



Advancing
Sustainable
Transport in
Urban areas
To promote
Energy efficiency



Deliverable 2-2 FINAL REPORT 'THE NATURE OF THE PROBLEM'

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1. INTRODUCTION

ASTUTE – Advancing Sustainable Transport in Urban areas To promote Energy efficiency

ASTUTE is a three-year research and demonstration project, funded by the European Commission, which is being delivered through the Intelligent Energy Executive Agency (IEEA) programme. The ASTUTE project is made up of nine partner organisations based within six European cities:

- P1** London Borough of Bromley (UK), as the lead partner of the project
- P2** CEN Creative Environmental Networks (UK)
- P3** Granada City Council (Spain)
- P4** CODEMA City of Dublin Energy Management Agency (Ireland)
- P5** Studio Metropolitana Urban Research Centre Public Society (Hungary)
- P6** City of Graz (Austria)
- P7** FGM-AMOR Forschungsgesellschaft Mobilität GmbH (Austria)
- P8** Organizzazione per la Ricerca, l'Occupazione e lo Sviluppo territoriale nel Mediterraneo (Italy)
- P9** University of Catania (Italy)

Increasing the percentage of travel undertaken by walking or cycling is a clear way to reduce CO₂ emissions. ASTUTE aims to identify, understand and overcome the organisational barriers that prevent increasing the use of sustainable, environmentally friendly and energy efficient modes of transport such as walking or cycling throughout Europe. The final outcome will be a toolkit for use by municipalities and employers that will address the various actions required to overcome the barriers and thereby increase walking and cycling in cities.

The first phase of ASTUTE has been Work Package 2 resulting in this report - 'The Nature of the Problem'. **P3 Granada** has been the lead partner of this work package with the support of Bromley and the Project Secretariat. During this period, all partners held launch events and produced data on the situation of walking and cycling in each city. Stakeholders from the private and the public sector were interviewed locally, nationally and via EU networks and different typologies of barriers have been defined based on best practice experiences.

This report has been divided into four sections based on the actions developed during Work Package 2:

- Summary of the conclusions of the benchmarking report
- Analysis of the discussion with stakeholders, locally with public authorities and employers, and with New Member States
- Analysis of the results from the 'before' survey
- Conclusions

The objective of this report is to analyse the current situation of walking and cycling in several European cities, comparing and analysing the results obtained through the city launches and the 'before' survey in the benchmarking report prepared by Transport & Travel Research Ltd. This analysis will provide information for the development of the ASTUTE toolkit and will help partner cities to work on their own barriers.

2. 'THE NATURE OF THE PROBLEM' BENCHMARKING REPORT

Transport & Travel Research Ltd. prepared this report as a desk exercise, using the outcomes of previous and current EC-funded projects (and others from outside the EU when relevant), and information gathered from the various EU-wide networks. The role of the benchmarking report was to identify probable problems and related solutions in the fields of mobility management, travel training, education, marketing campaigns and the general application of 'soft measures' in relation to walking and cycling.

A database of best practice examples was collated based on a review of different case studies in the fields of walking and cycling. Each of the solutions/best practice examples has been evaluated in terms of: i) barriers to implementation, ii) critical factors which contributed to the success of an approach and iii) common interests between the stakeholders in the city (public, private and civic).

This benchmarking report has been attached as Annex A.

2.1. Main findings of this report

The report identifies different types of walking and cycling intervention measures and innovative approaches that are currently being applied in cities to increase walking and cycling.

Some **common intervention measures** are:

- Walking and cycling strategy formulation
- The development of walking and cycling networks
- Integrating public transport developments with pedestrian links
- Providing secure cycle storage facilities
- Road safety and cycle training schemes
- Marketing and awareness campaigns
- Route signage, mapping and prioritisation
- Bicycle rental schemes
- Travel plan development

At the same time there are some **innovative approaches** to promote walking and cycling such as:

- Emotional marketing to stimulate clean urban transport
- Personalised travel planning, an opportunity to engage individual households
- Internet journey planners for cycling, which inform the user of how to get from one place to another, the shortest and safest route, travel distances etc

The report identifies the main **barriers** to walking and cycling, which are viewed as opportunities for the ASTUTE toolkit to deliver **solutions**. These barriers have been identified in the civic sector, public sector and private sector. The following tables summarise the main barriers, and suggest some actions to overcome them:

Barriers in the Civic Sector	Issues to be addressed
<ul style="list-style-type: none"> ○ Local Environment: A number of factors can act to resist the prioritisation of walking and cycling strategies. The most common are: urban environment, topography and climate, city pattern... ○ The availability and accessibility of other modes of urban transport may prevent cycling and walking modes from being prioritised. ○ Public perceptions of walking and cycling may weaken the priority for these transport modes in urban transport plans. 	<ul style="list-style-type: none"> ○ Identifying measures which can be used to overcome topographic and climatic barriers to walking and cycling. ○ Embedding cycling and walking improvements into the existing transport network, taking into account the limitations of other transport modes and planned improvements. ○ The support of residents of a city will be required in order to be successful. ○ The involvement of local cycling organisations and empowerment of local walking user groups

Table 1. Barriers to walking and cycling in the civic sector

Barriers in the Public Sector	Issues to be addressed
<ul style="list-style-type: none"> ○ Non-proper consideration of walking and cycling as transport modes ○ Preference for engineering-led solutions ○ Difficulties on data collection & monitoring of walking and cycling use and its impact; intangible benefits ○ Unclear responsibility for walking and cycling in city authority departments; lack of dedicated teams for walking and cycling 	<ul style="list-style-type: none"> ○ Use of quality management techniques is important in order to ensure that resistant managerial processes operating within city administrations can be overcome ○ Enthusing local politicians and decision-makers at an early stage is a critical success factor

Table 2. Barriers to walking and cycling in the public sector

There are many reasons for local politicians and decision-makers to include walking and cycling policies in urban transport plans such as the reductions of CO₂ emissions and traffic congestion; to educate young people about sustainability issues and the environment; city beautification; catering for tourist demand; the encouragement of healthier lifestyles,, and provide access to employment, particularly for disadvantaged social groups.

