide the cities with an assessment of the whole functional urban area. The city may need to carry out additional a more detailed assessment of the geographical or thematic pilot areas. This base line scenario is important for the final evaluation of the Pilot action results. A list of indicators is presented in the template and each city will, together with the WP leader, choose the most relevant of those for the evaluation (in the Pilot action plan). The monitoring and evaluation of the base line scenario and the indicators

will be an input to the Pilot action Evaluation report.

8. Implement the pilot action

The cities will start implementing their Pilot actions in the process of the SUTP according to their Pilot action plan. The implementation can be performed by the cities or by engaging external expertise. The WP leader will follow the implementation process closely and support the cities in their work. The outcomes of the Pilot action will be continuously reported on the website and in newsletters to provide input and ideas to other cities. The success factors and barriers of the Pilot actions will be discussed during the workshop, late spring 2007.

9. Evaluate the pilot action

A range of indicators will be presented (see Appendix 3 with a guide for the monitoring and evaluation) for the pilot actions and the cities. Some are common indicators and some are more or less suitable for different types of projects. The selection of indicators for each pilot action will be discussed and decided by the partner city together with Chalmers in the Pilot action plan (action 4). The results will be presented as input in the Evaluation report, in newsletters and on the web site.

10. Publicize actions and results continuously on the web site and in newsletters

During the project period there will be a possibility to publicize actions and results both in newsletters and on the project web site (www.bustrip-project.net). This is an opportunity for the city to promote the actions going on and to show good examples from the implementations.

11. Provide documents to WP leader and project co-ordinator (see below and templates) and provide input to the Theme groups

The documents expected are described below. The input from each city to the Theme groups is important to be able to spread the lessons learnt from the cities and to create a good forum for discussing ideas and solutions to different problems.

Documents

1. Pilot action plan

Each city will provide a Pilot action plan for the Pilot action/-s. This document will include detailed information about how the Pilot action is to be implemented; a time plan, steps for the implementation and definition of indicators for evaluation of the baseline scenario and the Pilot action. See template for a more detailed description. This document will be finalized during the autumn of 2006. The pilot action plans should be discussed during the Theme group meeting for more input and ideas from other cities, in early autumn 2006.

2. Deviation reports (each quarter of a year)

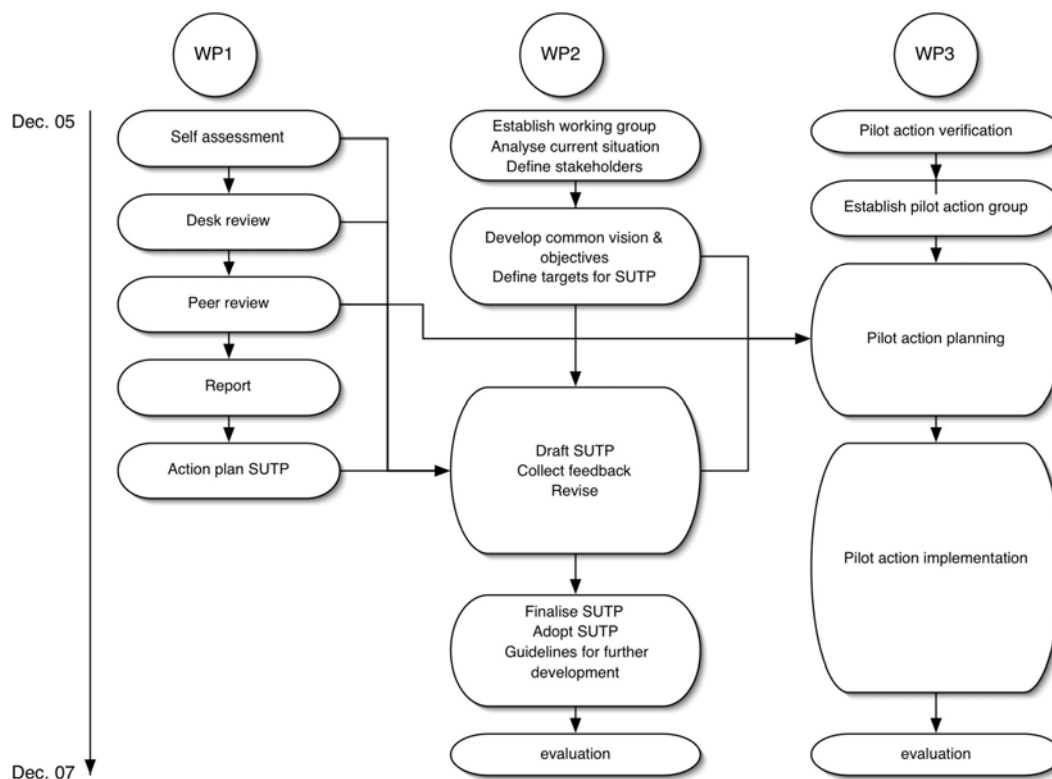
Deviation reports must be prepared for each pilot action to be able to see and evaluate the issues that did not proceed according to the plan. Barriers and drivers as well as deviations are important for the preparation and writing of the

guidebook (WP 4). Chalmers will contact each partner city every third or fourth month to follow up the work done by the cities. No written report will have to be made at this time. But, a certain number of questions, according to the “Deviation report template”, will be gone through during these telephone meetings.

3. Evaluation report

The evaluation report will consist of the baseline scenario indicator evaluation as well as the monitoring and evaluation of the indicator result of the Pilot actions. The report will also consist of a description of the Pilot action, how it was implemented, success factors, barriers and conclusion about the evaluation and indicator results.

Time plan



A rough time table for BUSTRIP work packages 1-3

The time plan for the complete BUSTRIP project is from July 2005 to December 2007. During this period the cities will perform a self assessment, a peer review will be done, a SUTP will be planned and implemented/ revised and the cities will perform one or more Pilot actions. The project period is short, so different actions have to be performed parallel with each other. The Pilot actions will start by verifying the theme group for the city as well as the Pilot action idea. The idea may not be seen as a final decision of the Pilot action since it is very important that the performance of the Pilot action correspond with the targets and issues of the SUTP. After the verification, a Pilot action group will be established and the possibilities for introducing a pilot action in the city within the framework of the SUTP will be found out. Those actions will be performed before June

2006. The time plan can differ between cities depending on the Peer reviews, since some peer reviews will not be finished until September.

See the picture above to find out the relations between this WP and the others. An individual time plan will be set up for each city, in cooperation with Chalmers and the other WP, in the beginning of 2006.

The Pilot action should be implemented no later than the spring of 2007. Some cities may implement the Pilot action earlier depending on the outcomes of the Peer reviews and possibilities of that certain city. The implementation of the Pilot action should be for a minimum of six months, but preferable longer (this will depend on the theme of the Pilot action). During the last milestone of the project there will be an evaluation of the Pilot action.

Milestone 1 July 2005 to December 2005:

No completion of any actions for the cities.

Milestone 2 from January 2006 to June 2006:

Action 1 – Verify the theme group and pilot action idea.

Action 2 – Establish a pilot action group

Action 3 – Find out the possibilities for a pilot action and connect it to the SUTP.

Milestone 3 July 2006 to December 2006

Action 4 - Make a plan for the pilot action

Action 5 – Identify stakeholders

Action 6 – Consult with stakeholders

Milestone 4 January 2007 to June 2007

Action 7 – Evaluate the base line scenario for the pilot action

Action 8 – Implement pilot action

Milestone 5 July 2007 to December 2007

Action 9 – Evaluate the Pilot action.

