



# EcoMobility Shift

*Assess, Audit and Label*

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# Introduction

Over the past century, European cities have been shaped by a transport system that is dominated by cars. Automobiles offer the highest quality of accessibility to destinations: an important issue as the mobility of people is vital for the functioning of the urban economy and society. However, a car-based system has serious drawbacks to the accessibility of destinations by those that have limited or no access to a car. A large part of the urban population relies on other modes of transport to participate in society. Moreover, in the long run, a system based on the conventionally-fuelled car concept as it is today (the most energy-inefficient way of transportation) cannot be sustained from an environmental point of view. The need to keep cities liveable, safe and accessible has thus become an issue of increasing concern for city governments.

Additionally, it has become difficult to abate negative environmental trends, let alone to stop these. On a global level, the transport sector contributes to 23% of energy-related CO<sub>2</sub> emissions and is the fastest growing sector in terms of GHG emissions in developing countries. This contribution is rising sharply mainly due to the rapid growth of road transport. Turning unsustainable car-based mobility into truly people-based sustainable mobility requires, in order of priority: a reduced demand for mobility, a shift to more sustainable modes and improved vehicle technology and fuel efficiency. The density of populations in cities offers most potential for energy-

efficiency gains and emission reduction. The potential to shift from conventionally-fuelled cars to lower or even non-emitting modes of transport is greatest in built-up areas.

This potential has inspired the European Commission, challenged by ambitious goals on energy-efficiency, to create a conducive environment for research and development, by means of the consecutive Framework Programmes on energy-efficiency in transport. This has yielded a considerable range of methods and systems available to city governments to tap the potential for energy efficiency. The idea of the EcoMobility SHIFT assessment and audit scheme was inspired by other methods that have already been developed by the time of the project's inception, around 2008/2009. These can be summarised as a set of quality management systems and policy guidelines that all made sense in their own right and encouraged the initiators of the EcoMobility SHIFT project to create the first Quality Management (QM) tool encompassing all possible actions in sustainable urban mobility within the city government's sphere of influence, with city performance quantified and scored for reference to other cities. The project thus benefited from all previous relevant work in the area. EcoMobility SHIFT is unique in that it can be used both as an evaluation system of a sustainable urban mobility plan and as a basis for starting up work with a new sustainable urban mobility plan.

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As a project team, we notice that the relevance of EcoMobility SHIFT has increased more and more since its inception. During the project's time span, the EU launched its White Paper on Transport, publishing ambitious goals to achieve massive energy-efficiency gains and emission reductions in urban transport. In addition, the Sustainable Urban Mobility Plans (SUMP) guidance material gained authority and reputation as the most comprehensive tool for city governments to improve on urban mobility policy and planning, and the EU is exploring ways to have as many cities embarking on SUMP as possible. The political support for SUMP is certainly increasing, and EcoMobility SHIFT has great potential to improve SUMP as it leads the city through a self-assessment of the state of affairs in their city and organisation. As we speak, there is momentum in Europe in making urban mobility systems more sustainable. Many citizens in urban centres prefer to use non-motorised or public transport rather than private cars, and city governments ought to exploit this preference by inviting/attracting their citizens with services and systems.

With EcoMobility SHIFT we aim to attract considerable interest from local authorities across Europe to this practical and comprehensive assessment and audit scheme. The scheme responds to the needs of cities which contain a truly urban area of a considerable scale, i.e. those that are home to 50,000-500,000 inhabitants. However, smaller cities and municipalities with a clear rural-urban disparity

and higher level institutions on mobility planning will also find it useful to carry out the self-assessment as part of visioning and planning processes – although they may have to leave some scores blank.

As such, the long-term impacts of EcoMobility SHIFT can be seen in terms of reduced energy consumption, CO2 emissions, traffic congestion and other negative impacts of transport in cities around Europe; and in terms of cleaner, more liveable environments in those cities. The labelling system, we hope, will leverage this impact, as it offers city authorities public recognition across Europe, on a level playing field.

This report describes the outcomes and the results of the EcoMobility SHIFT Project, people involved in developing this scheme and the results from the cities that have implemented the scheme. We also elaborate our view on the significance of EcoMobility SHIFT for the SUMP guidance material along with the main lessons learnt during the project and concluding with thoughts on possible next steps, viewed from the challenge of making urban mobility more sustainable across Europe as quickly as possible.

- *SHIFT Project Consortium*



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# Project at a glance



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# Objectives, Achievements and Lessons Learnt

## Objectives

The EcoMobility Scheme to Incentivize Energy-Efficient Transport (EcoMobility SHIFT) was developed with the objective of creating a set of criteria to assess and help improve the sustainability of local governments' transport policies. The scheme is referred to as an "EcoMobility Label" because it promotes clean and energy efficient mobility systems by awarding a "quality label" to cities for their transport policies, services, and infrastructures. The labelling scheme includes criteria for evaluating the walking, cycling, wheeling, and public transport "friendliness" of an urban area, as well as the policies to promote inter-modality. Underlying the labelling scheme is a Quality Management System (QMS) to help cities and private investors to analyse, understand, and improve their transport and mobility decisions so that they can continually improve their performance against the criteria and work towards the highest standards of EcoMobility.

The main objective of the project is to give local governments both incentives and management tools to implement policies for more efficient, cleaner, and safer urban mobility and encourage a shift towards a more sustainable urban mobility culture.

Considering the increasing rate of urbanization and related mobility problems (energy waste, congestion, pollution, etc.), city governments are the main targets of the scheme. These local governments are also responsible for designing urban transport policies, while private investors are increasingly involved in their implementation. The European scale of the project is mainly justified by the fact that urban mobility problems are trans-boundary.

The project is inspired by the observation that, when presented with adequate, competitively-priced, comfortable and efficient transport solutions, citizens in urban centres prefer to use non-motorised or public transport rather than private cars. This is seen in many German cities, for example, where a majority of trips are made by modes other than the private car.

This observation presents us with great opportunities for changing transport behaviour and increasing transport sustainability and energy-efficiency. EcoMobility SHIFT aims to have a significant impact on the way in which local authorities in Europe plan and implement their mobility policies and, consequently, their results in terms of influencing travel behaviour in a more sustainable direction.

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## Achieved Results

The long term impacts will be seen in terms of reduced energy consumption, CO2 emissions, traffic congestion, and other negative impacts of transport in cities around Europe; and in terms of cleaner, more liveable environments in those cities.

- An EcoMobility label for urban areas that aims to create EU-wide EcoMobility standards (including criteria for walking, cycling, wheeling and public transport ridership);
- A defined and tested labelling scheme to incentivise cities' investments in alternative and sustainable transport to reduce greenhouse gas (GHG) emissions;
- A user-friendly Quality Management System for mobility departments in local governments and for the investment departments of private stakeholders, so that they can understand where and why they are performing well, and how they can perform even better. This includes a manual complete with a guide to the scheme and a comprehensive assessment and audit kit;
- A website, e-newsletters, brochures, Power-point presentations, training material, banners, press releases;
- 25 cities (first consultation) and 39 (first consultation) stakeholders of 15 different EU-countries have participated in the set up of the scheme ;
- Results have been disseminated among about 400 newsletter subscribers;
- About 40 stakeholders in six pilot cities have tested the scheme
- 15 auditors were trained

## Lessons Learnt

- The assessment process enables officials to truly understand and operationalise EcoMobility, and to review set objectives and priorities.
- From the testing phase it appeared that some indicators were difficult to measure or to discuss, because of lack of information. In these cases, the underlying cause appeared to be a lack of influence of the municipality on the situation, e.g. regarding the 'greening' of vehicles and public transport.
- It is a challenge to factor in the various differences across cities and countries, such as national policies, lack of need for certain infrastructure in smaller cities, etc.
- The scheme is best suited for a targeted group of cities— that is, cities of a certain size. Identifying the threshold size presents a further challenge. Some cities are too small to get the full benefit of the scheme, while others may be too big or too developed to make use of it.



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# EcoMobility SHIFT Scheme

Cities are complex organisms. Everyday they are undergoing constant changes and the needs for resources and services increase. In order to cater the requirements for its citizens city governments are pressurised to make decisions. Mobility is one of such sectors in an urban context where city governments need to take a proper long term decision. Further, the introduction of sustainable urban transport policies into conventional transport policies make the decision making process for cities cumbersome and complex.

Cities need a yardstick to measure their current transport performance and to know where they stand and the areas for further development in urban transport. To successfully integrate the concept of sustainable urban transport or to draft, implement or improve an existing Sustainable Urban Mobility Plan (SUMP) a city will need to know their existing gaps or areas for development. Until date, there have been quality management systems in various sectors and very few in urban transportation. Auditing schemes do exist in urban transport and these schemes are limited to a specific mode of transport or to a specific echelon of transport stakeholders. A comprehensive transport performance measurement tool does not exist for cities. Thus, the impetus for creating such a tool, that could be used directly by the cities, came into existence with the EcoMobility SHIFT scheme.

The EcoMobility SHIFT scheme is a total quality management tool created by academia, NGO's, and cities for use and implementation by and in cities. The main aim of the tool is to give the power of measuring the performance of urban transport to cities such that cities can identify areas for further development and change their urban transport development trajectory.

## Components of the SHIFT Scheme

The EcoMobility SHIFT scheme is comprised of 3 major components:

1. The SHIFT scheme relies on 20 indicators developed by the project consortia upon consultation with various experts and stakeholders in urban transport. The 20 indicators are further classified into 3 criteria namely
  - Enablers,
  - Transport systems and services and,
  - Results and Impacts.A score between 1-5 can be awarded for each indicator. A city undergoing the SHIFT framework will measure the city's transport performance against these 20 indicators. The measurement is done under the leadership of a SHIFT Advisor.

- The SHIFT advisor is the person who leads the city in performing the measurement of the city's urban transport performance. The advisor can be a person who is already employed with the city. In situations where the city does not have sufficient capacity an external advisor can be hired by the city.

The advisor makes the final decision on the score allocated to each indicator, against the instructions mentioned in the scoring guide. The advisor is also responsible to guide the city on improving the city's score i.e. by suggesting the areas of improvement in the city's existing transport plan. Once the city is contented with the score, the score can be audited by an external Auditor.

- SHIFT Auditors are trained transport professionals who are certified by the SHIFT Organisation to conduct an audit in a SHIFT city. The auditor of a city cannot be the advisor for the same city. The auditor has the responsibility to certify the authenticity of the scores that a city advisor has awarded to a city.

## Structuring the EcoMobility SHIFT Scheme

A review of existing schemes was undertaken to ensure that the project took account of previous work, to identify any difficulties that could be anticipated in the SHIFT scheme, and to avoid "re-inventing the wheel".

In short, the aim was to discover whether someone had already developed a tool similar to SHIFT and if yes, what lessons can be learnt from existing schemes.

The review was structured around a number of research questions that were explored through a desk-based review of published material about each scheme, together with interviews with experts in the field.

The questions were divided into the following four main topic areas:

- Benchmarking and sustainability indicators i.e. how did the other schemes do this?
- Quality Management – how does this work and what is of relevance to SHIFT?
- Labelling – what recognition do cities get from such a system?;
- Auditing – how did each scheme carry out its audit process?