Barriers in the Private Sector	Issues to be addressed
<ul style="list-style-type: none"> ○ Inadequate incentives to employers to encourage walking/cycling in commuting trips ○ Inadequate information (routes, health benefits...) to motivate employers ○ There is the need to convince companies and shop owners about sustainable mobility management ○ Employers lack of knowledge and resources to develop and implement Workplace Travel Plans. 	<ul style="list-style-type: none"> ○ The ASTUTE toolkit should include measures to offer business incentives to increase employer involvement ○ The needs of city managers and employers should be synchronized

Table 3. Barriers to walking and cycling in the private sector



There are many issues related to walking and cycling that are likely to appeal to both city managers and employers:

- Walking and cycling reduce traffic congestion in the city centre, which is good for city managers, businesses and society as a whole.
- Walking and cycling engender good health among employees.
- Reducing CO₂ emissions is good for business. It helps to maintain a pleasant environment for employees to work and live in. and can be used in Corporate Social Responsibility reporting.
- Recruiting staff from the local area in which the company is located is of great benefit for both city managers and employers because the distance people need to travel is reduced.
- Encouraging walking and cycling is also beneficial because these modes can provide less advantaged social groups with the means to access employment.
- By encouraging staff to travel sustainably, especially in those companies occupying out-of-town sites, the need for land-take can be greatly reduced (especially parking spaces), which helps to reduce the cost of site development for the company.

Finally the report mentions three mobility management monitoring protocols and toolkits that have been developed mainly through EC funded research and demonstration projects and which might be useful for the development of the ASTUTE toolkit. These are:

- TAPESTRY, focused on monitoring the effectiveness of travel awareness campaigns and a Common Assessment Framework (CAF)
- MoST, developed the Monitoring and Evaluation Toolkit
- SAVE, a toolbox for Mobility Management in Companies

2.2. Summary

This benchmarking report has shown that there are a wide range of cross-sector benefits of walking and cycling to encourage policies and successful intervention measures. Based on the case study review, the report has identified **key decision points and messages** that must be taken into account when developing mobility management initiatives:

- Partnership working, integrating all public transport modes.
- Understanding of behavioural motivations for travel in the city
- Improvement of the attractiveness of walking and cycling
- Development of clear selection criteria for walking and cycling measures
- Emphasising cross-sector benefits of walking and cycling



3. DISCUSSION WITH STAKEHOLDERS

The aim of the local consultations was to present ASTUTE and test the draft benchmarking report in discussion with key stakeholders at local, national and European levels. At the same time, it was a good opportunity to make the first contact and recruit potential partners in the future of ASTUTE.

These discussions were undertaken with local authorities and employers in each partner city. In addition, in order to ensure that ASTUTE will meet the needs of cities in New Member States, a seminar was organized with appropriate stakeholders from those countries.



Picture 1. Siracusa's launch event

The programme of these events consisted of an introduction to ASTUTE; a presentation on the benchmarking report; a discussion on specific issues, and finally the participants were asked to complete a brief questionnaire covering their views on walking and cycling (and, crucially, the barriers to them).

The following sections describe the events organized as well as the results obtained through the discussions and the questionnaires.

3.1. City launches and New Member States Forum

Each partner city had to organize at least one **city launch** with key stakeholders. There were two types of event:

- **Local authorities:** This action involved five partner cities (Budapest, Granada, Graz, London, and Siracusa) who will participate in WP4. It consisted of a debate or meeting with political representatives and/or senior authority officials to discuss and reach a consensus on obstacles and solutions to the promotion of walking and cycling in the city.
- **Employers:** This action involved the five partner cities (Dublin, Granada, Graz, and London) who will participate in WP5. A similar methodology to 'Local Authorities' was used, focusing on the issue of individual business strategy. Some of the stakeholders invited to the meeting were representatives of local Chambers of Commerce and Business Forums as well as managers of companies that were likely to become involved in WP5.

PI Bromley city launch was done in two sessions. One took place at the National Travelwise Conference in Bristol (2-3 November 2006). LB Bromley representatives staffed the ASTUTE stand in the exhibition area and invited delegates to enter discussions about what they perceived to be the barriers to walking and cycling in their organisations/areas. Further discussions also took place at the EUROCITIES Mobility Forum in London (8-10 November 2006). Representatives from local authorities, businesses managers, transport operators and walking and cycling associations participated in these discussions, and many of them completed the survey.



Picture 2. ASTUTE stand during EUROCITIES mobility forum

The event organized by **P2 CEN** took place in the ALG Building in London on 26 May 2006. Thirteen people participated in this event. The main stakeholders came from the bicycle retailers association (Evans Cycles, Velorution);



pedestrians and cyclists organisations (Living Streets, London Cycling Campaign – head office staff and local borough group members) the bicycle training organisation (Cycle Training UK Ltd); traffic engineers (West One); Seltrans (South-East London’s 7-borough transport strategy group), and Kingston University.



Picture 3. Local event in Granada

P3 Granada event took place in one of the main buildings of Granada’s city council. It was organized in a morning session on 8 November 2006 and ten people participated in the event, including representatives from local and regional authorities, the Tourist Board, Chamber of Commerce and Employers Confederation.



Picture 4. Dublin’s city launch

P4 CODEMA organized two city launches. The first took place in Dublin Chamber of Commerce on the 11 July 2006. Thirteen people participated in this event. CODEMA, in partnership with Vipre, presented the ASTUTE project and the actions that will be developed in six companies. The second event was developed at the Guinness Enterprise Centre and focused on the situation of walking and cycling for commuters. Four representatives from companies, plus the University College of Dublin and a walking association participated in this second workshop.

P5 Studio Metropolitana, city launch was organized in Budapest as an open air event, a *Scribbling Party*. It took place at Kamermayer Square, on 30 June 2006. This site was chosen because it is one of the areas of the city of Budapest that will be pedestrianised as a result of the ASTUTE project. Almost 300 people participated in this event, including 30 stakeholders, representatives from retailers and neighbours associations, architects, journalists and public authorities.