All project activities must be completed by the end of year 2007 when the whole programme period ends. Actions 10 and 11 are spread out during the pilot project period and will occur every third or fourth month.

Outline Pilot Actions

Gdynia (ITS and Public transport)

The city of Gdynia is a beginner on sustainable transport planning. Gdynia will therefore put main emphasis on SUTP development. Their pilot action aims to reduce traffic in the central area of the city by using ITS measures, f.e. parking system information. Gdynia will prepare their SUTP and implement the pilot in close co-operation with the other cities in the ITS and public transport group.

Göteborg (Mobility management)

The city of Göteborg is a forerunner on sustainable transport planning and will revise their existing SUTP based on the findings of Peer Reviews. Their main emphasis is on the pilot action implementation. Their pilot action aims at developing and extending the cities mobility management work. This work consists of improving collaboration and organising awareness raising campaigns. Göteborg will revise their SUTP and implement the pilot in close co-operation with the other cities in the mobility management group.

Kaunas (ITS AND Mobility management?)

The city of Kaunas is a beginner on sustainable transport planning and will put main emphasis on SUTP development. Their pilot action aims at improving the image of public transport in the city through awareness raising. It will also promote closer stakeholder co-operation in order to integrate the public transport operators in common system using ITS technology. Kaunas will prepare their SUTP and implement the pilot in close co-operation with the other cities in the mobility management group.

Lahti (Intermodal transport)

The city of Lahti is an intermediate on sustainable transport planning and will put main emphasis on SUTP development. Their pilot action will be linked with functioning of Lahti Traffic Forum and it will aim on co-operative planning and awareness raising campaign through events and marketing. Lahti will prepare their SUTP and implement the pilot in close co-operation with the other cities in the intermodal transport systems group.

Liepaja (Intermodal transport)

The city of Liepaja is a beginner on sustainable transport planning and their main emphasis is on the SUTP development. Their pilot action aims at limiting the car usage in the city centre. Liepaja will prepare their SUTP and implement the pilot in close co-operation with the other cities in the intermodal transport systems group.

Pärnu (ITS and Public transport)

The city of Pärnu is a beginner on sustainable transport planning and puts main emphasis on the SUTP development. Their pilot action deals with more effective usage of the existing public transport system through new solution f.e. on river transport. Pärnu will prepare their SUTP and implement the pilot in close co-operation with the other cities in the ITS and public transport group.

Sundsvall (Intermodal transport)

The city of Sundsvall is a forerunner on sustainable transport planning and will revise their existing SUTP based on the findings of Peer Reviews. Their main emphasis is in the pilot action that aims at improving the intermodality and limiting car usage in the city

centre through f.e a park and ride system. Sundsvall will revise their SUTP and implement the pilot in close co-operation with the other cities in the intermodal transport systems group.

Tartu (Intermodal transport)

The city of Tartu is a beginner on sustainable transport planning and will put main emphasis on SUTP development. Their pilot action aims at awareness raising and innovative ways of limiting car usage in the city centre and promoting the public transportation, cycling and walking. Tartu will prepare their SUTP and implement the pilot in close co-operation with the other cities in the intermodal transport systems group.

Turku (ITS and Public transport)

The city of Turku is an intermediate on sustainable transport planning and has the main emphasis on SUTP development. Their pilot action aims at developing and strengthening the roles and pedestrians and cyclists and the effectiveness of the public transportation system. Turku will prepare their SUTP and implement the pilot in close co-operation with the other cities in the ITS and public transport group. Turku also provides the co-ordination team with expertise on transport, environment and spatial planning and a pilot action implementation.

Vilnius (Intermodal transport)

The city of Vilnius is an intermediate on sustainable transport planning and will revise its existing SUTP based on the findings of PRs. Their pilot consists of studies on sustainable intermodal transportation systems. They will do public surveys where the residents express their opinions on the issue. Different stakeholders will be involved in the discussions. In addition they will organise events to promote biking, walking and public transportation. Vilnius will revise their SUTP and implement the pilot in close co-operation with the other cities in the intermodal transport systems group.

Örebro (ITS and Public transport)

The city of Örebro is a forerunner on the implementation of sustainable transport planning. Örebro provides the project with good practices from pilot actions in sustainable transport field. Nevertheless, Örebro does not have SUTP yet and therefore its main emphasis is on the SUTP development. Their pilot action aims at studying the possibility of developing a new public transport system that would combine the travellers needs, with a system that is appropriate and accessible to all travellers. Örebro will work in close co-operation with the other cities in the ITS and public transport group.

Bremen (Intermodal transport)

The city of Bremen is a forerunner on sustainable transport planning and will revise their existing SUTP based on the findings of Peer Reviews. Their main emphasis is on the pilot action implementation. Their pilot deals with the "integrative transport planning" with implementations on the neighbourhood level in the field of innovative intermodal offers and improvements of the environmental performance of transport further action. Bremen will revise their SUTP and implement the pilot in close co-operation with the other cities in the intermodal transport systems group.

Support

Chalmers will support all Pilot actions and Theme groups during The BUSTRIP project period. Templates for how to establish a “Pilot action plan”, “Deviation report” and “Evaluation” are supplied in the appendix. The WP leader will follow the implementation process closely and put special emphasis on capturing the potential for transnational learning of the experiences of each Pilot action’s process.

- Supervise
- Support Pilot actions and Theme groups
- Approve plans, actions
- Visits
- Calls
- Link different projects together

Contact information

Contact information to all city coordinators or responsible partners for the pilot actions.

Chalmers

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Appendix 1: Best practise on Pilot actions in urban areas

To give some ideas and inspiration to the Pilot actions, here are some “Best practice” examples of Pilot actions and measures performed in a number of cities.

Germany, Bremen: ITIC – Intermodal Travel Information Centre was opened in 2002

www.bsag.de and Fact Sheet, Vivaldi project www.vivaldiproject.org

Objectives and targets

To improve customer services and information, an Intermodal Travel Information Centre (ITIC) was opened at Domsheide in Bremen in November 2002. At this centre, customers get information on and tickets for all public transport operators in the whole region, including information on Car sharing services.

Rationale

Good information on alternatives to the car is a basis to an environmentally friendly choice of mobility modes. With the improved information, new customers can be won for public transport services.

Main actors and role in the project

The ITIC is mainly realised by BSAG as the main public transport operators in the area, in co-operation with Cambio, Stadtauto (Car sharing provider) and VBN, the representative of around 35 public transport operators in the region.

Implementation aspects

The Northwest region is an area of 8.400 sq. kilometres with 1.8 million inhabitants in and around Bremen. The region is served by local buses, trams, local/regional trains and long distance rail connections. About 35 public transport operators are active. Domsheide is the main public transport interchange in the inner city at the edge of the pedestrian area. Here, an ITIC has been established as a part of the VIVALDI project, converting the ground floor of a former garage. On a premise of about 200 m², six desks for information, ticket sales etc. are realised. Some examples of the information given are:

- Door-to-door-information for the whole city including maps with walking connections between the stop and the final destination (based on the address);
- Estimation of travel time and fares for taxis in intermodal trips (in conjunction with public transport) and/or a single taxi trip;
- Information about Bike and Ride;
- Integration of local public transport information into the nation wide public transport information system (based on integrated access to EFA data base, HAFAS and other nation wide systems);
- Intermodal offers and services (e.g. with taxi, car sharing, integrated tourist offers etc.);

Appendix 1: Best practise on Pilot actions in urban areas

- “EnterdeckerCard” – An all-inclusive electronic ticket for regional PT and all tourist facilities in the region, stored on a bank account card with chip or on a specially designed chip card;
- All tickets for the region and different types of season ticket contracts (in co-operation with 34 different operators) for all modes of public transport are available.