### ENABLERS

- E1: Understanding User Needs
- E2: Public Participation
- E3: Vision, Strategy and Leadership
- E4: Finance for EcoMobility
- E5: Personnel and Resources
- E6: Monitoring, Evaluation and Review

### TRANSPORT SYSTEMS AND SERVICES

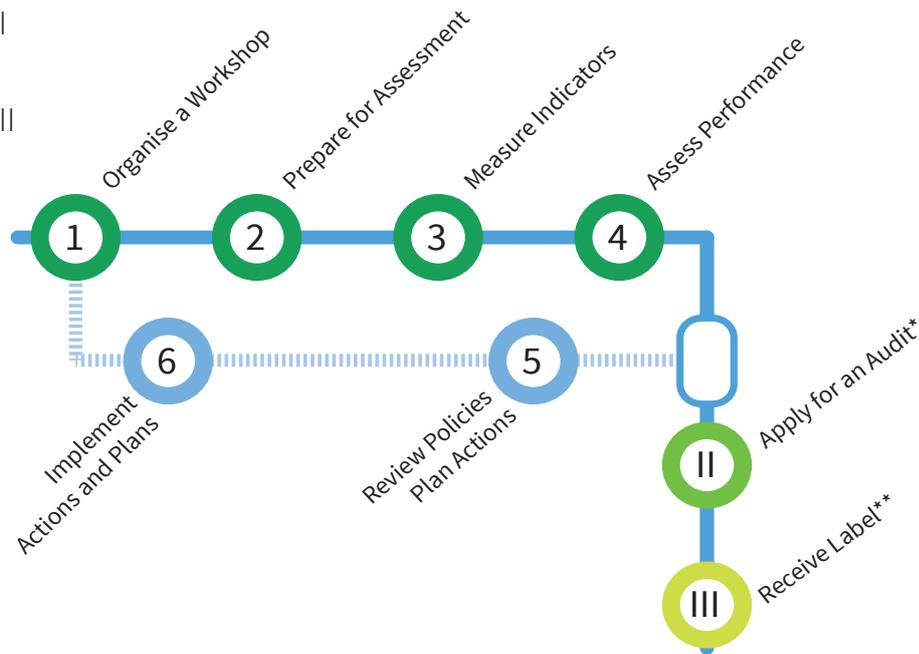
- TSS1: Planning
- TSS2: Low Speed / Car Free Zones
- TSS3: Information Provision & Systems
- TSS4: Mobility Management
- TSS5: Parking
- TSS6: Walking
- TSS7: Cycling
- TSS8: Public Transport Coverage & Speed
- TSS9: Usability of Public Transport
- TSS10: Low Emission Vehicles

### RESULTS AND IMPACTS

- RI1: Modal Split
- RI2: Safety
- RI3: Greenhouse Gases
- RI4: Air Quality

## SHIFT Indicators

*The above mentioned 20 indicators are the heart for the SHIFT Assessment and Audit Process. Cities measure their current performance against the above mentioned indicators. Thus, identifying the areas for further development.*



# Three stages for performance

## Overview

The EcoMobility SHIFT scheme is designed such that cities can implement the scheme themselves without excessively depending on external support. The scheme is divided into 3 stages, namely, the internal assessment, the audit and the label. Cities intending to adopt the SHIFT scheme need to undergo the first stage i.e. the assessments stage. While, the audit and the label stages are not required unless a city wants its performance to be externally verified (audit) and get recognition for its audited result (label).

Upon finishing the mandatory assessment stage the city can identify the of the areas of development i.e. gaps in transport development/plan and thus incorporate into the action plan or the Sustainable Urban Mobility Plan (SUMP). Thus, bolstering the activities identified in SUMP.

In summary, the SHIFT scheme enables cities to measure their transport performance, identify the gaps in their transport plans/development activities, and develop/improve their SUMPs.

As stated earlier every city will embarking on the SHIFT Scheme will undergo the assessment as the initial step, followed by an audit and finishing with a label.

## Assessment

The assessment process is about measuring and evaluating a city's mobility policies and measures, and proposing ways to improve its EcoMobility.

The assessment process for cities is performed in five steps (figure above). Each of these steps is explained in more detail in a manual that is given to the city (also available for download from the SHIFT website: <http://www.ecomobility-shift.org/index.php/en/project-downloads/category/8-shift-manual>). This stage of the SHIFT scheme is dependent on the 20 indicators mentioned in the previous section.

Every city taking part in the process will perform an 'EcoMobility assessment'. This assessment process is expected to be repeated on a regular basis (every three years) to take account of changing circumstances in the city. Once the five steps are completed, and fully documented, the actual implementation of the improvement actions can begin (step 6 in the chart below). Though, implementation in itself is not a part of the SHIFT scheme, it is suggested that cities implement their plans before doing and a re-assessment, to notice a difference in their assessments.

## Audit and the Label

Depending on the EcoMobility status and ambitions, and following the assessment process, a city can go on to perform an external audit by a licensed auditor (marked in the yellow box after step 4 in the chart above). This audit can take place after one or several assessments, and is likely to take place when the city's performance has improved to a point that benchmarking and public recognition with an EcoMobility label is worthwhile.

Only a licensed auditor can perform the audit to verify the city's performance against the indicator framework.

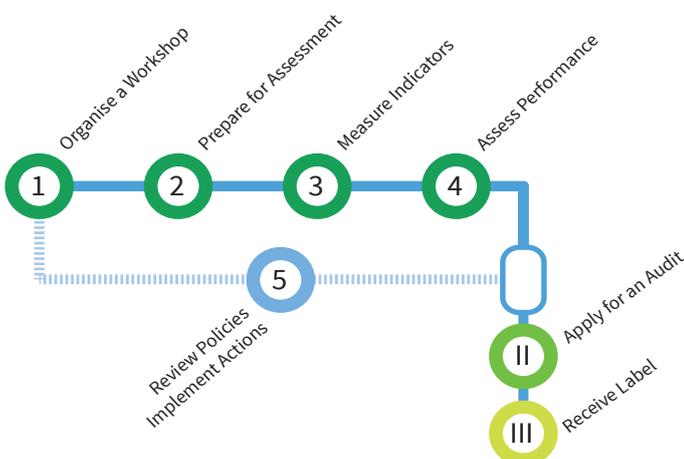
During the audit phase, the scores obtained from the indicators are adjusted by taking a number of city profile factors into account. This is done to ensure that cities will be assessed on a relatively level playing field. This means, for example, that cities with natural structural barriers to EcoMobility are not unfairly penalised, and those with fewer barriers will not be unfairly advantaged.

Depending on the score obtained from the indicators, the auditor will recommend if a city can be awarded a Gold, Silver or Bronze Label for EcoMobility.

## Stages Explained - Designing the Assessment Stage

### The Five Step Approach

Thinking through the steps that would be taken to prepare and complete a self-assessment took quite some discussion among the project team members. Quite a few diagrams were designed, discussed, redesigned, rejected or overhauled. In the end, it became a five-step procedure as shown in the following diagram:



EcoMobility SHIFT - Assessment and Audit Scheme

## Manual for Auditors and Advisors



### SHIFT Manual for Auditors and Advisors

For a detailed step-by-step guide to implement or understand the SHIFT Assessment and audit process please visit: <http://www.ecomobility-shift.org/index.php/en/project-downloads/category/8-shift-manual> and download the SHIFT Manual and the corresponding appendices. This will give you the tools for conducting and assessment.

The box on the right gives a brief description of the five central steps each city has to take in assessing its EcoMobility performance.

The 'Audit & Label' stages on the far right are optional and refers to the audit procedure, that will be discussed later in this report.

## Defining the indicators

Given the desire on the part of the project team, including the cities, that the SHIFT system should cover both process and outputs/outcomes, it was important to define a relevant set of indicators. Existing schemes such as BYPAD and MaxQ were the source of the initial draft indicators on process. To define indicators on outputs and outcomes, existing schemes were to some extent a source (particularly Energiestadt), but in the main these were developed by brainstorming within the project team and by a short expert survey. Based on these two sources, an extensive set of around 50 indicators was then circulated to a smaller number of experts in the fields of mobility and quality management, in order to give some external feedback on the importance of each suggested indicator. It was also intended to gather further external feedback at a workshop at ECOMM Toulouse in 2011, but a lack of audience at the workshop session made this impossible. Thereafter, ENU led a process of defining the levels of each indicator, and secured input from other partners in several internal consultation rounds via email. In defining the indicators and levels, wherever possible a quantitative indicator was chosen because it was simpler to define and the data needed to evidence the score is consequently easier to identify. However, for many indicators that had emerged from the indicator definition process, a quantitative score was not relevant, so it was then necessary to provide a qualitative definition for the different levels of performance against that indicator that would as far as possible guarantee consistent and comparable results between different cities. To answer this need, ENU also produced the text for the indicator definition sheets during August and September 2011; these sheets provide detailed advice on what an indicator is and how to measure performance against it, and how one indicator varies from another. This then became the basis of the draft scheme that was piloted in various cities during 2012.

## The SHIFT Assessment Process

Step 1	<b>Organise working group</b> to compose a working group of 4-15 people from city departments; to decide on external stakeholder, user group and politician involvement; and to agree the way forward in terms of the content, timing and responsibilities.
Step 2	<b>Prepare for assessment</b> To become familiar with the EcoMobility indicators and the process of how to measure and assess these. Set decision taking procedures, divide tasks, agree on the geographic area of the assessment exercise, on possible external advice and on the timings of the whole process.
Step 3	<b>Measure indicators</b> To measure all individual indicators and collect evidence: hard facts (statistics, facts and figures, evaluation reports), documents (policy documents, reports) and expert judgments.
Step 4	<b>Assess performance</b> On each of the 20 indicators, to discuss collected evidence, strengths and weaknesses and decide on a final score (between 1-5, see 6.5.2 below). The assessment results in an overall EcoMobility score for the city and an EcoMobility assessment report.
Step 5	<b>Review policies and plan action</b> To focus on the improvement actions in a strategy meeting. What improvement of Ecomobility performance can a city make and how?

## Defining the scoring mechanism

The rationale behind the scoring system was to allow cities both to see where they currently stand on the path towards ecomobility (what they score now), and to see what the next steps are in order to further improve (What are the characteristics required in order to get a higher score).

In Ecomobility SHIFT, we developed a five-step ladder to measure a city's progress towards Ecomobility. This means that a score with a number from 1 to 5 is attributed to each indicator. Level 5 describes the best possible practice for a city for each indicator.

For each indicator, detailed descriptions are given as to how the scoring should be assigned: an example is given below for the scoring of the indicator for E1:Understanding User Needs.

Level	1	2	3	4	5
<b>Summary</b>	Limited; ad-hoc	Use of external data for user needs	Occasional, survey collection of citizens needs	Understanding of citizens current needs	Clear view of citizens current & future needs
<b>Data Collection</b>	Ad-hoc	From national data (not local)	<ul style="list-style-type: none"> <li>▪ Not systematic</li> <li>▪ Survey method only</li> </ul>	<ul style="list-style-type: none"> <li>▪ Systematic</li> <li>▪ Methods: standard</li> <li>▪ Current needs only</li> </ul>	<ul style="list-style-type: none"> <li>▪ Systematic</li> <li>▪ Methods: innovative</li> <li>▪ Current &amp; future needs</li> </ul>
<b>Length</b>	Never	Never	1 year or less	1 - 4.9 years	5 years and over
<b>Complaint and suggestion Collection</b>	Never	Never	No collection of complaints and suggestions	Collects complaints and suggestions but not clear how these are used	<ul style="list-style-type: none"> <li>▪ Systematic</li> <li>▪ For ALL mobility services</li> <li>▪ Proven use to improve services</li> </ul>

The overall prerequisite is that the steps or the ladder towards Ecomobility should not be too big; let's say that a city should be able to shift towards a higher step in a period of 2-3 years for the enabler criteria; it should be able to shift towards a higher step in 5 years maximum for transport system and services and results and impacts indicators.

Quantitative indicators (such as figures and facts – see the example above for modal split) are the strongest evidence on performance and are ideally the best basis to reward and benchmark. However facts and figures can still be hard to compare between different cities (different methodology used, time period, accuracy of measurement etc.) especially in a supranational context with different national data collection requirements, regulatory contexts and data collection culture. Moreover, it is crucial from a quality management perspective to be able to relate the hard figures to what the city actually does.