P6 City of Graz and **P7 FGM-AMOR** co-organized the launch on 8 August 2006 which took place at the Urban Box of the city of Graz. Twelve stakeholders participated including staff from the departments of urban and traffic planning, representatives from the citizens associations, the tourist sector and the university.

P8 MedORO and **P9 Uni-Catania** organized Siracusa’s event on 20 July 2006. The ASTUTE project was introduced to 12 stakeholders, as well as the actions that will be developed in Siracusa to promote walking in the city. During the discussion, they analysed the current situation and the main barriers to walking, and also worked on finding solutions and integrated approaches for a more sustainable urban development.



Picture 3. Budapest launch event



Picture 4. Launch event in Graz



On 19 June 2006, the ASTUTE **New Member States Forum** was organized in the city of Budapest.

It focused on municipalities that were already aware of the principles and benefits of mobility management, and therefore representatives from the new Member State cities that are part of the CIVITAS programme were invited.

The purpose of the Forum was to present the draft report, and then discuss it with the participants in order to gather opinions, ideas and suggestions from experts working in the New Member States or Accession States. The Forum followed a similar agenda to the 'local' events being undertaken in the ASTUTE cities, based on a set of questions to discuss in groups, and also a questionnaire for each participant to complete.



Picture 5. Introduction session during the New Member States Forum

Twenty experts from 17 cities attended the forum, which was organized by the ASTUTE partner in Budapest, plus five representatives from the ASTUTE team. The following map shows the countries and locates the cities participating in this event.

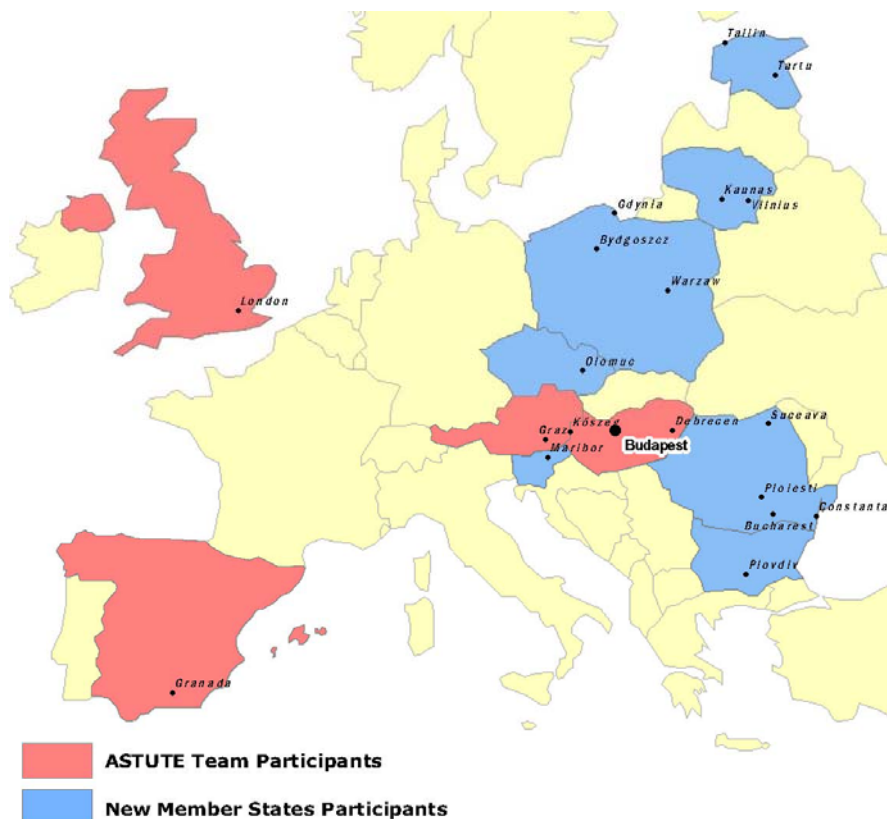


Figure 1 Map of the cities participating in ASTUTE New Member States Forum

3.2. Discussion Results

All city launches, as well as the New Member States Forum, carried out a moderated discussion among the stakeholders based on their experience in the fields of walking and cycling. Events were planned as ‘controlled’ exercises with a set of questions to discuss in groups. Some events were specific in the discussion such as walking or only concerned municipal actions etc.

The next sections expose in several tables and figures the results obtained through the discussion on the following questions:

1. Is walking and cycling a high priority in your city?
2. How does this compare to other cities in your country?
3. Do you have policy that promote walking and cycling? If so, what are the most important elements?
4. Main barriers identified to walking and cycling
5. Which are the most important ‘external’ elements for ASTUTE success in each city?
6. Which are the most important ‘internal’ elements for ASTUTE success in each city?

These questions were discussed by each partner. However, in the case of the New Member States Forum, questions 2, 3, 5 and 6 were not asked.

3.2.1. Is walking and cycling a high priority in your city?

	Yes	Not Enough	No
WALKING	3	3	2
CYCLING	2	2	3

Table 4. Level of priority of walking and cycling in partner cities

In the event organized by LB Bromley (for public sector WP\$), most of the participants responded ‘Yes’ to this question. Such measures are included in the council’s Local Implementation Plans. Besides, a number of businesses have adopted Workbased Travel Plans and there are several NGOs that work to promote walking and cycling in London. However at CEN’s event (for private sector WP5), even though many of the respondents also agreed, they thought there was not enough priority given to policy-making.

In Granada, all stakeholders agreed that walking receives great priority in the city due to the progressive pedestrianization of the historic centre. However, there are no clear policies focused on promoting cycling at a municipal level but at a provincial level, there is now a policy which aims to develop an inter-urban cycling network.

The opinions in at the Dublin events were quite diverse. In cycling, some stakeholders pointed out that new research was being carried out and there were cycle routes available. However, others argued that those lines were discontinuous and that financial resources were used to promote other modes of transport. In walking, the situation was even more negative as it was felt that although there are good walking routes, traffic congestion makes pedestrians very vulnerable.