These offers are made possible for the whole region, as all public transport operators are members in the Verkehrsverbund Bremen/Niedersachsen (VBN) – the co-operation for public transport operations.

Information is given in person, by fax, by phone or at self-service terminals with internet access. Customer access to timetables and fares is also realised by internet. Equipment for electronic cash and loading chip cards has been implemented. As most information is based on electronic database BSAG and VBN are rearranging their internet platforms and making them barrier free. In close co-operation with car sharing operator Cambio, the staff members of the public transport operators are also trained services on car sharing. Clients can apply for membership or book car sharing cars. A car sharing site is included on the premises.

Based on existing experience it is expected to have more than 350.000 requests per year to support environmentally friendly travel. The public transport internet platform of the ITIC registers more than 700.000 requests for travel information per month. Over the first few months there has been a significant rise in the level of requests by customers and evaluation will take place after the starting period is over.

Sweden, Stockholm: HSLC – Hammarby Sjöstad Logistics Centre was in operation between 2001 and 2004 for consolidation of material for a construction site

www.hammarbysjostad.se or Fact sheet, Trendsetter project: www.trendsetter-europe.org

At a major construction site in Stockholm goods has been collected at a logistics centre for more efficient deliverance. Daily, 400 deliveries brought in material to the site. At the entrance of the area all goods were reloaded and eight transport vehicles delivered within the area. The logistics centre was in full operation 2001-2004. The building of Hammarby Sjöstad is one of the largest ongoing construction projects in Sweden. An old dockland and industrial area is transformed into a modern city area. When all parts of the project are completed in 2010 there will be 30.000 people living and working in the area.

Access for deliveries to the construction site was restricted due to both geography and existing buildings. Over 15 construction managers were involved in projects in the area. These managers needed rapid and frequent deliveries;

Appendix 1: Best practise on Pilot actions in urban areas

daily, 400 deliveries brought in an average of 700 tons of construction material. Delivery trucks would clog the entire area if not co-ordinated. Therefore, the Hammarby Sjöstad Logistics Centre (HSLC) was established. It was located at the entrance to the area and all deliveries had to pass through the centre. Small deliveries were unloaded at the centre and delivered by a single lorry to 22 different unloading zones within the working area. Thus one vehicle replaced five. Larger cargoes were unloaded and stored at the centre before being delivered “just in time” – thus ensuring that only full truck loads entered the area. This also decreased the risk of theft and sabotage.

To facilitate unloading and avoid queues into the centre, drivers could schedule deliveries using a delivery calendar on the internet. All vehicles used for deliveries within the site were of the highest environmental standard (Euro IV standard).

The Trendsetter budget covered:

- Operating the centre (office and 8.000 m² stock) for three years – 10 staff and 8 transport vehicles – organized by a subcontractor.
- Maintaining the web site and supervision system.
- Evaluating and reporting results.

This measure was produced by the Stockholm Real Estate and Traffic Administration.

At the end of 2005 the logistics centre will open again. Then the area is reaching it's second peak of construction work. This time the logistics centre will be organized and run by the former subcontractor alone with the income from the users. The positive experiences from the first period have now made the users willing to pay full for the service.

England, London: Congestion charging

www.tfl.gov.uk

Congestion charging, London – the consultation process

The introduction of a congestion charging scheme was a central part of the Mayor's manifesto for election. Consultation on such a scheme started in July 2000 with the publication of “Hearing London's Views” and continued in January 2001 with the publication of the Mayor's Draft Transport Strategy.

During preliminary consultation on the proposed scheme (“0 June – 13 July 2001), TfL consulted 130 key stakeholders, including sending them a map of the proposed charging zone. TfL also arranged a series of 14 consultation meetings with groups of key stakeholders. 25 stakeholders sent written responses to the preliminary consultation.

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Formal consultation on the scheme order stated on 23 July 2001, running for 10 weeks, until 28 September. Key aspects of the public consultation process include:

- Notice of the public consultation published in the Evening Standard and London Gazette.
- 6000 notices placed 250 m apart on streets in and around the Inner Ring Road. These notices were checked weekly and replaced if damaged or missing.
- Producing and distribution an information pack to 500 key stakeholders including all the London Boroughs and local authorities surrounding Greater London, GLA members, MPs and MEPs with constituencies within Greater London, business group representatives, disability groups, all NHS Trust and Health Authorities within Greater London, motoring organizations, bus and train operators, groups representing the interest of different national/ethnic, religious and voluntary organizations.
- Arranging consultation meetings with key stakeholders including the 33 London Local Authorities and the Association of London Government, the emergency services, the NHS London Regional Office and NHS trusts, business and recovery industry, groups representing the interest of disabled persons, the London Development Agency, the utilities, the Royal Parks agency and groups representing the alternative fuel industry.
- Printing a 12 page public information leaflet in the proposed scheme and distributing 2.000 copies to each of the 33 London Boroughs to distribute. Copies were also made available in Braille, large print, on tape and in eight languages other than English.
- Sending over 2.000 copies of the leaflet to members of the public who requested further information after calling the Freephone number set up to deal with enquiries. 2.500 people called the Freephone number in total.
- Placing advertisements giving details of the scheme and how to participate in the consultation exercise in 11 London newspapers (including the Evening Standard) and on 11 London radio stations.
- Organizing a public exhibition in two central venues and two public meetings, this together attracted over 400 Londoners.
- Placing documents about the proposed scheme in Town Halls or Libraries of all central and inner-London Boroughs for residents to inspect.
- Publishing full details of the proposed scheme on TfL Street Management website, which was visited by 11.000 people. Three-quarters of them downloaded the charging zone map.

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Following publication of proposed modifications to the scheme on 27 November 2001, there was a further consultation on the proposed modifications until 18 January 2002. This included:

- Contacting everyone who had responded to date and 500 key stakeholders with details of the proposed amendments and inviting further comments.
- Placing another advertisement in the Evening Standard, detailing the amendment and inviting further comments.
- Placing 6.000 notices of the proposed modifications to the scheme 250 m apart on streets in and around the charging zone. These notices were checked weekly and replaced if damaged or missing.
- Arranging meetings with key stakeholders to discuss specific points raised.
- This second major period of consultation ended on 18 January 2002.
- In addition boroughs within the charging zone were specifically consulted on the scope of the proposed exemption for certain borough operational vehicles.

The benefits of the scheme are:

- The scheme is predicted to cut traffic levels inside the charging zone, measured in “vehicle miles”, by 10-15 %, and congestion, measured in “vehicle delays”, by 20-30 %.
- Central London’s traffic will return to “summer holiday” levels all year round.
- Journey times and deliveries will be much more reliable for those making essential journeys within the charging zone.
- Drivers will save 2-3 million hours within the zone and a further 4-7 million hours on roads between the zone and within the North and South Circulars each year.
- The scheme will have paid for itself within 18 months of starting up.
- Over the first 10 years of the scheme it will raise more than £1,3bn to re-invest in transport improvements across the capital.