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The scoring of each indicator is guided by:

- A good definition of the indicator and the purpose of the indicator. For instance, the purpose of the modal split indicator is to measure the impact of the city's Ecomobility policies on travel behaviour.
- Suggested evidence to justify the score. In the case of modal split, recognition is given to the fact that the collection data across Europe is not standardized.
- Guidance on how to collect the data if this is missing.
- Possible grounds for changing the total maximum possible score for this indicator, to take into account the various aspects of city profile that make it more difficult

for a city to achieve in this area. In the case of modal split, a less compact built-up area and a smaller city size are two city profile characteristics that make it more difficult for a city authority to reduce trips by car.

- Links to further information and best practice.

## Designing the Audit Stage

Once the distinction between the assessment and the audit stage was sharply made, the audit could safely be designed as an external audit with detailed procedures for systematically checking the performance of an organisation against a set of criteria. An audit was supposed to be carried out by an officially trained and accredited auditor external to the organisation, resulting in an audit report forming the basis for recommending policy improvement under the QMS as well as to attribute a certificate as proof of completing all steps, and for recommending the award of an EcoMobility Bronze, Silver or Gold label. We subsequently thought that the audit stage should become cyclical, starting from an assessment report, an audit request and a (preferably digital) file of information on each indicator. This guided the design of the working procedure of the auditor. Steps were defined as follows:

Step 1: Prepare the audit

Step 2: Hold the opening meeting

Step 3: Conduct the audit

Step 4: Recalculate the ecomobility score -> with more explanation about the city profile factors

Step 5: Discuss outcome with the city

Step 6: Labelling process

This shaped the role of the EcoMobility SHIFT auditor (an individual, not a team):

- to carry out an EcoMobility audit;
- to advise the SHIFT organization on awarding an 'EcoMobility label' to the city;
- to ensure a proper audit process;
- to bring in expertise regarding EcoMobility measures and best practices;
- to contribute to the SHIFT organisation's reputation and authority.

Regarding the position of the auditor, they should be licensed (or certified or accredited) and working on behalf of, in name of, the SHIFT organisation. The SHIFT organisation appoints the auditor; the city contracts the auditor. The EcoMobility SHIFT auditor can also perform the role of advisor during an assessment, but not for the same city. A separate deliverable spells out the professional knowledge required, skills, personal competences and attributes, inspired by ISO documentation. This completed the set of ingredients to design the combined training for the two roles (auditor and advisor).

The first two-day training session took place in Ghent, Belgium on 30 and 31 January 2012. The main purpose of this training event was to fully prepare those people who, during 2012, would work as advisors and/or auditors with the pilot cities in the testing of the EcoMobility SHIFT system. A total of 15 people, including the trainers, participated in the workshop and will serve as the 'founding' pool of EcoMobility SHIFT auditors. They learned how to use the assessment framework, how to facilitate the necessary meetings at the city, how to obtain relevant data and how to advise on the development of an action plan. The training included a great deal of practical learning through group work and half a day was invested in a role play that was carefully set up to prepare the trainees for being confronted with and conflicting views on city performance and on the mobility situation, and even opposing interests, among a range of potential working group members. The two days resulted in a rich series of recommendations to improve and fine-tune the scheme and its material further. Future training workshops are due to be organised by the SHIFT organisation. The backing of an international steering group will give confidence to users of the EcoMobility scheme that those advising them are well-qualified, highly trained and fair in their assessments.

The overall time investment of the auditor is estimated at 40 hours, encompassing studying the assessment report, checking evidence, two sessions, a site visit, and compiling the audit report. For city representatives, the effort needed in this stage of the EcoMobility scheme is limited to approx. 6-12 hours for one or two officers.

## Organising reiterative feedback

### Organising the feedback

In different stages of the project we organised feedback with a wide range of stakeholders in order to get input from experts outside the consortium on the content and the user friendliness of the audit system.

The first consultation was on the labelling scheme and was organised in May 2011. We sent an online questionnaire to 218 stakeholders, a representation of:

- the four sectors (walking, cycling, wheeling, and passenging)
- local governments (both bigger and smaller cities)
- different European countries
- mobility experts, consultants, city planners, etc.

As it was a quite long questionnaire on a large number of indicators the response was rather limited (63 people started the questionnaires, from which 34 completed the whole questionnaire) but of a high quality. It was very useful in reducing the number of indicators and in limiting the list to the most important ones.

A second consultation in January 2012 focused on the assessment and audit procedure. Here 35 stakeholders were contacted; 16 of them participated. The target groups in this case included experts from universities, consultancy agencies, and representatives of the four sectors (walking, cycling, wheeling and passenging). All the documents of the audit kit were sent to the participants and they were asked to give their expert opinion (based on a questionnaire). The input obtained was used to make the audit procedure and documents more clear in order to have a system that is user-friendly and attractive for auditors.

After adapting the documents, based on the input from the experts, a last consultation was held in August - September 2012. For this consultation, several cities were contacted and requested to give their opinion on the assessment and audit procedure. About 30 cities were asked to give their input; 11 cities (from different countries: Albania, Belgium, Denmark, Slovenia, Spain, Sweden and UK) responded with their comments.

The input from these consultations was useful in editing and shaping the assessment and audit scheme to be both attractive and of high quality.

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## Reflecting on the various consultations

The consultation of different stakeholders (cities, consultants, representatives of relevant organisations) provides a different perspective of the scheme, with an unbiased view not influenced by the preparatory discussions within the consortium. It's a good way to improve the system and to make it more user-friendly.

The most important obstacle in obtaining the feedback was the time investment for the stakeholders to go through all the documentation (which is necessary to give a judgement). This was especially challenging because the project team did not have a budget for remuneration, and thus little incentive for experts to devote time to giving feedback. Only in the second consultation phase was it possible to offer a modest allowance for experts' feedback.

For future projects an option could be to contact stakeholders in advance (before the start of the project) and ask them if they would be willing to participate in one or more consultation rounds with a small reimbursement for their time. This would then allow the project to have a budget for such consultations. Taking such measures would guarantee useful professional feedback and prevent wasting time contacting and reminding a list of uninvolved stakeholders.



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# Benefits for the cities

The SHIFT-scheme provides local authorities with an effective tool to measure, assess and improve urban mobility. SHIFT has been designed mainly to help improve EcoMobility in small and medium-sized cities with approximately 50,000 - 500,000 inhabitants, irrespective of the current transport performance.

The assessment stage of SHIFT enables local authorities to understand how best to develop an effective path towards EcoMobility. The benefits for a city undergoing SHIFT are:

- Become more efficient and more effective with improved priorities;
- Identify areas for further improvement and thus strengthen the transport plans;
- Analyse and score the performance and the situation in the city;
- Get a feedback for the efforts put in by the city leaders in improving the transport in the city;
- Become a source of inspiration for other cities.

Taking part in an external audit of EcoMobility will further help the city to:

- Demonstrate to its citizens that the city cares for their mobility needs;
- Demonstrate to other cities in the region that the audited city is engaged with its citizens and the environment;
- Give recognition to city leaders of the work done to improve quality for citizens;
- Develop resource allocation and provide access to funding (both internally and externally);
- Access and contribute to knowledge and good practice examples; and
- Join a community of internationally-recognised cities through the EcoMobility Label.

Cities are welcome to engage with SHIFT in the way that suits them best, for example: for internal measurement and quality management, for comparison or to receive a Label of EcoMobility.

The scheme is constructed in a way that a city can decide to use it either mainly internally or to call in external tailored advice.



(C) GIZ Photo DVD, 2011

# Tools

## SHIFT – manuals

Based on the different consultation rounds and the feedback of the pilot cities at different stages of the project, the SHIFT materials were finally shaped into two manuals: one for the cities and another one for the SHIFT-auditors. These manuals and their appendices will be updated at least every two years to take into account the latest developments and experiences in the SHIFT scheme.

The SHIFT-manual for the cities focusses on the self-assessment part of the SHIFT scheme. With this manual, a city should be able to conduct a self-assessment autonomously (without external help from an advisor) and successfully prepare for a SHIFT-audit. A city can download the manual with appendices from the SHIFT website after registration at the SHIFT Secretariat.

The SHIFT-manual for auditors focusses both on advising the city through the self-assessment process – this part II is exactly the same as the one from the city manual - and verifying the city's self-assessment reports during the audit procedure (in part III). This SHIFT manual is available for licensed auditors only which means auditors that have followed a SHIFT auditor training, pay their annual auditor fee and participate at SHIFT network events at least once in two years.

The overall table of contents of both manuals is presented in the table below. In the appendix to both manuals, a number of additional materials are provided such as reporting templates, calculation workbooks and information sheets to help cities and auditors in their assessment in relation to audit activities. Most appendices are quite comparable. The differences between 'city' and 'auditor' versions relate to extra information in the latter one which is needed to recalculate indicator scoring based on the city's profile values.

## City Experiences

To test the SHIFT assessment and audit scheme, six pilots took place, and were held in Burgas (Bulgaria), Dundee (UK), Lund (Sweden), Miskolc (Hungary), Oss (NL) and Turnhout (Belgium).

The cities were given the SHIFT materials, and together with an advisor completed EcoMobility assessments. An audit was then performed by an external auditor who had not been involved in the assessment to complete the audit of EcoMobility in the city.

## Manuals available from the SHIFT for City performing the assessment and the Auditor performing an audit

SHIFT manual for the city	SHIFT manual for the auditor
Part I: the SHIFT scheme in a nutshell	Part I: the SHIFT scheme in a nutshell
Part II: a step-by-step guide for the cities during the self-assessment process	Part II: a step-by-step guide for advising cities during the SHIFT self-assessment process
	Part III: a step-by-step guide for auditing cities
Appendices	Appendices
1: EcoMobility indicator descriptions (city version)	1: EcoMobility indicator descriptions (auditor version)
2: EcoMobility report template for the self-assessment	2: EcoMobility report template for the self-assessment
3: Powerpoint presentation	3: Ecomobility audit report template
4: Assessment workbook (for cities)	4: Assessment workbook (for auditors)
5: City profile factor descriptions	5: City profile factor descriptions
6: EcoMobility audit request form	6: EcoMobility audit request form

**Note:**

The above mentioned material is available for download from the EcoMobility SHIFT website:  
<http://www.ecomobility-shift.org>





# City Fact Sheets





(C) Santhosh Kodukula, 2017

# City of Burgas

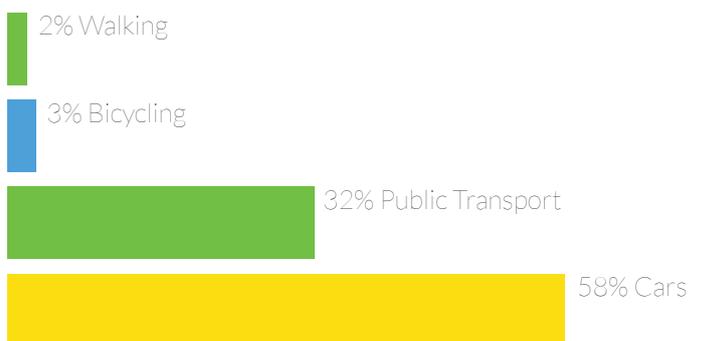
The coastal city of Burgas is the capital of the Burgas province. It is 4 largest city in Bulgaria and has the second most busiest airport in Bulgaria. Burgas is not only a pilot city in the SHIFT project but also a partner in the project execution. Right from the beginning the city demonstrated a strong willingness to develop the scheme and have contributed towards the practicality of the scheme.

The City has undergone the complete SHIFT process i.e. assessment, audit and labelling. Burgas has received a Bronze label for its transport performance. The graph depicts the score received by Burgas from a certified auditor in the 20 indicators.