In Budapest, walking and cycling are not considered as a mode of transport for commuter trips. Some measures have been implemented to improve walking, however, cycling is still restricted to leisure activities, although this perception is starting to change.



Picture 6 City of Graz

In Graz, all participants agreed that walking and cycling are high priorities and this is shown by successful initiatives implemented especially in the field of cycling. However, the modal share of walking in Graz is declining and the use of cycling is stagnating. So, although Graz has implemented several innovative measures, the effect of marketing and awareness campaigns has been fairly low.

In Siracusa the answer was unanimous as all stakeholders agreed that policy-makers do not prioritize walking and cycling issues.

Although the situation of the cities represented in the New Member States Forum might vary from one city to another, many of them agreed that walking was a priority as many of their cities were in the process of pedestrianisation of certain areas. However, those actions concerned only the main commercial streets or tourist areas, and the traffic of the city is still car-oriented. On cycling most of the participants responded 'No' this was not a priority - cycling is seen as a recreational activity, although this perception is starting to change.

3.2.2. How does this compare to other cities in your country?

The situation of walking and cycling in cities depends on many factors. Some of them might be the characteristics of the urban pattern, the topography, its size or population, economic development, etc. For example, in Siracusa the city council is promoting 'walking tourism' in order to preserve the cultural and architectural heritage, however, the legislation is still very weak. This situation is very similar to the most important cities of Sicily, nevertheless, there are significant north-south differences as the northern cities of Italy do have strong city plans concerning walking and cycling.

In the case of Budapest and Dublin, both are capital cities and so their position on walking and cycling cannot be easily compared with other cities in their country. Both cities are much more populated and more urban, so their problems of traffic congestion are much bigger. In the case of Hungary, country towns such as Debrecen, Kaposvár or Pécs have obtained great achievements with pleasant pedestrianised city centres and a higher rate of bicycle usage.

Graz and London, both leading cities in the promotion of walking and cycling, are generally in a good position, although there are also other cities which are taking the lead in more specific actions. The Mayor of London's transport strategy aims to make London a 'walking city', however, York and Cambridge are examples of cities where walking and cycling are already being promoted successfully; Nottingham has a good publicity example with the 'Big Wheel' internet portal and Exeter is a 'cycling demonstration' town. Graz has some good projects, especially in the field of cycling. However, Salzburg has now the leading position in walking and cycling.

In Granada, the participants in the launch event thought that their city is in a similar situation to the rest of the cities of Spain. However, they are conscious that cycling receives less support than walking, compared to other Spanish cities. Granada's urban characteristics and the traditional patterns of mobility require big awareness campaigns in order to motivate the population to use alternative modes of transport.



3.2.3. Do you have policy that promote walking and cycling? Which are the most important elements?

Policies that concern walking and cycling are mainly divided into the three levels of national, regional and local administration.



Picture 7. Logo from Road Danger Reduction Forum: <http://www.rdrf.org/>

Based on the opinions of the stakeholders participating in the ASTUTE launch events, the most active policy on walking and cycling is found at local level. City Councils promote sustainable modes of transport through Local Implementation Plans (London) or Accessibility Plans for the historic centre (Granada). There are also regulations of traffic calming such as 30/50km/h speed limit throughout Graz since 1992 or the promotion of ecological vehicles in Siracusa. Some general programmes mentioned were the Road Danger Reduction Charter of London, which actively promotes walking and cycling by taking positive and coordinated action to increase the safety and mobility of these benign modes; the Budapest Transport Development Concept which emphasizes the importance of walking and cycling, and the strategy paper 'Green Net Graz' which aims to provide an attractive network of green areas across the city.

In Dublin, walking and cycling is also promoted in the private sector through Travel Plans and Environmental Policies for companies. In addition, the Italian National Policy states that all companies with more than 300 employees require a Mobility Plan which must be approved by the Municipality.

Other initiatives highlighted by the participants of the city launches are the actions developed by NGOs and private organizations in the fields of travel marketing, awareness campaigns or training schemes.

At a National and Regional level, there are general frameworks such as the Decree from the Ministry of the Environment of Italy which aims to reduce air pollution by promoting a rational use of private vehicles. This decree is developed through regional plans for air quality. Austria has developed this further with a Master Plan for Bicycling in collaboration with regions, municipalities and relevant organizations and the Traffic Club of Austria (VCÖ) publication which provides good examples of measures and strategies for promoting the use of bikes. Finally, the Diputación de Granada, provincial government, is now developing an inter-municipal network of bicycle paths.



Picture 8. The publicity campaign of Nottingham 'get of the big wheel' is a good example of successful travel marketing

The following figure summarizes the most relevant policies mentioned by ASTUTE participants:



Figure 2. Most relevant policies in walking and cycling

In the case of New Member States, they usually have a Master Transport Plan that states the national framework for all modes of transport. In the case of Romania, walking is included in this plan, but cycling is not. While in Hungary it is to the contrary ie the Traffic Development Strategy considers cycling (in regard to infrastructure) but not walking. In other countries, such as Bulgaria or Lithuania, considerations on walking and cycling are included in policies related to a healthy living and environment.

3.2.4. Main barriers identified to walking and cycling

During the discussions, participants were asked about the most important barriers to increase walking and cycling in their cities. It is important to mention that even though the barriers identified might be applicable in many partner cities, these results only show the ones that have been identified by stakeholders during the seven city launches and the New Member States Forum.