Brazil, Curitiba: Innovative Public transport solutions.

www.ourplanet.com/imgversn/121/tanig.html

Curitiba has become a model for the developed and developing countries alike. Cassio Taniguchi describes its pioneering public transport system:

The value of a city is directly proportional to the degree of satisfaction of the people that live in it. So, an urban administration can be visibly and critically assessed by the quality of life of the inhabitants. When it makes decisions, it should always keep its citizens in the spotlights. For this reason, successive municipal administrations in Curitiba since the beginning of the 1970s have done their best to answer – in a practical and organized way – this basic question: how

Appendix 1: Best practise on Pilot actions in urban areas

can the city welcome an ever increasing number of inhabitants into a static physical space, without losing quality of life?

Public administrators must preserve the environment while meeting the demands of an urban centre and planning the sustainable development of a city. In Curitiba, transport proved to be the key to a sustainable future. Its urban transport system was set up to give its citizens high quality service as standard. Harmonized with the city's plans and zoning regulations, it transformed the emptiness of the 1970's into residential and business areas – and induced the desired growth. Following the principle of respecting the citizens, the Research and Urban Planning Institute of Curitiba designed special buses in 1973 in partnership with transport enterprises and automobile manufacturers. These replaced trucks adapted for mass transportations which did not offer the comfort or safety their users deserved. The new buses had larger doorways, lowered chassis, wide windows, special ventilation systems and rear-located engines, all to provide passengers with greater comfort. The city's mass transportation system, which was established in the following year, was the first in Brazil to use bus lanes alongside the system for private cars. People left their cars at home, finding the mass transportation very competitive because of its speed, punctuality and regularity. As the system evolved, larger buses were designed and built – including articulated ones in the 1980's, carrying up to 160 people, and bi-articulated ones in the 1990's each with a capacity of 270 passengers. Vehicles with automatic transmission and air suspension were introduced, as was a system of paying fares in advance so as to make boarding more efficient.

Two million people now use the city's integrated transit network every day. It has four elements: the direct line; an alternative "speedy" system – buses which travel faster and have fewer stops; the inter-district line which carries out trips between districts without crossing the centre of the city; and feeder buses, which connect terminals to the districts. It is integrated within the 12 municipalities of the metropolitan region, and is continually updated as the city and its population grow. Public transportation also plays a fundamental role in preserving the environment. A high-quality transport system, accessible to the citizens, reduces the number of vehicles circulating around the city and, as a result, cuts the level of air pollution.

Taking the lead

Curitiba took a pioneering step to improve air quality even further by becoming the first city in Brazil to use less polluting fuels. We have adopted a special fuel made up of 89,4 per cent diesel, 8 per cent anhydrous alcohol and 2,6 per cent soybean additive. The resulting fuel is less polluting and cuts the emissions of particles to the air by up to 43 per cent. Adding the mixture of alcohol and soybean additive to the diesel also brings social and economic benefits, including maintaining employment in rural areas, as every billion litres of alcohol generate approximately 50.000 new jobs. Curitiba is now issuing a smart card to replace cash in paying fares, thereby increase the security for passengers using the

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mass transportation system. Citizens registered at the City Hall will be given access to the card, which is made up of available credits. People who are exempt from paying fares – such as elderly, physically handicapped, police officers and students – will also have the right to a card. At the City Hall, there is a work going on to enable the inhabitants of Curitiba to participate in all decision making processes, so they can see the city as an extension of their own homes. Curitiba does not intend to leave icons or concrete memorials as legacies, but social action revives a feeling of citizenship and brings benefits to all without distinction.

Appendix 2: Templates for WP 3

Templates will be provided to guide the partner cities in their work with the pilot actions. There are three templates provided for the Work Package 3: “Pilot action plan”, “Deviation report” and “Evaluation report”. All the templates are here presented with an introduction about:

- How will the document be used?
- How will the data be collected?
- What will the report be used for?
- When will the report be finalized?

In the templates, in the next few pages, the red text indicates where the cities need to fill in information.

“Pilot action plan”

The Pilot action plan will be produced during Milestone 3 (July to December 2006). The plan is based on the Pilot action idea presented in the beginning of the project and discussions after the Self-assessment and Peer review.

The report will be used as a guide for the cities to implement their Pilot actions as well as for presenting the Pilot action and implementation plan and approach for others. The city co-ordinator and the Pilot action group will prepare the plan together with support from the WP leader. When the plan is finalized it should be sent to the WP leader for approval. After this approval the implementation process should start. A summary of the Pilot action plan will be presented on the project web page.

The most important purpose of the Pilot action plan is to state what the city wants to do and what they want to achieve by doing that.

Contents for the Pilot action plan:

- Short summary of the Pilot action.
- What do we want to do?
- What do we want to achieve?
- What are the expected results?
- How are we going to do this?
 - o implementation plan – steps?
 - o stakeholder involvement?
 - o meetings/workshops?
 - o technology used?
- Time plan.
- Budget.
- Indicators (chosen from the list of indicators in Appendix 3 in discussion with WP leader).

Appendix 2: Templates for WP 3

- What are the risks with the pilot project (financial, administrative – time etc., political, technical)?

“Deviation report”

All deviations from plan should be reported and evaluated. This template will help the partner cities to report on those issues. The Deviation report will be updated every third or fourth month during the Pilot action period (three times during 2007), to be able to help cities overcome their problems.

Chalmers will contact each partner city to follow up the work done by the cities. No written report will have to be made at this time; the documentation will be done by Chalmers. But, a certain number of questions, according to the “Deviation report template”, will be gone through during these telephone meetings. The information gathered will be used as input for the evaluation report.

“Evaluation report”

The Evaluation report has to be finalized by the end of the BUSTRIP project period (July to December 2007) to be able to report on the Pilot actions performed and to help information and knowledge to be spread. The report will partly be done by the cities and partly by the WP leader. The cities will write the specific parts about each Pilot action performed and the WP leader will write general conclusions from the cities experiences and actions as well as the general lessons learnt and further recommendations. Some parts of the Evaluation report will be finalized during the Pilot action period – the base line scenario indicators have to be monitored in the beginning of the project and some of the indicators could need monitoring during the period (depending on the nature of the indicator).

There is a list of indicators presented in the evaluation report template. Not all of the indicators should be used in each Pilot action. An appropriate number of indicators (10 – 15) should be selected by the cities in discussion with the WP leader. The indicators chosen should be put into the Pilot action plan (see above) before starting the implementation.

The contents of the Evaluation report for the cities are:

- A short description of the city and the Pilot action area.
 - o Relevance of the Pilot action according to the SUTP?
- ‘Ex-ante’ evaluation of the Pilot action area.
- Description of the Pilot action performed.
- Baseline scenario.
- Description of the implementation, success factors, barriers etc.
- Results evaluation.
- Conclusions for each Pilot action.

Template: Pilot action plan

Pilot action plan for [insert city name]

Pilot action summary for [insert city name]

[Describe the Pilot action/-s shortly (a summary of the Pilot action plan that can be used for input to the web page and in newsletters)]

Objectives

[Describe the objectives for the Pilot action.]