## Findings

At the time of the assessment Burgas was in the process of implementing various transport improvement projects in the city. Project such as increasing the accessibility to urban areas, expanding and upgrading bicycle facilities, and renovating and increasing the appeal of public transportation are some of the ongoing projects. It is found from the assessment that Burgas already involves various transport stakeholders in decision making and has also earmarked budget towards sustainable transportation. During the assessment external stakeholders from the local bicycle and empowerment network for physically challenged groups were a part of the working group.

## Modal Split



Though the current public transport ridership is increasing Burgas faces the ubiquitous challenge of high automobile dependency. The assessment has identified that promoting low speed car zones, parking and mobility management and improving walking and bicycling facilities as areas needing further improvement to break the trend of increasing motorisation.

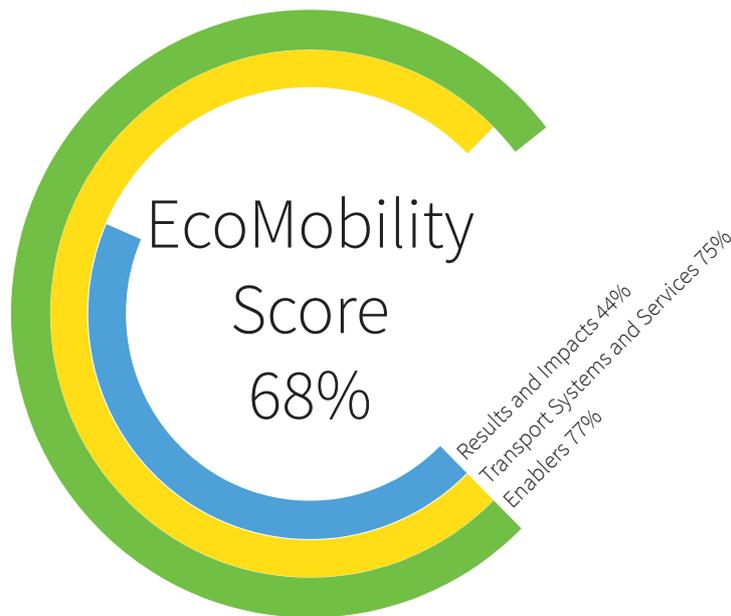
It is also identified that due to the fact that several projects are ongoing the results of these projects are unavailable at the time of assessment. Thus, an assessment performed before or after completion of the project could give a clearer picture on the areas for improvement.

## City Evaluation

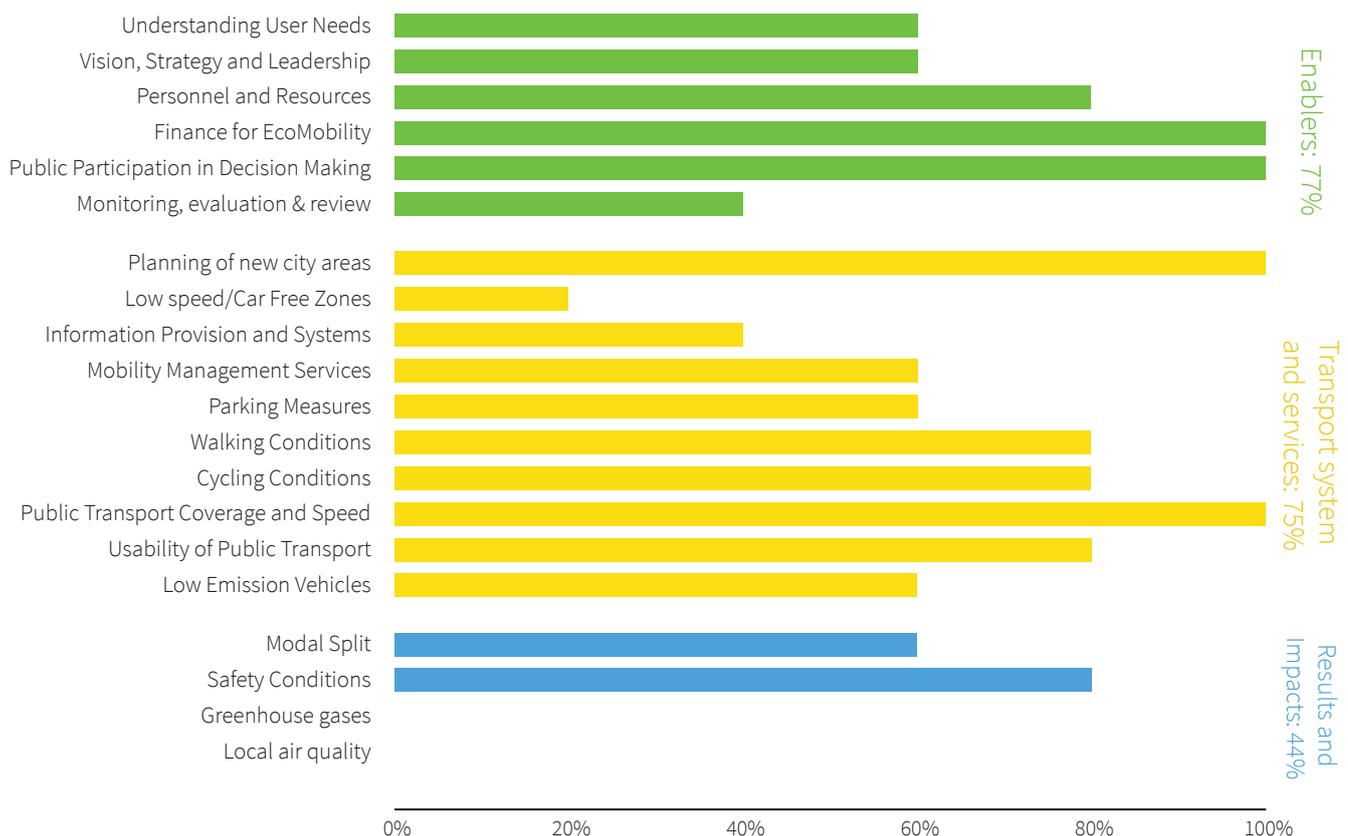
The city of Burgas acknowledge the final results as a positive input towards the future development of sustainable transport in Burgas. The assessment stage has enabled the city officials to critically look into the current situation in the city and collectively explore practical ways forward. The city feels that though the local authorities are doing their best to steer Burgas' transport towards being ecomobile, the final results will need some time to materialise.

## Conclusion

The SHIFT assessment has provided a positive input to the current and future transport plans of Burgas. It is learnt that involving various stakeholders in the assessment stage might take the assessment to run longer, while the outcome of such assessment will be comprehensive. Performing the assessment before embarking on a transport project would be more beneficial than conducting the assessment while the project is being executed.



## EcoMobility SHIFT Result for Burgas, Bulgaria





(C) Mark Kirkels, 2012

# City of Oss

Oss is one of the 415 municipalities in the Netherlands, located in between the larger cities of 's Hertogenbosch (20 km) and Nijmegen (30 km). Oss is connected by two railway stations and two highway junctions connect with the cities of 's Hertogenbosch (South-west), Eindhoven (South), Nijmegen (North-east) and further.

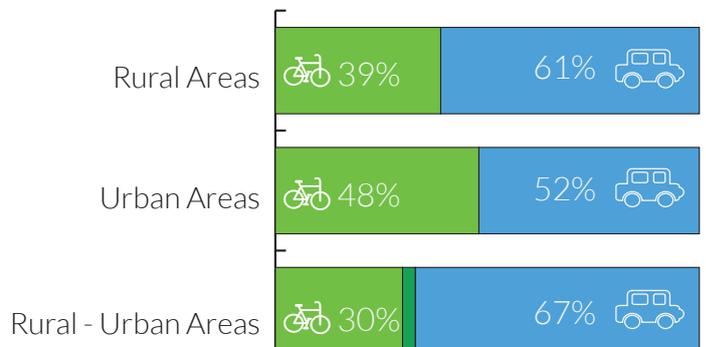
Transport policy, in Oss, is the responsibility of Environment, Housing & Economy while traffic management systems, parking regulations etc. is the duty of Operations. In 2009, Oss compiled a Vision on Mobility ('Mobiliteitsvisie') that seeks a balance between accessibility, safety and liveability. In October 2011, various sub-plans were united into a comprehensive mobility plan covering today's area of jurisdiction. A vision on the future of the spatial structure of the municipality ('Structuurvisie'), compiled in 2006, underpins all documents mentioned.

## Findings

The municipal area as a whole rather than merely the city has been the subject of the assessment, so as to tally with the most applicable level of policy and planning.

First, the indicators were divided in two groups. One group of indicators required tacit knowledge of the group members to enable scoring. The other group of indicators required only the collection of quantitative information

## Modal Split in Oss



to be scored. Overall, Oss achieved a final score of 69%. Applying the city profile factors did not change the overall score.

Discussions revealed that Oss has a mobility plan but there is no emphasis yet on EcoMobility. Stimulating cycling and public transport are mentioned as goals but there are no clear objectives and measures to become a more ecomobile city. The integration of mobility and spatial planning is improving. Oss is doing well in making human and financial resources available for mobility, and in listening to citizens and other stakeholders.

Cycling is already quite convenient and excellent compared from a European point of view, and the municipality continues to invest in it. A major achievement is a long north-south 'cycling street' where bicycles have priority

over cars, and an east-west bicycle main street is under construction.

The municipality is not in charge of the public transport system. The bus service is arranged at sub-provincial level; the train at national level. The regional bus service is well used; the city bus service is not viable but serves the few that cannot drive or cycle.

## City Evaluation

The municipality reckons that there is a lot of room for improvement especially in making greater efforts to reduce the need to travel. The car-friendly urban form and the political will to improve conditions for car users even further conflict with the goal of a modal shift towards cycling. Past efforts in mobility management were hindered little interest from the private sector, but assessment and audit generated new ideas within the city's circle of influence.

The municipal staff is positive about applying the EcoMobility SHIFT scheme. The

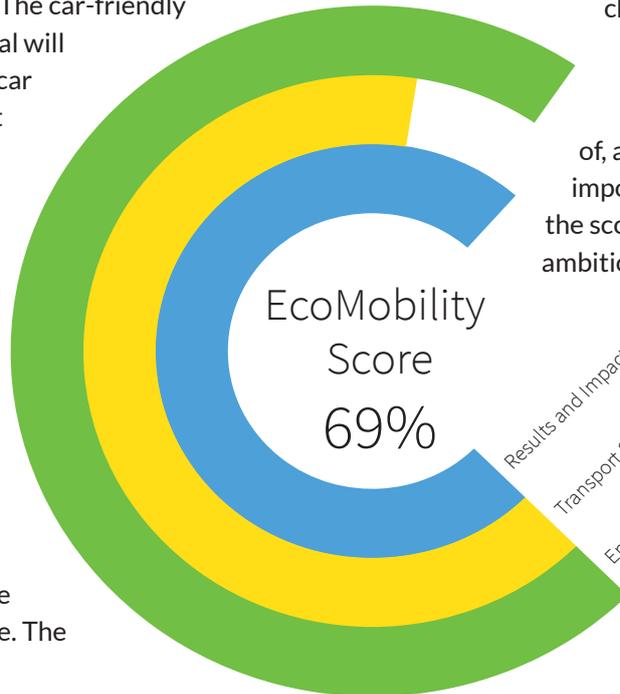
opportunity to review the municipal performance more critically and objectively than before was welcomed by the municipality. On a higher level, the scheme provides direction in adjusting working processes, e.g. with other departments.