Barriers have been classified in ten categories, based on the benchmarking report and the first draft of the ASTUTE Toolkit. In each category, there are two to four barriers identified (there are more barriers in each category although they were not identified by stakeholders). Some of the barriers are common to nearly all partner cities whilst others are mentioned by one partner city. The results are shown in the following table:

	London (Bromley)	London (CEN)	Granada	Dublin	Budapest	Graz	Siracusa	New Member States	TOTAL
Safety and Security Concerns									19
Road Safety (real and perceived)	x	x	x	x	x	x	x	x	8
Unsafe bicycle storage	x	x		x	x		x	x	6
'Stranger danger' fear to walk kids to school	x								1
Disrespectful road users		x				x	x	x	4
Inadequate information									3
Misinformation, different terminologies	x								1
Unavailable information		x							1
Lack of continuous and effective campaigns			x						1
Inadequate Urban Environment and Design									10
Climate and topography		x	x	x				x	4
Car-oriented design		x		x				x	3
Urban pattern, centralization of activities		x	x					x	3
Lack of infrastructure and support									16
Insufficient infrastructure	x		x		x		x	x	5
Poor conditions of the infrastructure							x	x	2
Lack of integration with public transport		x		x	x	x			4
Discontinuous walking and cycling networks			x	x	x	x		x	5
Poor public perception and lack of awareness									13
Status, negative perception	x	x	x		x			x	5
Lifestyle and mentality			x	x	x		x	x	5
Time constraint	x			x			x		3



	London (Bromley)	London (CEN)	Granada	Dublin	Budapest	Graz	Siracusa	New Member States	TOTAL
Accessibility and health									9
Recreational use of bikes			x					x	2
Lack of healthy habits		x		x					2
Long distances				x				x	2
Inconvenient clothing, lack of shower facilities		x		x				x	3
Lack of public sector support									5
Political priority	x	x				x		x	4
Limited public funding								x	1
Lack of private sector support									3
Lack of incentives, knowledge, skills	x	x		x					2
Difficulties for commercial activities			x						1
Congestion and air pollution									6
Unpleasant environment		x					x		2
Pollution and traffic congestion	x				x		x	x	4
Lack of education and training									3
Lack of cycle skills		x		x					2
No opportunity for training				x					1

Table 5. Barriers identified by stakeholders during city launches

The following graphic shows the importance of barriers based on these results:

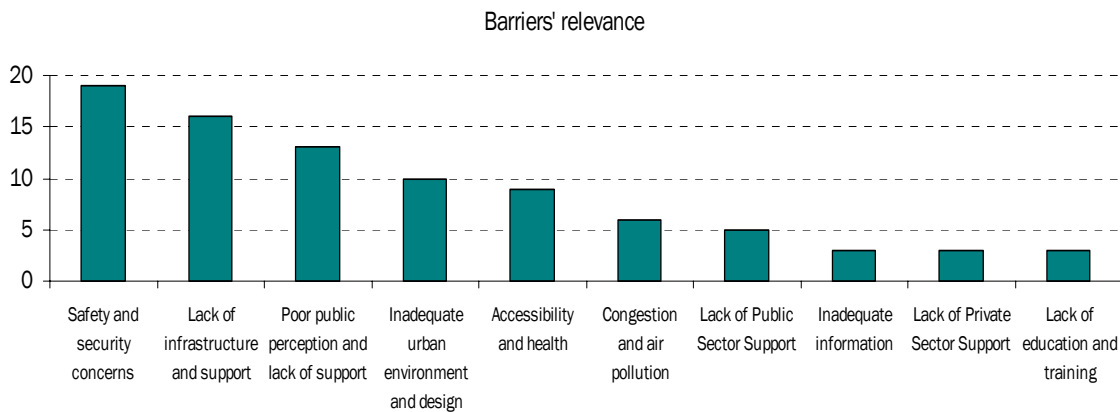


Figure 3. Graphic showing barriers importance based on the results from the discussions

As can be observed, *security and safety concerns* have been identified as the main typology of barriers to the increase of walking and cycling in cities. Within this category, the real and perceived danger in the road is the biggest barrier to increased cycling. Pedestrians and bikers are the most vulnerable users of the road - indeed, they do not feel secure. The volume and speed of traffic in many roads acts as a disincentive to pedestrians and particularly to cyclists who usually cohabit the same space as motor vehicles. Secure bicycle storage, in origin and destination, and the disrespectful attitudes of other users of the road are also important barriers concerning safety.



Picture 11. *Unsafe bike-car cohabitation*



Picture 12. *Cars parking on the footway*

Lack or insufficient infrastructure for walkers and cyclist is also a main barrier to their mobility. This problem is accentuated when this infrastructure is discontinuous and incoherent. Both barriers were mentioned in Budapest, Granada and the New Member States.

The *attitudes and poor public perception* of citizens have also been identified as barriers. The car is still a symbol of status, especially in New Member States, and walking and cycling are not recognized as valid modes of transportation. This is also the case of London, Granada and Budapest. Graz is the only city where stakeholders did not identify the attitudes or mentality of people as a barrier for walking or cycling.



Picture 10. *Bicycles in the snow*

Land use planning, climate and low political priority were also relevant deterrent factors to walking and cycling. Among the other barriers identified, the least important were: inadequate information, lack of private support and lack of education and training.

3.2.5. Which are the most important 'external' elements for ASTUTE success in each city?

One of the issues discussed among stakeholders concerned the 'external' factors that would contribute to ASTUTE success in each city. 'External' elements were understood as those circumstances that are not within the control of the project.

The following table summarizes the results by each city:

“External” Elements for success

LONDON (Bromley)

More infrastructure
More information about cycling routes, highly disseminated
Political support at LB level for new investments

LONDON (CEN)

Prioritising danger reduction in national, regional and local authorities
Change in planning and design
Public education, engagement and better information
Funding

GRANADA

Discourage private car use for urban journeys
Flexible working hours to avoid traffic congestion and crowded public transport
Funding for complementary infrastructures in order to create an integrated public transport network

DUBLIN

Change in the urban planning and design
Promotion and funding of co-modality
Incentives for companies and flexible working hours
Road pricing and a more efficient public transport system

BUDAPEST

Improve the attractiveness of the city
To have calm streets and squares allowing pedestrians to move safely

GRAZ

Implementation of the “Traffic Policy Guideline 2000”, the Master Plan for Bicycling and VCO.
Widespread dissemination of it
The problem with particulate matters and a ban of driving for diesel vehicles in winter
Extension of tramlines and B+R facilities and blue zones.