What do we want to do?

[Describe what you want to do in the Pilot action.]

What do we want to achieve?

[Describe what you want to achieve with the Pilot action.]

Expected outcome

[Describe the expected results]

“Ex-ante” evaluation

[Describe the Pilot action area:

- Why and how it was chosen
- How does it relate to the city as a whole (or is it the whole city)
- What are the problems and possibilities with this area
- Are there any special pre-requisites for the area?

This part can later be transferred into the Evaluation report, but it is good to write this in the beginning of the project to get a view of the area that is not constructed after the project.]

Implementation plan

[Describe how the Pilot action is going to be performed.]

Implementation steps

[Describe step by step how the implementation is going to be performed]

Stakeholder involvement

[Describe how the stakeholders' involvements are going to work out.
Connections to the Peer Review stakeholders, intersectoral group and WP 2]

Meetings/workshops

[What meetings and workshops or other activities are planned for the Pilot action?
Describe the purpose and actors for the different events]

Template: Pilot action plan

Technology used

[Is there any particular technology that is going to be used? State of the art?]

Other

[Any other activities planned or points need to be further described here]

Time plan

[Make a detailed time plan for the Pilot action. Use the activities mentioned above and set preliminary dates for them to be accomplished.]

Budget

[What are the costs for the Pilot actions? Finance?]

Indicators

[Indicators (chosen from the list of indicators in Appendix 3 in discussion with WP leader) need to be described here. Why are they chosen and what is the purpose of them?]

Pilot Action specifications

[Please complete the tables below. The indicators are chosen together with the WP leader and will be approximately 10-15. See Appendix 3 for a list of indicators and an example of how to complete the tables.]

Activities and objectives

Pilot Action activity: What do we want to do?	
Objective: What do we want to achieve?	
Indicator of Activity: What indicators show that we did what we said?	
Indicator 1	
Indicator 2	
Indicator n	
Indicator of Progress: What indicators show whether or not we are achieving what we set out to achieve?	
Indicator 1	
Indicator 2	
Indicator n	

Template: Pilot action plan

Indicator definition

Impact	Indicator	Description (Location/ Quality, etc.)	Unit	Methods of measurement	Sources of data	Time/ frequency of measurement

Risks

[Describe the risks with the Pilot action.]

Political risks

[Describe

- the likelihood of occurrence (low, medium, high, critical)
- what partners and areas the risk will affect
- the expected impact (low medium, high, critical)
- prevention actions (what do you do to prevent the risk from occurring)
- contingency actions (what will you do if the risk occur)]

Financial risks

[Describe

- the likelihood of occurrence (low, medium, high, critical)
- what partners and areas the risk will affect
- the expected impact (low medium, high, critical)
- prevention actions (what do you do to prevent the risk from occurring)
- contingency actions (what will you do if the risk occur)]

Legal risks

[Describe

- the likelihood of occurrence (low, medium, high, critical)
- what partners and areas the risk will affect
- the expected impact (low medium, high, critical)
- prevention actions (what do you do to prevent the risk from occurring)

Template: Pilot action plan

- contingency actions (what will you do if the risk occur)]

Institutional risks

[Describe

- the likelihood of occurrence (low, medium, high, critical)
- what partners and areas the risk will affect
- the expected impact (low medium, high, critical)
- prevention actions (what do you do to prevent the risk from occurring)
- contingency actions (what will you do if the risk occur)]

Technical risks

[Describe

- the likelihood of occurrence (low, medium, high, critical)
- what partners and areas the risk will affect
- the expected impact (low medium, high, critical)
- prevention actions (what do you do to prevent the risk from occurring)
- contingency actions (what will you do if the risk occur)]

Template: Deviation report

Deviation report no. [X] for [insert city name]

What is the work undertaken?

[What has been done for the Pilot action within the reporting period (since the last report)?]

What are the key outputs?

[What (foreseen) outputs have been produced within the reporting period? Please mention all quantifiable production, like studies, reports, workshops, meetings, presentations, media exposure etc.]

Have there been any problems/delays?

[Describe if there have been any mayor problems, delays or deviations that you encountered during the reporting period? When answering, please consider the Pilot action plan, the time plan and the implementation steps planned.

- Why have the problems, delays and deviations occurred?
- What effect do these problems, delays and deviations have on your planning and the results?
- What actions have you undertaken to reduce and manage the problems, delays and deviations?
- Have the actions undertaken had positive impacts for the (future) progress of your work? If not, what is necessary to ensure the success in your future work?]

Future plans

[Describe what the plans are for the next period of time (before next deviation report) and if there are any changes to the plans made in the Pilot action plan (why and how that affect the final results)]

Evaluation report for **[insert city name]**

The city of [insert city name]

[Give a short presentation of the city]

Description of the pilot action performed

[Give a presentation of the Pilot action performed (summary version) with approach, theme group and some short conclusions.]

Relevance for the SUTP

[Describe how the Pilot action responds to the planned/revised SUTP for the city.]

“Ex-ante” evaluation

[Describe the Pilot action area;

- Why and how it was chosen
- How does it relate to the city as a whole (or is it the whole city)
- What are the problems and possibilities with this area
- Are there any special prerequisites for the area?]

Base line scenario and monitoring

[Use the indicators chosen for the Pilot action. The first indicators measurement will be performed before the start of the implementation of the Pilot action to state the base line scenario.]

Indicator monitoring

[Complete with tables for all the indicators chosen.]

Indicator 1

Impact	Indicator	Description (Location/Quality, etc.)	Unit	Methods of measurement	Sources of data	Time/frequency of measurement

Date/Time	Description 1	Value 1	Value 2	Comment

Description of the implementation

[Description of the implementation, success factors, barriers, risks etc.]

Results

[Use the indicators chosen for the Pilot action – present the results of the monitoring and compare them with the base line scenario. Answer the questions: Did we do what we planned to do? Did we achieve the results we wanted?]

Pilot Action Evaluation

[Please complete the tables below. The indicators are chosen together with the WP leader in the Pilot action plan – please use the same indicators in this table. The start value and end value can be found in the tables for the monitoring of the indicators.]

Presentation of Results

Indicator	Unit	Start-Value	End-Value	Trend	Comment

[Add tables, graphs, diagrams etc. to demonstrate further details on the indicator development or to show relations and dependencies between indicators.]

Evaluation of monitoring results

Did we do what we planned to do?	
Did we achieve the results that we wanted?	

Conclusions

[Discuss about conclusions from the implementation and the approach to the problem:

- Was this a good Pilot action?
- What could we have done better?
- What are the lessons learnt?
- What recommendations can we pass on to others?

Template: Evaluation report

- How did the BUSTRIP project approach work out (Pilot action group, stakeholder involvement, Theme groups) and did it give any extra value to the Pilot action with the support from theme groups?]

Discussion and conclusion

<p>What are the reasons for the monitored trends?</p> <ul style="list-style-type: none">• Was there any other influence besides the pilot action activities?• Did you change the monitoring method (measurement, data source, etc.)?• Etc.	
<p>What could we have done better?</p> <ul style="list-style-type: none">• Implementation of action• Using of other indicators• Using of other data sources• Etc.	
<p>What are the lessons learnt?</p> <ul style="list-style-type: none">• Was this a good pilot action?• What are the recommendations we can pass on to others?• How did the BUSTRIP project approach work out?• Did the BUSTRIP project approach give any value to the pilot action with the support from theme groups?• Etc.	