## Conclusions

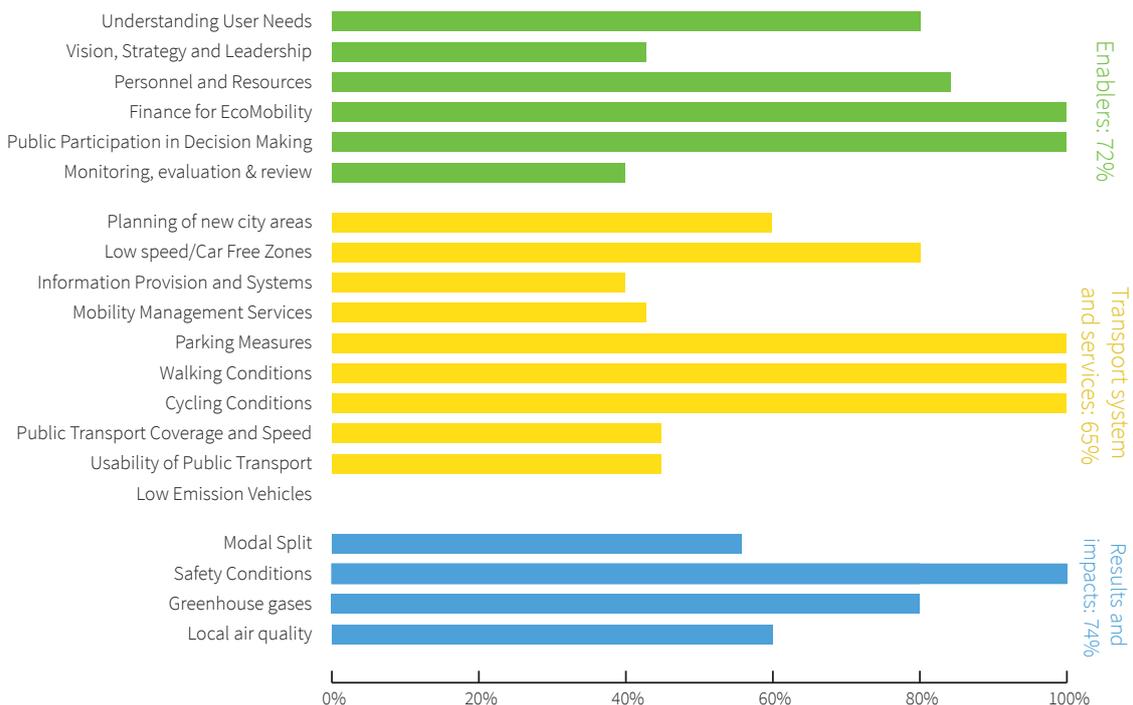
Oss concludes that the exercise increases the awareness of the entire planning process for sustainable mobility.

The most helpful element is the set of EcoMobility SHIFT indicators providing the direction for improving performance. The overview of scores facilitates making choices regarding how to allocate the limited resources.

For municipal staff, generating an overview of, and insight in, what can best be done is most important whereas for the municipal leadership the score is important. The score will feed into the ambitions in other policy areas. Oss reckons the EcoMobility SHIFT scheme to be a practical tool that is complementary to the European Commission's SUMP guidelines. An external audit is regarded as useful only in the case the municipal leadership wishes to communicate the score to the outside world.



## EcoMobility SHIFT Result for Oss, the Netherlands





# City of Turnhout

Turnhout, is a compact city with 40,000 inhabitants in the Flanders region of Belgium. The mobility plans for Turnhout are jointly drafted with three other neighbouring municipalities. The mobility department of the four municipalities implements the actions stemming from the SUMP. However, the implementation of all cross-municipal border mobility measures of this SUMP, of all mobility management measures and the consultations with the regional public transport operator is done on the level of the city region. The average trip length in Turnhout is 5km. Majority of the population dwell in the urban area and all necessary services are available in the urban area.

The share of cycling in Turnhout (for all travel motives) is, overall, high compared to the rest of Belgium. Turnhout is neither an historical nor a university city but it attracts a net influx of people commuting to the city everyday. So, it is neither dominant over nor influenced by other cities. Car ownership in Turnhout per 10.000 inhabitants amounts to 456 cars and is more or less stable in the last ten years.

The city's own land use plan forms the basis of the mobility policy in city region of Turnhout. Parking policy and parking standards are local policy responsibility and the city is able to spend most (not all) of the revenues from its parking policy autonomously.

## Findings

Turnhout obtained a score of 62% after the audit, the city profile factors played a role in affecting the final score that Turnhout has received. It is found that the city provides sufficient resources both in terms of personnel and finances for the promotion of EcoMobility. In spite of a large mobility service the cooperation among the various departments was found to be smooth. Turnhout, needs to perform better in the areas of vision, political will and monitoring and evaluation. It is found that the vision that is present in the urban mobility plans is not well translated into political will and thus in practice.

As mentioned earlier the cycling share is higher than many other Belgian cities, however, effort needs to be put in improving the walking conditions. During the assessment, there were maintenance activities in progress on various sidewalks, which is a reason for a lower score on pedestrian facilities. It is also found in the assessment that the bus speeds need improvement, while the bus coverage is adequate. More effort is also required in the area of promoting low speeds zones, currently Turnhout scores low in this area. Further, lack of adequate data on various indicators could have resulted in a lower score for the city.

## City Evaluation

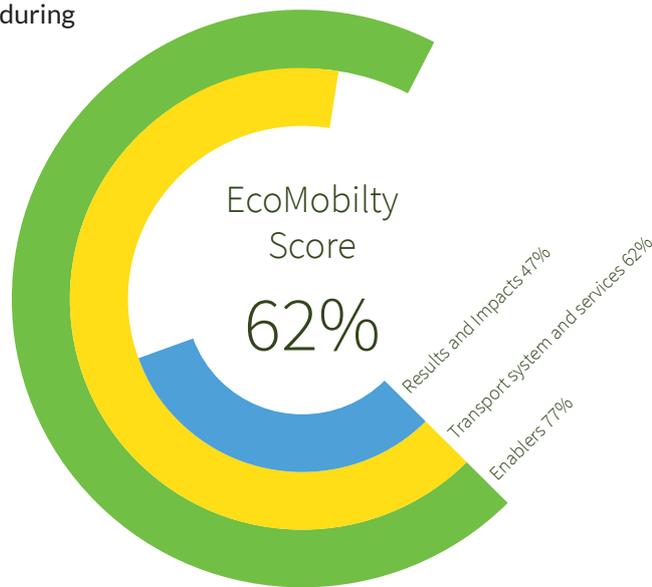
The city of Turnhout acknowledges that there is a weak political will in transforming the vision in the Sustainable Urban Mobility Plan into action. It is also pointed that a coordinated effort from all the departments related to urban transport is essential for a successful result.

The idea of the assessment in which the working group consisting of officials from various departments was very appealing to the city.

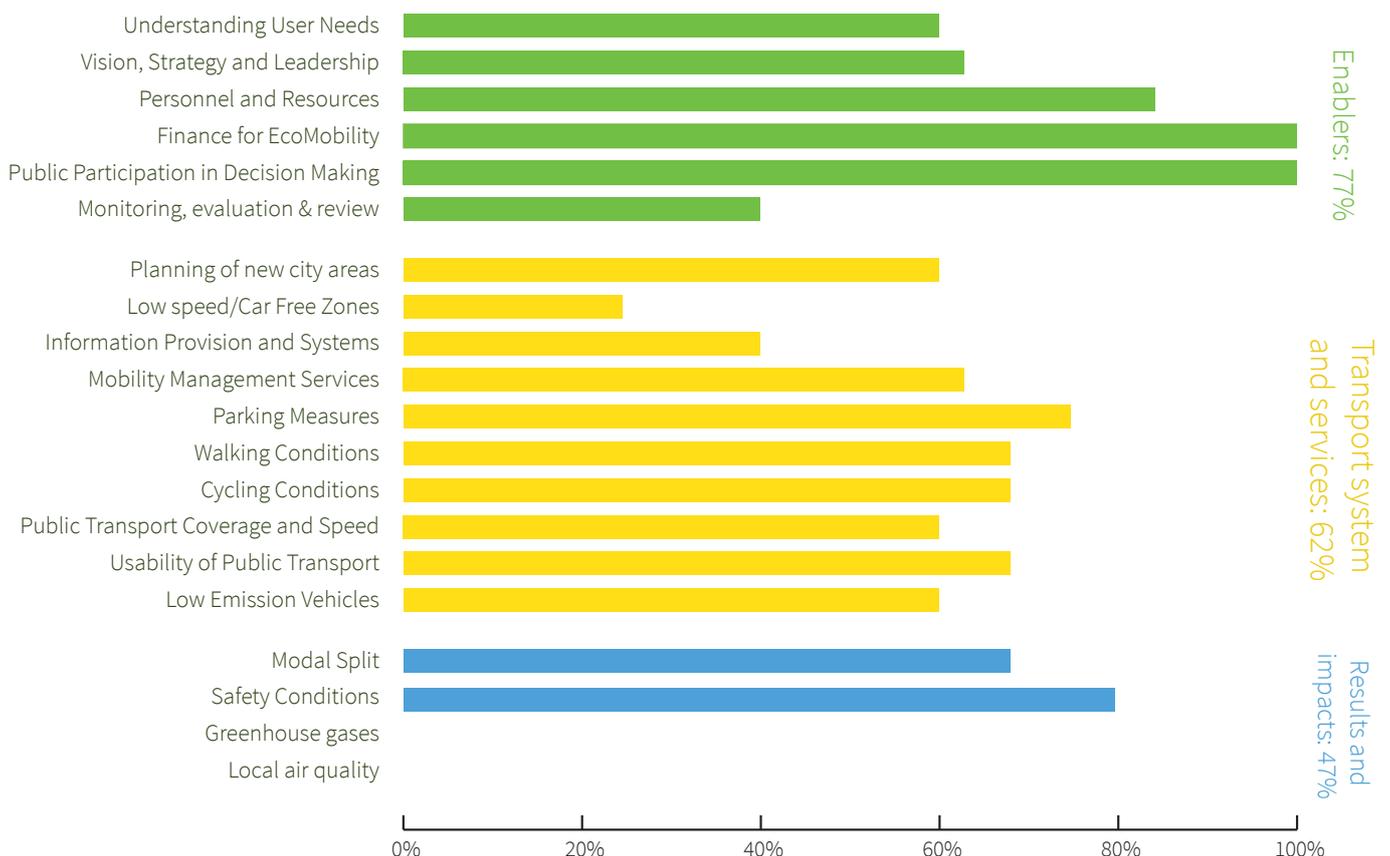
Another factor that was also identified during the assessment is that the city already implements various schemes such as car sharing and bike sharing to shift car users to ecomobile modes of transport. It is identified that there is not much visibility for these schemes to have a larger use. Hence, improving public outreach and ICT related services are considered an important aspect in the future transport plans of Turnhout.

## Conclusions

Upon completion of the assessment and the audit of Turnhout it was identified that some cities might be already implementing impressive and innovative means for promoting sustainable mobility. A proper outreach program is essential, this is also highlighted in the SUMP guidelines. Further, a strong political will is the crux to materialise any proposal mentioned in an urban mobility plan. Hence, sensitising the key decision makers and the politicians is crucial for the success of a transport plan.



## EcoMobility SHIFT Result for Turnhout, Belgium





# City of Lund

Lund, a city with 80,000 inhabitants, is situated in the south of Sweden, close to Malmö and the Danish capital Copenhagen. Lund is easy to reach, by bus, train or car. The Öresund Bridge, officially opened in year 2000, provides a direct link for cars and trains between Sweden and Denmark. In Lund itself, the easiest way to get around is to walk or cycle.

In 1998 Lund developed the first sustainable urban mobility plan: “LundaMaTs”, which stands for environmentally adapted transport systems in Lund. Since then it has been revised twice, and is now a working strategy aiming at 2030. LundaMaTs has become a well-known brand for Swedish cities and traffic planners over the years. Lund’s work with sustainable transportation has also sparked a good deal of international interest.

## Findings

As mentioned earlier Lund has a long history in planning for and developing EcoMobility. This is evident from a comprehensive transport plan that is revised regularly. Having such a tradition of providing for EcoMobility has resulted in a strong score for Lund. The enabling factors such as Finance for EcoMobility, Political Will, Vision, Strategy, and Resources are adequate. Lund, needs to make efforts in the area of public participation. The working group felt that the city could primarily improve a bit when it

## Modal Split in Lund



comes to increasing the range of people who are involved in the public participation.