SIRACUSA

Effective policy implementation
Public space regulation and improvement of accessibility
Promotion of park&ride facilities and public transport

Figure 4. Summary of the most important ‘external’ elements for success

The main tools to success in urban mobility are already set in national, regional and local policies. However, in order to obtain a real change, those policies need to be implemented effectively. In the case of Italy, the national government transfers to the regional administrations all the competencies in the field of regional and local transport. Those institutions must develop regional transport plans as well as urban traffic plans. Stakeholders from Siracusa pointed out that in order to succeed in any initiative of sustainable urban mobility such as ASTUTE, current policy must be fully implemented. Stakeholders from London and Graz also mentioned policy as a key issue to success. In the case of London, prioritising the Charter of Road Danger Reduction is important to success in other initiatives. In Graz the implementation of the Traffic Policy Guideline, its Master Plan for Bicycling and the VCO, is very important particularly through its widespread dissemination.

Political support and funding were also important elements for improving walking and cycling in London. Similar opinions were found in Dublin where the promotion and funding of co-modality was a key issue. In Granada, funding is necessary to build complementary infrastructure and thereby achieve an integrated public transport network.

In London, Dublin and Siracusa stakeholders pointed out the necessity to change urban planning and design so that cities are planned to take into account walking and cycling mobility. In Budapest, city beautification and traffic calming measures promoted by the



municipality are essential to bring more people to walk and cycle. The same opinions were found in Granada: Discouraging private car use for urban journeys was the first step to promote walking and cycling.

In the case of private companies, both Dublin and Granada indicated that having more flexible working hours was a key issue to avoid traffic congestion and improve mobility in cities.

Finally, the environmental situation of Graz, where winter conditions and its problem with atmospheric particulate matters has obliged the authorities to ban the use of diesel in winter which might help to raise awareness of the environmental problems of transportation and thereby encourage more walking and cycling.

3.2.6. Which are the most important ‘internal’ elements for ASTUTE success in each city?

‘Internal’ elements are understood as those circumstances that are under control of the project, the people and organizations involved. Based on the actions that each of the partners will undertake during the project, actions by municipalities and actions by companies, stakeholders were asked about the most important factors to success.

The following table summarizes the results by each city:

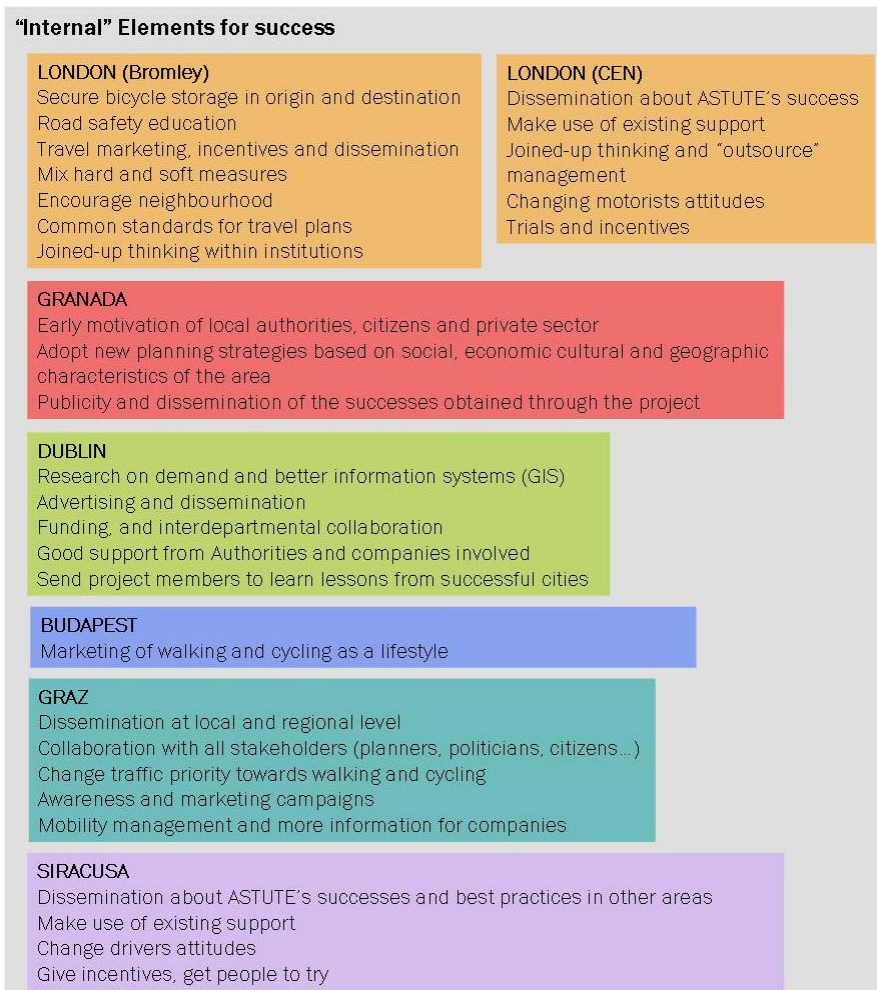


Figure 5. Summary of the most important ‘internal’ elements for success



Picture 11. First ASTUTE Newsletter, dissemination as a key issue to success.

In all discussions, participants pointed out the dissemination of the ASTUTE findings and research as one of the key issues for success. Information and promotion is essential in order to reach key stakeholders and make a real change to walking and cycling policies.

Collaboration at all levels of society is a key issue for success. In Granada, it is important to involve shop owners and residents of the areas where actions will take place. The same point was mentioned in London (Bromley).

Joined-up thinking and inter-departmental collaboration are also important elements in London and Graz in order to be effective and obtain full results. In Siracusa, Dublin and London they pointed out the importance of making use of existing support, both financial as well as through partnerships.