Appendix 3: Pilot Action Indicators and Evaluation

The objective of Appendix 3 is to guide the partner cities in the evaluation of the pilot actions. It provides:

- Background information on monitoring, evaluation and indicators;
- A list of relevant indicators;
- Guidance for selecting relevant indicators for pilot action evaluation;
- An example of an evaluation.

Background information

A precondition for performing a meaningful evaluation is a clear understanding of the evaluation process. This section is based on the evaluation and monitoring process in the Presud project¹ and imparts basic knowledge about monitoring and evaluation as well as about indicators including the issues which have to be considered for the indicator selection.

Monitoring and Evaluation

The goal of evaluation is to find out whether or not we are getting things done and how we might get things done better. “Monitoring” and “Evaluation” are important mechanisms designed to help us to get things done.

What are monitoring and evaluation?

- Monitoring

Monitoring is the process by which we check on progress in getting things done. For example if we said that we would improve the catch from fishing then monitoring will provide the information to be able to show us whether catches have improved. If we said we would spend money on surveys then monitoring will provide the information to be able to show us that we have spent the money appropriately.

In the context of this guideline the process of providing the information with which to show that we have done what we have said we would do is “monitoring”.

- Evaluation

Evaluation is the process by which we determine what the monitoring information means and what we should do about it. Evaluation might show that the fish catch is going down and that the solution is to provide marine sanctuaries. Evaluation might show that the money for the survey has been spent on a holiday and that the solution is to sack the guilty member of staff. Evaluation produces “Lessons

¹ www.presud.org Allen Creedy

Appendix 3: Pilot Action Indicators and Evaluation

Learnt” which can be used to develop a new statement or plan defining what we intend to do.

In the context of these guidelines the process of determining what we should do with the monitoring information is “evaluation”.

Why monitor and evaluate?

- Monitoring

Monitoring helps to get things done by providing information for evaluation. If monitoring is not undertaken then there is no way of knowing whether something has been done or not and no basis for making and implementing recommendations.

- Evaluation

We evaluate in order to use the information from monitoring to determine what needs to be changed to get things done. Evaluation improves efficiency and accountability. The alternative to evaluation is the increased likelihood that resources will be wasted. There is less justification for introducing a marine sanctuary if we do not know that fish catches are going down. It is hardly fair to sack a member of staff unless we know that funds have been misused by that member of staff. There is less justification for introducing city centre access restriction for heavy duty vehicles if we do not know their impact on local air quality.

Indicators

What should we monitor and evaluate?

We should monitor and evaluate “Indicators”. Indicators are things that show us whether, or not, we are achieving what we set out to achieve. It is obviously better to identify these indicators before we start our activities since changing the indicators whilst implementing activities is like changing the rules of the game after we start playing the game.

An Indicator might be fish catch in a fishery. It might be coral cover in a Marine Sanctuary. It might be the emissions of heavy duty vehicles in the city centre.

How should we select indicators?

The selection of indicators is a potentially difficult and time consuming process. However, the longer the time that is spent on the process the more appropriate and effective the indicator is likely to be. To a great extent the process of selecting indicators is one of common sense and context. If you can't justify selection of an indicator to your peers in simple terms it is not likely to be a very good indicator. There is no perfect indicator and selection is often a compromise. You will notice that many of the examples given below are highly conditional and depend on the purpose and context of monitoring. However, a focussed

Appendix 3: Pilot Action Indicators and Evaluation

approach to selection is better than a random one. There are a number of practical considerations in selecting indicators. These can be summarised as:

- Show cause and effect

Possible indicators should be used to monitor the relationship between cause and effect and the effect of that relationship on the progress of what you are trying to do. If only one is measured then it is difficult to monitor and evaluate the link. If water quality is considered to be adversely affecting coral cover then it is necessary to measure both coral cover and water quality. If the number of heavy duty vehicle is considered to be adversely affecting air quality then it is necessary to measure both, number of heavy duty vehicles and air quality.

- Be practical

There is no point in selecting an indicator that is not practical. For example if you wish to measure fish stock recovery from improved management then you will need to measure it over enough time to show recovery. In turtle stocks, for example, this could be years. In rare and/or highly variable species the intensity of sampling needed to detect change might be prohibitively expensive. For example determining whether the population of coelocanths was increasing, stable, or in decline. In a socio-economic context it might be inappropriate to use stakeholder dependency on a rare or marginal resource as an indicator.

- Be relevant

There is no point in spending time and effort on selecting an indicator if it is not relevant to what you wish to monitor. You need to ask yourself two questions in this respect:

1. Will this indicator help me to monitor progress towards achieving what I have set out to do?

For example if you are trying to improve management in a marine sanctuary then it is better to select indicators of effective management (effective prosecutions) and target habitats and species at risk from poor management (corals, coral dependent reef fish) rather than, for example, the number of divers visiting the area (unless diver pressure is a management issue) or water clarity (unless water clarity is a management issue).

2. If the indicator shows something can I do anything with it?
There is little point in monitoring an indicator that provides little information you can do anything with. An extreme example of this might to be to monitor growth in a mangrove stand before it is cut down, a sea grass bed before it is reclaimed or a coral reef before it is mined. Once the habitat is destroyed knowing that it was healthy

Appendix 3: Pilot Action Indicators and Evaluation

before hand becomes an academic exercise since there is nothing that can be done to reverse the damage.

Whilst monitoring stakeholder dependency on a habitat (stake) prior to its destruction might be relevant to determine compensation it would be better to monitor indicators of efforts to provide alternative income generation. Monitoring these indicators would help determine how best to replace loss of opportunity resulting from loss of the stake.

- Show change

This consideration has already been addressed in terms of practicality. If the indicator is unlikely to show change in the context in which it is being monitored then it should not be used. Estimating coral cover using line intercept transects is a case in point. It is widely accepted that the line intercept transect cannot detect changes in coral cover of a few percent. It follows that it cannot be used to detect a change of 1 or 2%. An example of this consideration in the socio-economic context might be to try to detect changes in income resulting from improved fishing outside the fishing season.

- Show progress

It is important to prioritise the selection and use of indicators of “progress” over indicators of “activities”. They are not necessarily the same although they might be. The guide is whether they show whether or not what is intended by the activity is being achieved. Activities may not actually achieve anything although they may be important for other reasons.

An indicator of activity might be number of patrols in a marine sanctuary whilst an indicator of progress could be number of offences in the sanctuary that have been effectively prosecuted and/or potential offenders who have been deterred. It could be argued that number of patrols is a sign of effectiveness of patrolling. However, more patrolling is a tool designed to achieve for more effective enforcement and without effective enforcement (or deterrence) it is pointless. A transport related indicator of activity might be the length of the cycling network in a city, whilst an indicator of progress could be the share of cycling in the modal split. Examples of indicators of activity versus progress are presented in Table 1.

Table 1: Indicators of Activity versus Progress

Activity	Progress
Tickets booked	Tickets purchased
Shots at goal	Goals scored
Voters registered	Votes cast
Fish landed	Fish sold
Diet	Loss in weight

- Involve stakeholders

Appendix 3: Pilot Action Indicators and Evaluation

It is important that as many stakeholders as possible are involved in the identification of Indicators and means of verification. This is the case both in a technical and a community based management context. There are two major reasons for this:

Firstly selecting indicators is a complex process and it should take account of as wide a range of experience as possible.