At the time of the self-assessment, the criteria on Transport System and Services was the one that caused most questions and discussions. This was mostly due to the fact that some indicators were not very clearly defined or difficulties in converting some key figures to the ones provided in the definitions as not all are standardised across Europe. For instance, low emission vehicles are defined as those which emit < 120 g CO<sub>2</sub>/km in Sweden. However, a figure for vehicles emitting < 100 g CO<sub>2</sub>/km could be calculated by linear interpolation during the audit.

While for the criteria Results and Impacts, Lund scored a complete 100%. This reflects that the city has worked for many years in a well-planned, conscientious way with EcoMobility that is continually being developed and improved.

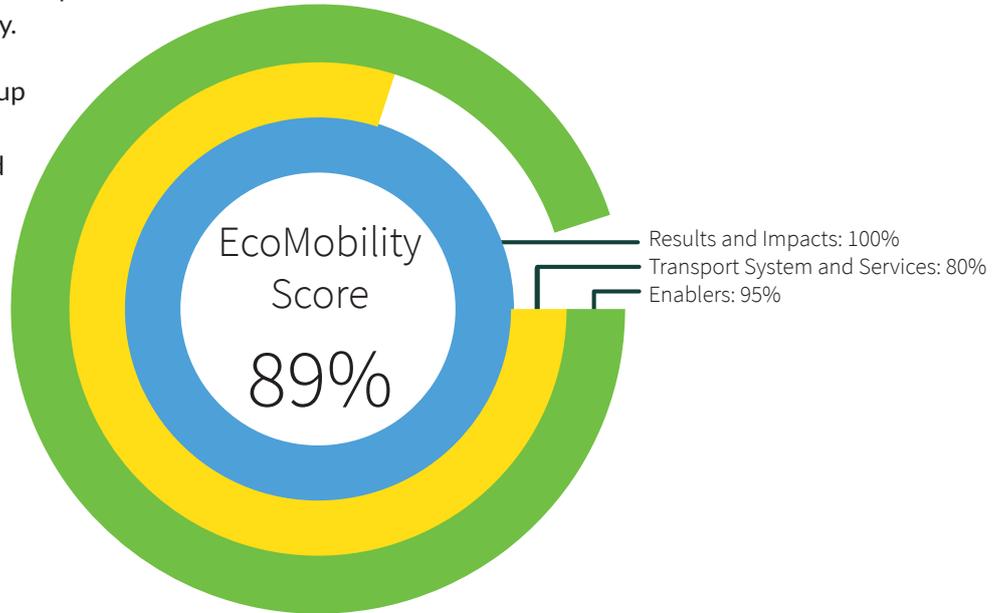
## City Evaluation

The city of Lund provided feedback on the indicator definitions and the exercise in general. Regarding the entire process, the working group thought that it was educational and rewarding because it included assessing different types of indicators that comprise EcoMobility. This work has provided Lund with an overview of the work on sustainability in the transport sector. The city also valued the fact that the scheme is instrumental in identifying weak areas to be tackled. The scheme provides the incentive to improve continuously.

Each member of the working group spent about 1-2 working days to find the data/information needed to assess the indicators. This was considered reasonable and they also mentioned that it had been a good learning experience to search for the required information. On a less positive note, the working group members judged the meetings to be a bit too long.

## Conclusions

Lund is the only city in the SHIFT pilot cities to score a GOLD label for their EcoMobility assessment and audit. It is evident from the effort that the city has exerted in the past that such a result is meaningful. While it is also seen that Lund has areas for further improvement. The city has acknowledged these areas and will include means for improvement in the forthcoming revisions of the transport plan.



## EcoMobility SHIFT Result for Lund, Sweden





# City of Dundee

Dundee, the fourth largest city of Scotland, covers 6,500 hectares and is geographically the smallest local authority area of Scotland. Despite its small size it plays a crucial role as a regional centre for the wider area of Perth and Kinross, Angus and North East Fife and has a catchment population of approximately 400,000 persons. Most of the top ten commuter movements in the regional area are within or into Dundee City and mainly involve road transport.

The structure of the population is a tale of two cities. Whilst Dundee has a slightly higher than average proportion of elderly residents it also has the highest proportion of student population in Scotland, approximately 20% of the population are students.

Alongside the high number of students and ageing population Dundee also has areas of high unemployment and low income households. This manifests itself in low car ownership - roughly half of all households have no car. Therefore a large number of people in Dundee, of all ages, currently rely on public transport (mainly buses) to provide for their travel needs. These are generally short distance trips to work, shops and hospitals. Key destinations are the city centre and Ninewells Hospital, in the west of Dundee.

The City Council controls land use through the planning system and has direct control over both parking policy and standards. The council can make transport investment as it has responsibility for the road network and public transport infrastructure (excluding bus and rail stations). Responsibility for managing and delivering the public transport network of bus, trains and taxi services lies with private sector organisations.

## Findings

Scotland, part of the United Kingdom, has its own national transport strategy and this gives a clear vision and objectives on how transport should be taken forward through the country. On a regional basis Dundee City Council is a constituent member of the Tay and Central Scotland Transport Partnership (TACTRAN). Dundee City Council has its own Local Transport Strategy which gives direction and focus for the city's transport policies and projects. The most important policy documents are all supported through committee approval which ultimately has support of management. From the start, Dundee were very keen and motivated to be involved in the EcoMobility pilot scheme

The main politician for transport, Councillor Will Dawson, was present for the first audit meeting. Councillor Dawson is Dundee City Council's City Development Dept convener and is also the Chairperson of Tayside and Central Scotland Regional Transport Partnership (TACTRAN). Dundee choose its own municipal boundaries since it is within these that it has most control over the issues measured within Ecomobility.

During the audit, site visits were conducted by the auditor to assess quality of bus waiting facilities and information at stops. The site visit also helped to assess the quality and accessibility of the city centre pedestrian environment, pedestrian signage and so forth.

Dundee scored relatively high on Public participation (80%), which is reflective of the extent to which they

actively encourage public participation in transport decision making. Dundee scored maximum points for PT coverage, which is reflective of the extensive bus network operation within the city boundaries. For other bus related indicators (speed, affordability and ease of use) they scored relatively lower, particularly in relation to cost, although this is likely to be due to the fact that fares are typically higher in the UK by EU standards and wages are typically lower in Dundee from the UK average. The usability of Dundee buses was let down due to the lack of integrated fares (two companies operate buses within the city) and lack of fare information and ticketing purchasing options.

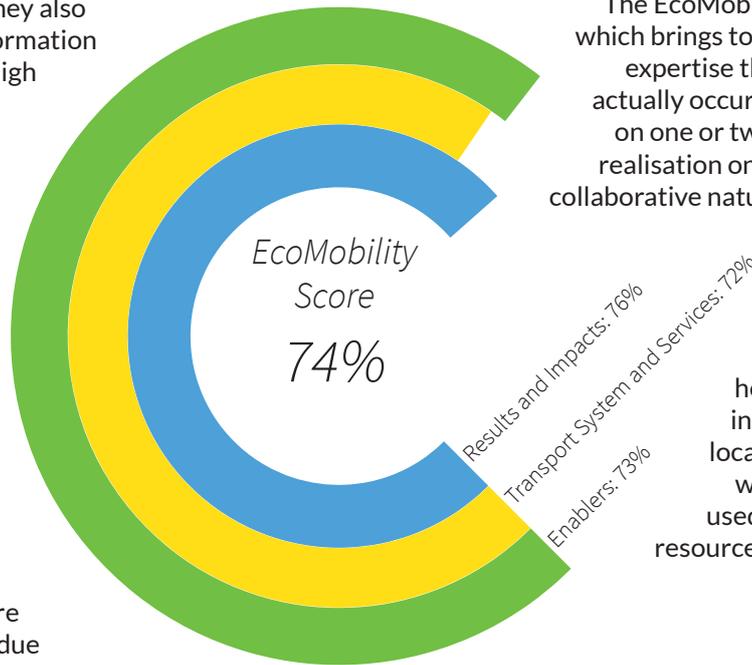
Dundee also scored highly on 'Accessibility to services' and 'Planning of new areas'. This was due to Dundee's efforts on ecomobile oriented and accessible land use planning. They also scored highly on information systems due to the high levels invested by the city (RTPI at bus stops) as well as the quality of information provided by the local bus operators.

It was identified that Dundee needed to put more effort in Mobility Management practices, which pulled down the score of Dundee. Further, due

to the lack of evidence on the ownership of low emission vehicles, Dundee, was unable to attain a higher score in this indicator.

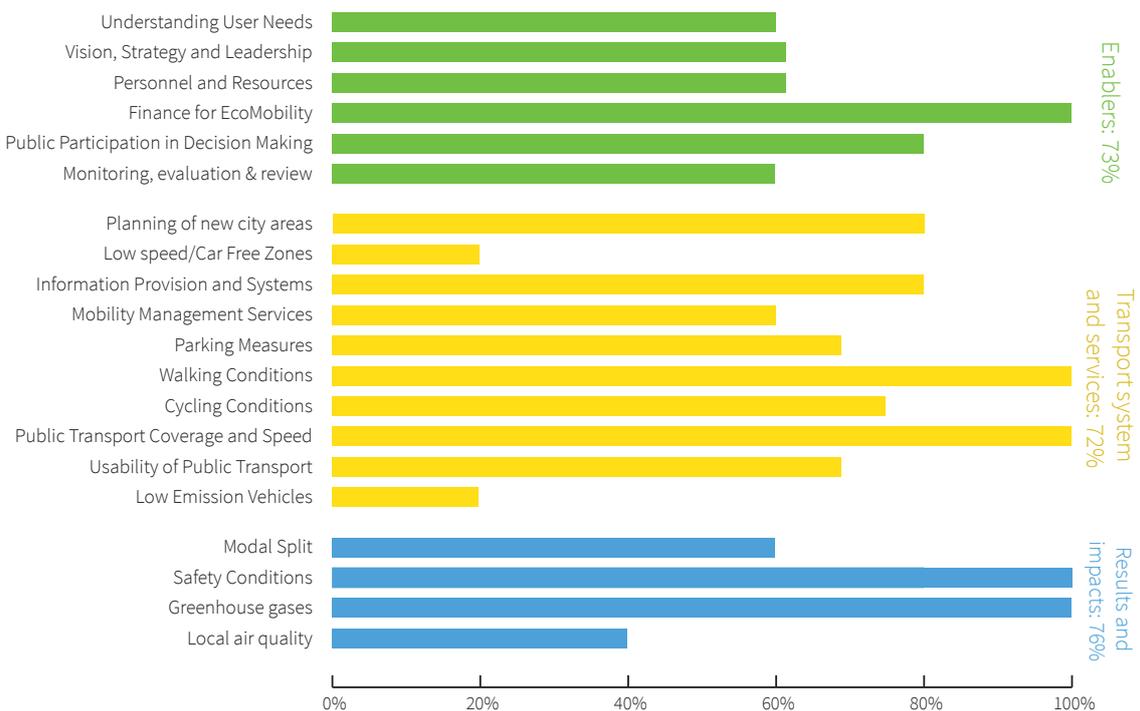
Prior to undertaking the audit the working group expected that Dundee would do poorly on environmental measures as cars are still a dominant mode of transport. However it transpires Dundee has performed well in European Terms in this regard which was unexpected. For 'Modal share' and 'PT trips per capita', whilst Dundee scored above average on both indicators, the two areas were highlighted as areas where the city could make improvement.