Another important element is the involvement of public authorities at an early stage, as mentioned in Granada and Graz. In the case of Budapest, the city launch of ASTUTE was used to disseminate the project to local authorities as it is shown in the following pictures:



Picture 12. City Launch event in Budapest, early involvement of public authorities

The same level of involvement should be taken into account in the actions developed by companies. In Dublin, it was suggested that the opportunity should be given to key stakeholders to visit successful initiatives in other cities. This is understood as a good incentive to convince and involve decision-makers. Travel marketing and bicycle trials would also motivate walking and cycling in the private sector.

Other elements mentioned are road safety education (London); change in road users' attitudes towards walking and cycling (Siracusa, London); new planning strategies to prioritise walking and cycling (Graz, Granada), and common standards for Travel Plans (London).

4. 'BEFORE' SURVEY RESULTS

This section provides the 'before' data against which the ASTUTE toolkit will be evaluated at the end of the project.

As the Technical Annex stated, the lead partner designed a 'before-and-after' survey to be undertaken in all partner cities in Apr-06 and Nov-08. The 'before' survey was completed during city launches. Participants were asked to complete a brief questionnaire covering their views on walking and cycling (and, especially, the barriers to them). In all cases respondents were asked to 'score' suggested barriers in a range from 1= low to 6=high. The average scores for specific questions have been calculated, and the variances have been identified. This section identifies for each city and for all cities:

- Average score per question
- Overall average scores
- Where a city-score varies from the overall average by +/- 20%

A copy of the questionnaire is attached as Annex B

4.1. Analysis

Seven questionnaire surveys were run (ie one in each city, two in London): a total of 109 questionnaires were returned, ie 15.5 per meeting.

In order to be able to compare the 'before' survey with the 'after', it is important to be able to compare the characteristics of the respondents. Respondents were asked to classify themselves according to some pre-defined categories. Unfortunately these turned out to be not fully suitable, with some 34% classifying themselves as 'other'. Table 6 summarises the overall figures, and Table 7 interprets the largest 'other' categories from the data provided.

	Senior	Transport	Walking	Cycling	Other
Politician	6	0	0	0	3
Manager	27	0	0	1	7
Technical	0	5	1	1	12
Lobbyist	0	0	2	3	4
Other	0	0	0	0	37
TOTAL	33	5	3	5	63

Table 6. Characteristics of the respondents

	other Technical	other Other
University	2	Stakeholder representatives 2
Trainer	1	Local residents 17
Architect/Urbanist	7	Passers by 8
Other	2	Not stated 10
Total	12	Total 37

Table 7. Interpretation of other category

4.1.1. Barriers to walking and cycling

The following table summarises the overall views on the suggested barriers. Section 4.1.3. include scores by city. NB: a higher score indicates that the barrier is seen as more significant.

Barriers	walking		cycling	
	score	rank	score	rank
1. Physical: climate	2.7	13	2.8	13
2. Physical: topography	2.3	14	2.6	14
3 Urban Form: legacy (shape of city, width of streets, etc)	3.0	12	3.1	12
4. Transport infrastructure: public transport	3.0	11	3.1	11
5. Transport infrastructure: footpaths ,signalisation, etc	3.2	9	3.9	4
6. Public finances	3.5	6	3.8	6
7. Political priority: national/regional	3.5	7	3.5	9
8. Political priority: municipal	3.6	5	3.9	5
9. Political priority: managerial	3.0	10	3.2	10
10. Political priority: civil society	3.4	8	3.7	7
11. Safety: level of vehicle traffic [objective, ie as seen by the managers]	3.8	3	4.4	2
12. Safety: level of vehicle traffic [subjective, ie as seen by pedestrians/cyclists]	4.0	1	4.7	1
13. Cultural: the status of walking/cycling	3.8	2	4.0	3
14. Informative: provision of maps etc	3.6	4	3.6	8
AVERAGE	3.32		3.64	

Table 8. 'Before' survey results on barriers to walking and cycling

Barriers to WALKING

Overall score = 3.32

- Less significant: Physical; Urban Form; Transport infrastructure; Political priority (managerial)
- More significant: Safety, Culture, Information

Barriers to CYCLING

Virtually the same as walking although the barriers are generally seen as more significant (an overall score of 3.64)

- Less significant: Physical; Urban Form; Transport infrastructure (public transport); Political priority (managerial)
- More significant: Safety (very clearly), Culture, Infrastructure (footpaths, signalisations, bicycle routes...)

4.1.2. Outcomes

The following table summarises the overall answers to the question: ‘The proposed ASTUTE actions in your city: in your view what will be the most important outcomes?’ NB: a lower score indicates that the outcome is seen as more significant.

Outcome	Score
1. Increase walking	2.9
6. Improve health	3.3
4. Reduce congestion	3.4
5. Reduce accidents	3.4
2. Increase cycling	3.5
3. Reduce CO ₂	3.9

Table 9. Most important outcomes of ASTUTE for your city

However, this disguises a significant variation by city as follows:

4. Reduce congestion:

Highest priority for Granada, London (Bromley), Siracusa;
Lowest for Budapest, Graz, London (CEN).

2. Increase cycling:

Highest for Budapest, Graz, London (CEN);
Lowest for Granada, Siracusa.

[Dublin was very average]

4.1.3. Barriers and Outcomes by CITY

The following table shows that all cities felt that cycling barriers were more significant than walking (except Siracusa where cycling is not being considered). Graz respondents were the most positive about barriers (ie they considered that the barriers were less significant than respondents from other cities) but not about the outcomes; Siracusa were the most negative about barriers to walking and London (CEN) and Granada were the most negative about barriers to cycling.

As to outcomes, Granada was the most positive, Budapest the least.

	Walking	Cycling	Outcomes
Budapest	3.28	3.50	4.05
Dublin	3.22	3.27	3.50
Granada	3.01	4.15	2.92
Graz	2.62	2.99	3.33
London (Bromley)	3.11	3.72	3.50
London (CEN)	3.89	4.17	3.30
Siracusa	4.12	N/A	3.21
AVERAGE	3.32	3.64	3.40

Table 10. Barriers and outcomes by city

4.1.4. Barriers to walking and cycling: views from the new Member States

As reported above, a special Forum was held to gather the views of relevant stakeholders from the new Member States. Participants were invited to complete a similar questionnaire to that used in the ASTUTE partner-city launches. In the event, only 10 of the 20 participants completed and returned the form, so the results are less statistically representative. The table below presents the views on the barriers in the same format as Table 8.