Secondly it is better to reach consensus amongst stakeholders concerning the nature and means of verification of indicators. Stakeholders will need to accept:- (1) the results of monitoring; (2) the relevance of these results to any evaluation; and (3) the management actions that need to be taken resulting from the evaluation. If the stakeholders do not accept the legitimacy of the indicators they will not accept the results from monitoring these indicators.

- Be independently verifiable

It is important, particularly with respect to scientific and technically derived indicators that the monitoring be independently verifiable. In other words it should be possible preferably to measure the same indicator and obtain the same result or alternatively to have sufficient documentation to allow for independent checking and confirmation that the monitoring has produced the specified results. In some cases this might prove difficult practically and any system of checks and balances can be undermined if there is a desire to do this. However, systems for independent verification should be provided where possible and an indicator that cannot be independently verified in one form or another should not be selected. Systems of independent verification include monitoring by different persons, questionnaires asking the same question in two different ways, double accounting and so on.

Indicators for pilot action evaluation

This section provides a guide on indicators for the pilot action evaluation. It includes the selection as well as the definition of relevant indicators.

Pilot actions as response to impacts

Urban transport, dominated by the private car, has significant adverse **impacts** on the transport system, the environment, the society and the economy and therefore on the general quality of life for people living and working in cities.

The pilot actions are **responses** to these effects. The goal is to reduce the negative impacts on and of mobility and transport. Because of the impact's interdependence the pilot actions usually affect more than one impact. For the evaluation it is evident to monitor the progress on the impacts (**Indicator of Progress**), but also the activities of the pilot actions (**Indicators of Activity**). Together they show whether or not and to what extend the goal of the activity is being achieved. Activities may not actually achieve anything although they may be important for other reasons. Therefore indicators of both, activity and progress have to be monitored.

Selection of indicators for the pilot actions

The indicator selection is determined by the pilot action's objective. Therefore the 1st step is to clearly define:

- The activities of the pilot action: What do we want to do?
- The objective of the pilot action's activities: What do we want to achieve?

After answering these questions the relevant indicators can be identified. Two questions have to be considered:

- Indicators of Activity: What indicators show that we do what we said?
- Indicators of Progress: What indicators show whether or not we are achieving what we set out to achieve?

Not every relevant indicator may be appropriate for the pilot action. For selecting suitable indicators for the pilot action several issues have to be considered. An indicator should:

- Show cause and effect
- Be practical
- Be relevant
- Show change
- Show progress
- Involve stakeholder
- Independently verifiable

Appendix 3: Pilot Action Indicators and Evaluation

Table 2 lists a template by which to judge the considerations with respect to an indicator.

Table 2: Indicator judgement template

Consideration	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Indicator						
Cause and effect						
Practical						
Relevant						
Shows Change						
Shows Progress						
Involves Stakeholders						
Independently verifiable						

Defining the pilot action's indicators

After selecting appropriate indicators for the pilot action's evaluation, the indicators need to be defined, including what, when, where etc. should be monitored. It should include:

- Name of the indicator
- A description providing more detailed information on location, quality, etc. of the indicator
- The unit of measure
- The methods of how to perform the measurement
- The source of the measured data
- The time when the measurements takes place and how often

Table 3 presents an example of an indicator definition.

Table 3: Example of indicator definition

Impact	Indicator	Description (Location/ Quality, etc.)	Unit	Methods of measurement	Sources of data	Time/ frequency of measurement
Air quality	Average NOx concentration	Several locations in city centre	kg/m ³	Measured values	Survey	Once a year
Intermodality	Length of cycling network	City area, lane's width > 1m	Km	Collected values	Municipality	Beginning and end of activity

List of Indicators for pilot actions

This section provides an overview about indicators that can be used for the pilot action evaluation. It includes a list of indicators of progress as well as a list of indicators of activities. Furthermore a list of references on indicators is presented in this section, which was taken from the Expert Working Group on Sustainable Urban Transport Plans report (2004). The here presented indicators are based on these references.

Please note that the indicator lists are not exhaustive! Indicators can be added and existing indicators should be customized to suit the city's local conditions. Helpful suggestions can be found in the references.

Indicators of Progress

The following list table presents a list of the adverse impacts and related indicators by which the scale of the impact can be described.

IMPACT	INDICATOR
Environment	
Air quality	<ul style="list-style-type: none"> • days exceeding pollutant limits • Annual average pollutant concentration • Population weighted exposure to pollutants • Transport-related air emissions per capita • Transport-related air emissions per GDP-unit
Climate Change	<ul style="list-style-type: none"> • CO2-emissions of transport sector per capita
Noise	<ul style="list-style-type: none"> • population exposed to excessive noise
Resource consumption	<ul style="list-style-type: none"> • Intensity of energy use in transport • Total energy use of transport sector • Renewable energy use of transport sector • Fossil energy use of transport sector
Transport system	

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Efficiency	<ul style="list-style-type: none"> • Capacity of transport infrastructure networks • Freight transport demand • Passenger transport demand • Load factor freight • Load factor passenger
Quality of service	<ul style="list-style-type: none"> • Average travel speed
Accessibility	<ul style="list-style-type: none"> • population close to stations • Congestion level
Intermodality	<ul style="list-style-type: none"> • Modal split <ul style="list-style-type: none"> ○ Trips ○ Km
Economy	
Costs	<ul style="list-style-type: none"> • Cost per trip and mode • External costs per mode
Society	
Social exclusion	
Gender equity and equality	
Health and Safety	<ul style="list-style-type: none"> • Premature death • illness • fatal injuries
Acceptance	<ul style="list-style-type: none"> • Customer satisfaction • Operator satisfaction
Public awareness	<ul style="list-style-type: none"> • Media response • Awareness

Appendix 3: Pilot Action Indicators and Evaluation

Indicators of activity

The following table provides a list of pilot action activities categorized by theme groups and their indicators of activity. It provides an overview about indicators that can be used.

ACTIVITY	INDICATOR OF ACTIVITY
<p>ITS, Public transports and clean vehicles</p> <p><i>Road transport</i></p> <ul style="list-style-type: none"> • Traffic Management • Parking Management • Road pricing and access restrictions • Speed control <p><i>Public transport</i></p> <ul style="list-style-type: none"> • Traffic and traveller information system • Public transport priority schemes <p><i>Freight transport</i></p> <ul style="list-style-type: none"> • Monitoring freight transport <p><i>Clean vehicles</i></p> <ul style="list-style-type: none"> • Promote alternative fuels and clean vehicles • Selective access restrictions: <ul style="list-style-type: none"> ○ low emissions ○ energy efficient 	<ul style="list-style-type: none"> • Capacity of transport infrastructure networks • Vehicle fleet meeting certain emission standards • Composition of vehicle fleet • Size of Vehicle fleet
<p>Intermodal Transport</p> <ul style="list-style-type: none"> • Reallocating space for public transport, cycling, walking • Ensuring safety and security • Developing attractive transport services • Coordinating transport services and improving quality of interchanges • Providing traveller easy understandable information system that facilitates travel 	<ul style="list-style-type: none"> • Pedestrian infrastructure (length of network) • Cycling infrastructure (length of network) • Investment in public transport • Public transport priority (length of bus lanes and ways for trams) • Average age of vehicle fleet • Reliability