## City Evaluation



The EcoMobility framework gives a robust process which brings together a working group with different expertise that can give a better picture of what is actually occurring in the city. Staff sometimes focus on one or two aspects of transportation with little realisation on its wider impacts to EcoMobility. The collaborative nature of the working group gave a better understanding of how the city was performing in EcoMobility terms. The additional benefit for the Council is that the EcoMobility process also gives an indication of how the city compares with other cities in the EU. This gives the officers and the local politicians a better understanding of where the city stands which can also be used as a lever or tool to obtain additional resources for the areas where the city is weak.

## EcoMobility SHIFT Result for Dundee, UK





# City of Miskolc

Miskolc, located in the North of Hungary, has around 168,075 inhabitants. The internal and external accessibility of Miskolc is good (by car as well as by public transport). The city is connected to Budapest and other parts of the country. There are two railway stations in Miskolc, and a small train that runs between Miskolc and Lillafüred. A tram service and a regular bus service cater as public transport in Miskolc. Public transport of Miskolc is well organised by the Miskolc City Transportation Company. There is a terminal of regional bus lines too.

The transport policy is implemented by the City Council through divisions of Urban Planning and City Management. There is a separate department for Transportation, but the existing departments are working together to create the best transportation system regarding EcoMobility. The city has a transportation development concept which is the guiding concept for all new development in transportation: network infrastructure, cycle roads, public transport, modal centres, traffic regulation, etc. The Program for Environment protection and Program for Climate protection affects mobility policy and planning.

The municipal budget for transportation, in 2012, is around 2,5 million Euro and from this 1,83 million Euro went to the City Transportation Company towards the subsidization of public transport.

## Findings

There are various areas of transport for which Miskolc currently does not collect any data. Miskolc collects regularly the complaints, and analyses systematically 'user needs' related to cyclists and PT users. The inhabitants' needs and reflections are taken into account during the planning process. This explains the reason for a full score for this indicator.

Due to the fact that no clear strategy for EcoMobility exists for the future, Miskolc was given a low score for the related indicators. The city has projects to develop the PT ('Green Arrow') and bicycle lanes, and also several systematic and accepted practices for operationalising cooperation between the departments. Multi-functional project teams are created to work on improvement of city transportation. New investments are widely consulted with the stakeholders – even in an early planning phase. The city uses the feedback obtained during project development in the next planning phase and there are open web-forums for the public.

Only the Miskolc City Transportation Company performs yearly passenger counting and the result is used during further analysis and planning of lines and stored in a maintained database, but the city does not have a systematic database related to pedestrians and bicycle traffic. Bicycle traffic data is owned and developed by the Miskolc Bicycle Society.

The analysis of public transport maps shows currently

100% of residential properties within 500 m. of a bus/tram stop. The tram lines are the main axes in the city, and buses services have radial routes to local centres. The Public Transport in Miskolc is very easy to understand. Transit points and ticket system (price and purchase system) are quite simple, but sometimes it is difficult for foreigners, as the information is only in Hungarian and there are not many maps at stations. Currently, the PT company has only one hybrid bus, but in the coming years 75 gas buses are planned to be purchased. Some PT vehicles cater for the needs of physically challenged people, they are indicated in the timetable or on the bus line map.

In terms of bicycling, the total length of separate bicycle lane/path is 17 km. Length of road network marked as a part of the bicycle network is 57 km ('on road', cyclists share usage with the motor vehicle). 14% of road network is safe for cycling, and well-equipped with bike signals with links to the main origin and destination points, parking facilities. The maintenance of the bicycle network has an emphasised attention and budget by the city. The municipality of Miskolc works in collaboration with Urban Cycling Club in cycling development.

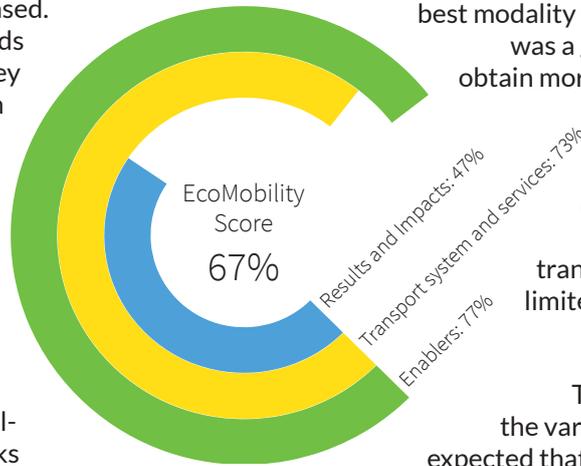
In terms of parking, more than 75% of parking spaces in city centre has an hourly charge or are time limited. The city has a parking policy that includes various parking strategies and rules, but there is no measure aiming to reduce parking space. The municipality has no data available on speed and on the number of green vehicles owned by private persons. Data is unavailable for the indicators on green house gas emissions and air quality.

## City Evaluation

Miskolc is a developing city with big potential to apply principles of EcoMobility. The big investments of the last years (tram line, bicycle lane) are opening the door for politicians and decision makers to reach the vision of a modern city with sustainable transportation.

Municipality of Miskolc is constantly striving to offer the best modality opportunities for citizens. SHIFT audit was a good possibility and a good exercise to obtain more knowledge closed to EcoMobility, to collect good practice examples and all these can help for the leadership to develop the best mobility options. The indicators helped the city to check the improving of sustainable transportation, but our resources are very limited, so the development can be a slowly process.

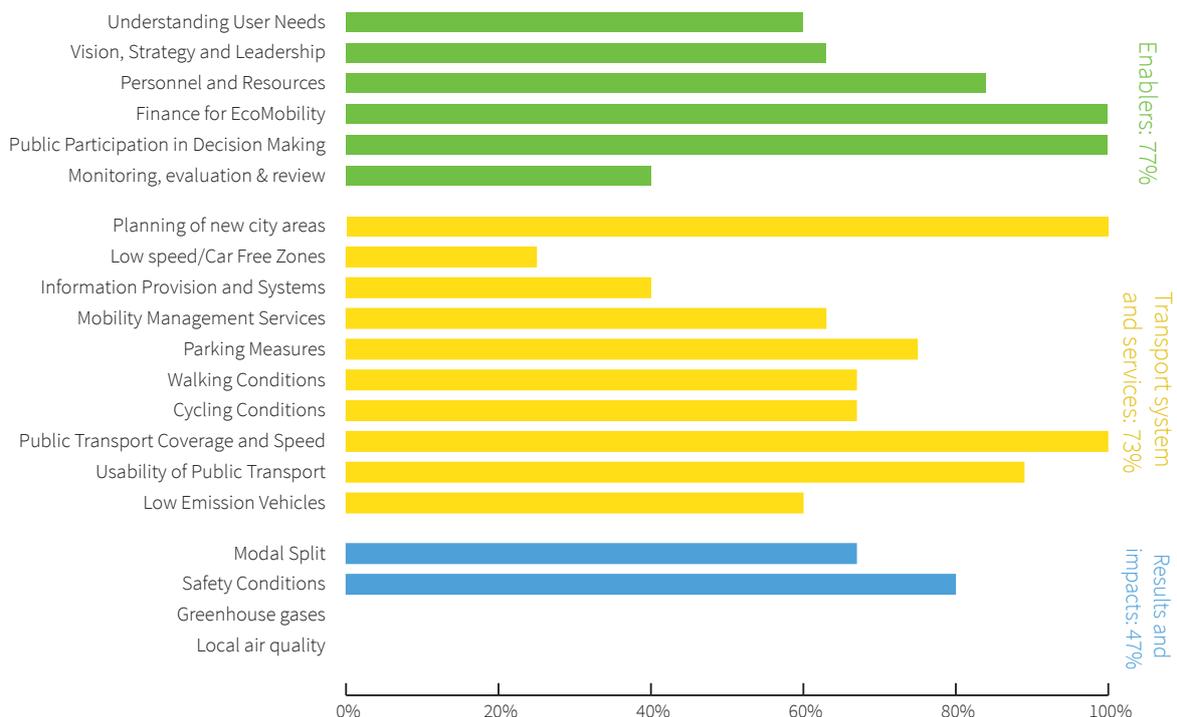
The SHIFT project also showed the city the various possibilities for development. It is expected that if resources permit the SHIFT project should also prepare a proposal of actions at the end of the assessment stage for the city to consider.



## Conclusion

The experience with the city of Miskolc corroborated the lessons learnt from the other pilot cities. it showed that a strong political will, resources for transport and an active involvement from all the stakeholder is crucial for the successful preparation of an action plan or a SUMP. it also showed that the SHIFT project complements a SUMP creation process by helping cities to identify the areas for improvement and thus include these areas in the mobility plan for the future development.

## EcoMobility SHIFT Result for Miskolc, Hungary





# Synthesis

All of the pilot cities succeeded in completing the full assessment and audit process. The feedback for the scheme and the materials was positive from all of the cities. The positive feedback related to:

- A general opinion that the scheme was useful to spend time and effort to complete.
- The ease of using the materials provided by SHIFT (the step-by-step guide, indicator definitions).
- The clarity of the materials (in terms of the indicator definitions and scoring).

At the same time, the pilots helped the SHIFT team to pinpoint areas for improvement that were taken on board in the development of the final scheme. The main areas for improvement are given below.

The final version of the SHIFT assessment and audit scheme available at the end of the project took into account the invaluable feedback received from the pilots. At the same time, as the field of sustainable transport is constantly shifting and changing itself, the scheme itself must adapt to new definitions and new findings to best reflect the state-of-the-art. It is hoped that SHIFT will continue to adapt to the changing world, and remain as a positive and worthwhile exercise in understanding and improving ecomobility in European cities.

<b>Improving indicators</b>
There could be some difficulty in scoring the indicators: both in reflecting the actual status of the city, and in matching requirements of the indicators to existing national guidelines (if any). It is of course impossible to create a perfect set of indicators, and every piece of feedback can serve to improve the indicators and the understanding of ecomobility, but these definitions need to be constantly updated by the latest knowledge and expertise. It is the idea of SHIFT to constantly update the indicators (the definitions and scoring) in order to best reflect existing knowledge and expertise, through constant feedback from groups of SHIFT advisors and auditors.
<b>Ensuring objectivity</b>
The issue of scoring indicators is related to the aim of being objective, and the need for having a system in which cities can really be benchmarked across Europe: how can we ensure that two auditors would give the same score to the same city? This issue can be tackled by including better advice for the scoring of indicators, and at the same time by improving training of advisors and auditors. The idea of SHIFT is to have opportunities for advisors and auditors to meet in order to discuss the scheme, and this will help to have a common understanding (and ability to score) the indicators.
<b>More examples</b>
Scoring indicators and completing the assessment and audit reports would be easier with more examples. SHIFT will create a network of cities, and as more assessments and audits are completed, the wealth of information from them will help those completing new assessments and audits and at the same time enhance the system as a whole.

**ENABLERS**

- E1: Understanding User Needs
- E2: Public Participation
- E3: Vision, Strategy and Leadership
- E4: Finance for EcoMobility
- E5: Personnel and Resources
- E6: Monitoring, Evaluation and Review

**TRANSPORT SYSTEMS AND SERVICES**

- TSS1: Planning
- TSS2: Low Speed / Car Free Zones
- TSS3: Information Provision & Systems
- TSS4: Mobility Management
- TSS5: Parking
- TSS6: Walking
- TSS7: Cycling
- TSS8: Public Transport Coverage & Speed
- TSS9: Usability of Public Transport
- TSS10: Low Emission Vehicles

**RESULTS AND IMPACTS**

- RI1: Modal Split
- RI2: Safety
- RI3: Greenhouse Gases
- RI4: Air Quality

## The weighing of indicators

The one indicator is more important for working on EcoMobility than the other. The weighing is such that the ratio between Enablers, Transport Systems & Services and Results & Impacts is 25, 50 and 25%. Within the dominant group of measures (TSS), discouraging the use of the private car and making the use of alternative modes more attractive (so-called SHIFT measures) have been given a weight of 82%. This underpins the name of the scheme. Stimulating green vehicles (6%) is a welcome measure but its impact on modal split, safety and global warming is considered far less relevant. Minimizing the need to travel by creating compact cities is a highly necessary but tough action that counts for 12%. Looking from another angle at the weighing, two 'super-measures' (Planning & Resources and SHIFT measures) and two 'super-effects' (Modal split and Environment) together dominate the total score: 80%.