Barriers	walking		cycling	
	score	rank	score	rank
1. Physical: climate	2.7	13	3.6	10
2. Physical: topography	2.0	14	2.3	14
3 Urban Form: legacy (shape of city, width of streets, etc)	3.1	10	3.9	8
4. Transport infrastructure: public transport	2.9	12	3.2	11
5. Transport infrastructure: footpaths ,signalisation, etc	3.4	7	4.4	3
6. Public finances	3.6	4	4.6	1
7. Political priority: national/regional	3.4	5	4.1	5
8. Political priority: municipal	3.4	6	3.9	7
9. Political priority: managerial	3.6	3	4.2	4
10. Political priority: civil society	3.1	11	3.1	13
11. Safety: level of vehicle traffic [objective, ie as seen by the managers]	3.9	2	4.1	6
12. Safety: level of vehicle traffic [subjective, ie as seen by pedestrians/cyclists]	4.2	1	4.6	2
13. Cultural: the status of walking/cycling	3.2	9	3.7	9
14. Informative: provision of maps etc	3.3	8	3.1	12
AVERAGE	3.28		3.79	

Table 11. New Member State Forum survey results on barriers to walking and cycling



On **WALKING**, the respondents at the new Member State Forum held very similar views to those at the ASTUTE city launches. The average scores (Forum, 3.28; ASTUTE cities, 3.32) were not statistically different. Moreover, the rank-order of the suggested barriers was exactly the same for the two groups.

On **CYCLING** there was a difference of views. Again, the average scores (Forum, 3.79; ASTUTE cities, 3.64) were not statistically significant. However, the new Member State respondents considered the following barriers to be the most significant:

6. Public finances;
12. Safety: level of vehicle traffic [subjective]
5. Transport infrastructure: footpaths ,signalisation, etc
9. Political priority: managerial
7. Political priority: national/regional
11. Safety: level of vehicle traffic [objective]

The greatest difference of views between the new Member State respondents and the ASTUTE city respondents was in respect of the following barriers:

6. Public finances [more important for the new Member State respondents]
9. Political priority: managerial [more important for the new Member State respondents]
10. Political priority: civil society [less important for the new Member State respondents]
13. Cultural: the status of walking/cycling [less important for the new Member State respondents]

The new Member State forum respondents were not asked about the expected outcomes (after all, no ASTUTE action will be taken in their cities), so there is no comparison to make.

5. CONCLUSIONS

During WP2 'The Nature of the Problem', a deep analysis of the reality of walking and cycling in European cities has been conducted. The benchmarking report, the local consultations in all partner cities and the New Member States Forum have provided very valuable information about the current policies that are being implemented in the fields of sustainable mobility, the main barriers to walking and cycling and successful examples of how to overcome them. At the same time, the city launch events have set the first contact with local, regional and European stakeholders who are now aware of ASTUTE and may become involved in future actions.

The conclusions from the analysis of all the information and opinions supplied are as follows:

- Walking and cycling policies are fairly common at a European Level. In general, there is a national regulation that sets a common strategy, but local authorities are responsible of its definition and development. Nearly all partners agree that an effective implementation of current policies is a key issue to increase walking and cycling.
- Even though policies are quite widespread among European countries, walking and cycling are not a main priority for politicians. Most of the stakeholders agree that those modes of transport are not properly considered and do not receive enough priority. Although the level of priority is rising, car and public transport are still the main priorities in transportation policies.
- The main barrier to walking and cycling is clearly road safety. Pedestrians and cyclists do not feel secure, and moreover the level of traffic congestion and the attitudes of other road users cause a real danger for them. The public perception of walking and cycling is another significant barrier. The low cultural tradition in some areas (southern Europe) and the negative image and status of walkers and cyclists acts as a deterrent to increase walking and cycling. Finally, the lack or limitation of infrastructure for pedestrians, and more clearly for cyclists, also influences decisions on whether to walk or take a bike for urban journeys. Based on the survey results, barriers to cycling are seen as more significant than the ones to walking.
- Among the most important 'external' elements for success, the most relevant is the effective implementation of national, regional and local policy. Political support and funding are also important. Moreover, some of the partners agreed that in order to improve walking and cycling there is the necessity to change urban planning and design towards more sustainable cities.
- The 'internal' elements that will help to succeed in future actions developed by ASTUTE are mainly based on the dissemination of the project results with effective publicity and promotional initiatives. It is important to reach the target audience (whether they are politicians, technicians, citizens...) of each partner city and convince them that walking and cycling is worthwhile. To obtain that, it will be necessary to work together at all levels of society (politicians, employers, citizens, associations...). Another important 'internal' factor for success is the joined-up thinking and the collaboration between institutions and different public authorities and departments in order to be fully effective.
- In general, the likely barriers in the new Member States are similar to those in the ASTUTE partner-cities. For WALKING, our evidence is that the concerns and barriers are identical. For CYCLING there are some differences: there is a greater awareness of the difference between recreational and 'purposeful' cycling, and the latter is associated with low-status. The most important barriers are more likely to be political, managerial and financial. In the new Member States cycling is less likely to be seen as a transport mode in its own right: while some cities have cycling-related policies, fewer have programmes of action and investment.



As mentioned at the beginning of this report, ASTUTE aims to increase the number of trips taken by walking and cycling and thereby reduce the CO₂ emissions. Participants were quite positive evaluating the expected outcomes that will result from ASTUTE.

Now that 'The Nature of the Problem' has been studied and analysed these conclusions will be considered during the ongoing development and testing of the ASTUTE toolkit which ultimately will be useful for many municipalities and companies to overcome the identified barriers to walking and cycling and thereby improve the quality of our cities.