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<p>choices</p> <ul style="list-style-type: none"> • Developing good prerequisites for intermodal freight transport • Promoting intermodal transport for both passenger and freight transport 	<ul style="list-style-type: none"> • timeliness • Accessibility to public transport stations • Speed ratio Public transport/private car • Service intervals
<p>Mobility Management</p>	
<ul style="list-style-type: none"> • Optimise freight transport and logistics • Optimise the use of infrastructure • Applying financial instruments such as road pricing, local taxation – charging the use of private cars • Promoting behavioural change through awareness rising campaign, information provisions, marketing • Providing door-to-door access choices across the urban agglomeration • Promoting a compact city 	<ul style="list-style-type: none"> • Freight transport demand • Passenger transport demand • Average load factor of trucks • Average occupancy rate of private vehicles • Fuel prices and taxes

References for Indicators

European Common Indicators (ECI): 10 indicators of which 5 are immediately relevant for transport planning - www.sustainable-cities.org/indicators/index.htm

EEA European Environment Agency: Transport and Environment Reporting Mechanism (TERM) indicator fact sheets are continuously updated - http://themes.eea.eu.int/Sectors_and_activities/transport/indicators

TISSUE: FP6 project developing a harmonised set of indicators for monitoring the Thematic Strategy on the Urban Environment - <http://cic.vtt.fi/projects/tissue/index2.html>

UITP Millennium Cities Database: 200 indicators collected in 100 cities around the world - <http://www.uitp.com/Project/index4.htm>

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Urban Transport Benchmarking Initiative: Testing common performance indicators in European cities - <http://www.transportbenchmarks.org>

Urban Audit II: Covering 209 cities - 330 indicators - http://europa.eu.int/comm/regional_policy/urban2/urban/audit/

SUMMA: FP5 research project (Sustainable Mobility, policy Measures and Assessment). A main output is a set of sustainable transport indicators - <http://www.summa-eu.org>
<http://www.summa-eu.org/control/reports/SUMMA-D8-app.pdf>

OECD: 15 indicators for the “integration of environmental concerns into transport policies” [http://www.oilis.oecd.org/oilis/1998doc.nsf/linkto/env-epoc-se\(98\)1-final](http://www.oilis.oecd.org/oilis/1998doc.nsf/linkto/env-epoc-se(98)1-final)

PIARC: Works of the Committee on Urban Areas (C10) including the report on the evaluation of transport performance measures for cities - <http://www.piarc.org/en/publications/tech-report/urban-areas/>

Annual Report on Equal Opportunities for Women and Men in the European Union: Starting points for establishing gender-sensitive indicator sets (EC 2003) - http://europa.eu.int/comm/employment_social/news/2003/mar/report_equopp_m_enwomen2002_en.pdf

Appendix 3: Pilot Action Indicators and Evaluation

Example: Pilot Action Evaluation

Considering as example this section presents a guide of how to select indicators, monitor and evaluation of the pilot action. It focuses on pointing out issues to be considered and presenting sample forms rather than proving a practicable pilot action definition including a meaningful evaluation. The contents only represent examples and have been chosen without scientific reflection.

Pilot Action specification

Activities and objectives

Pilot Action activity: What do we want to do?	Reallocate space for cycling
Objective: What do we want to achieve?	<ul style="list-style-type: none">• Reduce modal split share of private car• Reduce congestion level in the city centre• Reduce noise level• Improve air quality
Indicator of Activity: What indicators show that we did what we said?	
Indicator 1	Length of cycle network
Indicator 2	Capacity of bike parking facilities
Indicator of Progress: What indicators show whether or not we are achieving what we set out to achieve?	
Indicator 1	Modal split
Indicator 2	Congestion level
Indicator 3	Share of population exposed to excessive noise
Indicator 4	Number of days exceeding pollutant limits

Appendix 3: Pilot Action Indicators and Evaluation

Indicator definition

Impact	Indicator	Description (Location/ Quality, etc.)	Unit	Methods of measurement	Sources of data	Time/ frequency of measurement
Transport system	Length of cycle network	City area, lanes width>1m	Km	Collected values	Municipality	After implementation steps
Transport System	Capacity of bike parking facilities	City area	Number	Collected values	Municipality	After implementation steps
Intermodality	Modal split	Distributing of trip kilometres among transport modes	%	Surveys	Selected groups of citizens	After implementation steps
Accessibility	Congestion level	Speed of vehicles	Km/h	Car detectors that measure speed	Municipality	During peak hour, regularly
Noise	Noise-exposed population	Share of population exposed to excessive noise	%	measurements	Municipality	Beginning and end of activity
Air quality	Particulate emissions	Number of days exceeding pollutant concentration limit	Days	Collected values	Municipality	Beginning and end of activity

Indicator monitoring

The purpose of monitoring is to check the progress on the indicators. Therefore development of each indicator has to be reported. At the end of the project the trend is measured by comparing the indicator value at the beginning of the project with its value at the end. Two examples how a monitoring form for quantitative one-dimensional indicators could look like are presented in the following tables. For qualitative indicators or more-dimensional quantitative indicators the monitoring methodology has to be adjusted according to the indicators requirement.

Indicator 1

Impact	Indicator	Description (Location/ Quality, etc.)	Unit	Methods of measurement	Sources of data	Time/ frequency of measurement
Transport system	Length of cycle network	City area, lane's width>1m	Km	Collected values	Municipality	Beginning and end of activity

Date of opening of new cycle track	Location of new cycle track	Length of new cycle track	Total length [km]	Comment
2006/02/12	Street A	2,3	34,2	Beginning of project
2006/03/05	Street B	1,8	36,0	
2006/05/09	Street C	1,3	37,3	
2006/06/21	Street D	5,4	42,7	
...				
	Street N	2,1	64,1	End of project
TREND			+29,9	

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Indicator 2

Impact	Indicator	Description (Location/ Quality, etc.)	Unit	Methods of measurement	Sources of data	Time/ frequency of measurement
Accessibility	Congestion level	Speed of vehicles	Km/h	Car detectors that measure speed	Municipality	During peak hour, regularly

Date	Time	Location	Average speed [km/h]	Comment
2006/01/12	8:00 – 9:00	Chalmersgatan	34,2	Beginning of project
2006/01/12	16:00 – 17:00	Chalmersgatan	32,1	
2006/01/13	8:00 – 9:00	Chalmersgatan	35,7	
2006/01/13	16:00 – 17:00	Chalmersgatan	33,5	
...				
2006/12/15	8:00 – 9:00	Chalmersgatan	38,2	End of project
TREND			+4,0	

Pilot Action Evaluation

The purpose of evaluation is to determine what the monitoring information means and what we should do about it. It includes the presentation of the indicator monitoring results, their discussion and conclusions.

Presentation of monitoring results

An overview of the development of all considered indicators should be presented together in one table.

Indicator	Unit	Start-Value	End-Value	Trend	Comment
Length of cycle network	Km	34,2	64,1	29,9	
Capacity of bike parking facilities					
Modal split					
Congestion level	km/h	34,2	38,2	4,0	
Noise-exposed population					

Furthermore, additional tables, graphs, diagrams, etc. can present further information on more complex indicators or show relations and dependencies between indicators.

Appendix 3: Pilot Action Indicators and Evaluation