# SHIFT complements SUMPS

The EU aims to facilitate and support the creation of a conducive environment for cities to embark on more sustainable transport systems.

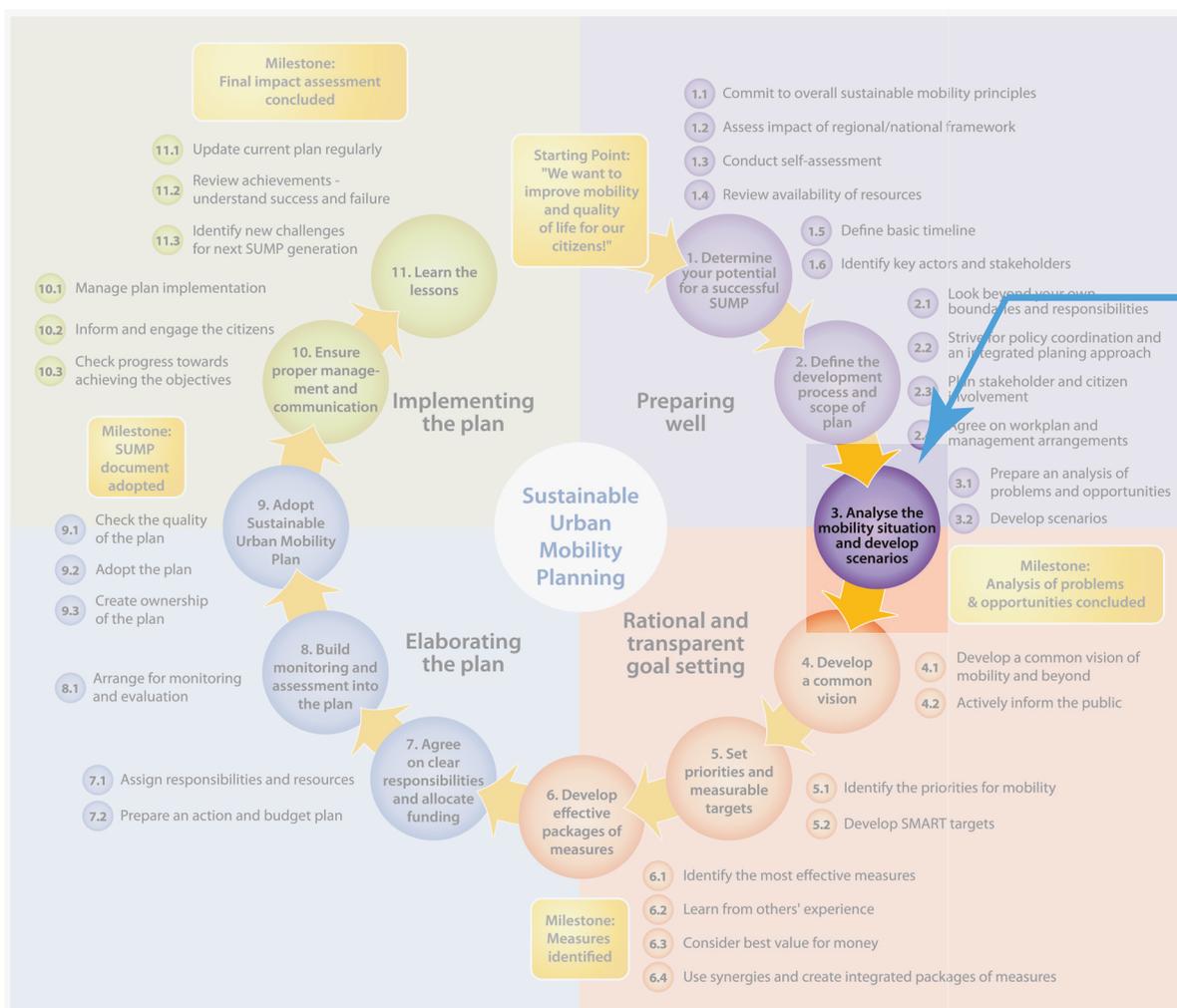
The comprehensive SUMP guidance material have become the most important tool for the EU to build leveraging capacity for its ambitious goals regarding energy efficiency and emission reduction in urban transport. In addition, the EU has funded the research and development phase of systems such as MAX-Q, BYPAD, ISEMOA, QUEST, ADVANCE and others. EcoMobility SHIFT differs from other instruments in that it:

- covers the entire field of urban passenger transport policy and implementation, unlike BYPAD (cycling), MAX-Q (mobility management) or ISEMOA (Accessibility)

- covers the three major domains that matter in transport policy: the enabling organisational processes, the measures (to be) taken in the system and the results and impacts thereof

When a city wants to know where it stands and what it should do, it can embark on EcoMobility SHIFT. Thanks to the indicators and the supporting text on practice linked to QM-guidelines, it can be used to evaluate an existing mobility plan, or to start a new sustainable urban mobility plan.

SHIFT's indicator descriptions comprise a user-friendly guide for step 3 (situational analysis) of the SUMP process that encompasses the entire policy and planning cycle. EcoMobility SHIFT thus improves the quality of the resulting SUMP plan.





## Conclusions and next steps

The scheme as it has been developed is the first attempt at designing a quality management system encompassing all aspects of mobility planning; covering enabling processes as well as measures targeted at the transport system and services, and the effects thereof on modal split, safety and the environment.

We believe the scheme, as it is, serves cities in their effort to continuously improve on mobility planning in the direction of a truly sustainable urban mobility system. Thanks to the indicators and the supporting text on practice linked to QM guidelines, EcoMobility SHIFT can be used both as an evaluation system of a sustainable urban mobility plan and as a basis for starting up work with a new sustainable urban mobility plan.

We recommend the following for consideration in future rounds of scheme improvement:

- A number of indicators were adapted, and could have been further adapted, which had consequences for the relative weighting of the indicators. This highlighted the importance of interlinked indicators, for instance linking the “hard” with “soft” indicators such as infrastructure with mobility management.
- It is very important that the definition of terms be clear in order to have a proper comparison and measurement of cities. For example, even the definition of ‘city centre’ had to be clarified as to whether it refers to the commercial centre, or where the majority of residents are living.
- Similarly, qualitative indicators can lead to long and confusing discussions and therefore it is crucial that the wording and explanation is as clear as possible.
- The current scheme is tailored to the European scale, but the prime context for cities against which they would like to benchmark themselves is probably the national level. Developing national benchmarks can be included in a future version of EcoMobility SHIFT.
- Adjustments can be considered to align better with administrative and geographical boundaries, and to make the scheme more applicable by higher-level institutions and sub-municipal organisations such as neighbourhood councils. See 6.2 for the lessons learned from reviewing existing schemes on further quality improvement of the scheme.
- The main target group for SHIFT has been medium sized cities (between 50 000-200 000 inhabitants). This means that the current scheme has been tested in medium sized cities and developed primarily with those cities in mind. However, we think the system can

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be useful for bigger cities as well. In the future, tests on bigger cities may be used to adapt and develop the scheme further

- Unique in the SHIFT scheme are the city profile factors that form a solid basis for benchmarking between SHIFT-audited cities. The project consortium currently has drafted a first benchmarking methodology based on the SHIFT scheme. This benchmarking method needs to be further elaborated and tested out once more cities are using the scheme.

As time goes on, the actual operation of the scheme has to prove itself. The project has succeeded in reaching a level of detail in operationalising continuous improvement in sustainable urban mobility that has not been realised before. This was possible thanks to a limited number of partners.

A follow-up phase is recommended to extend the testing to other countries and more diverse cities, to improve the quality of the material further and to increase the scale of dissemination.

The credibility of the scheme is going to hinge on the EcoMobility SHIFT auditors' expertise, the attractiveness of the SHIFT network and the authority (or accreditation) of the labelling commission. We recommend the EU to

support the Ecomobility SHIFT-scheme as an evaluation system for SUMP's and as a basis for developing new SUMP's.

One way of supporting SHIFT is for the EU to demand that all cities who receive EU-funding for SUMP's or sustainable transport projects should use the SHIFT-scheme and have a SHIFT audit certificate. This will greatly enhance EcoMobility SHIFT's legitimacy.

ICLEI will host the SHIFT secretariat and will facilitate auditor training and certification, auditor and city registration for the SHIFT network and a labelling commission made up of appointed members.

It is planned that ICLEI will train and certify auditors on a cost-recovery basis, Trained auditors approach and inform cities, cities decide whether or not to embark on a self-assessment, and on how to work with them: as external advisor during self-assessment, or as auditor.

The SHIFT Secretariat facilitates the auditors' promotional activities by backing their authority and expertise and ensuring the quality of all material.

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# Consortium

Eight partners comprised the project consortium.



## ICLEI

The world's leading association of cities and local governments dedicated to sustainable development, ICLEI is a powerful movement of 12 mega-cities, 100 super-cities and urban regions and 450 large cities as well as 450 medium-sized cities and towns in 84 countries. ICLEI promotes local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, bio-diverse and low-carbon; to build a smart infrastructure; and to develop an inclusive, green urban economy with the ultimate aim to achieve healthy and happy communities.



## Edinburg Napier University (ENU)

Research and consultancy activities in ENU's Transport Research Institute cover topics relevant to SHIFT including transport safety, transport and society, transport psychology, pedestrian and mobility planning, travel behaviour, and transport policy and economics.



## Mobiel 21

Mobiel 21 is a centre for knowledge development, education, and behavioural change in the field of sustainable and safe mobility. Mobiel 21 is a private, nonprofit company, and encourages safe and sustainable mobility in the 21st century. The company organises its work with an integrated approach starting with research preparation, demonstration and pilot projects, to dissemination of knowledge, and finishing with influencing mobility behaviour.



## Traject

Traject is a small independent consultancy specialising in mobility management, with offices in Brussels and Gent. Founded in 1992, Traject stands for a user oriented approach to transport and mobility. Traject works with various types of clients, including enterprises, institutions, administrations, schools, stores, commercial centres or main attractions, recreation centres, event organisers, regions and zones, municipalities, transporters, and regional, national, and European authorities.



## Trivector

Trivector Traffic offers consulting services, research, and development in the field of traffic and transportation. About one third of its turnover comes from research projects. One of Trivector's specialties is creating efficient, safe, and more environmentally sustainable traffic systems. Several of its projects in the field of sustainable transport are among the most renowned of their kind in Sweden.



## Mobycon

Mobycon is an independent research and consulting company with 25 years of experience in traffic, transport, and mobility. The company works together with clients on sustainable mobility solutions, bearing all stakeholders in mind. The multi-disciplinary team consists of traffic planners and engineers, urban and rural planners, economists and human geographers. Early 2012, Mobycon took over from Interface for Cycling Expertise (I-CE) which had to withdraw.



## Burgas

Burgas is the second-largest city and seaside resort on the Bulgarian Black Sea Coast with a population of 210,260 people. It is also the fourth-largest city in terms of population in the country and is the capital of the Burgas Province. Located at the westernmost point of the Black Sea, the large Burgas Bay, Burgas has the largest and most important Bulgarian port. Today it is a key economic, cultural, and tourist centre of southeastern Bulgaria.



## Miskolc

Miskolc is a city in north-eastern Hungary with a heavy industrial background. With a population close to 180,000, Miskolc is the third-largest city in Hungary. It is also the administrative, economic, educational, and scientific centre of the North Hungarian region, and is also the capital of the Borsod-Abaúj-Zemplén county.



## Contact

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