



CiViTAS
Cleaner and better transport in cities

ARCHIMEDES

AALBORG • BRIGHTON & HOVE • DONOSTIA-SAN SEBASTIÁN • IASI • MONZA • ÚSTÍ NAD LABEM

D11.7 – BYPAD Cycle Audits

September 2011



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION

Project no.	TREN/FP7TR/218940 ARCHIMEDES
Project Name	ARCHIMEDES (Achieving Real Change with Innovative Transport Measure Demonstrating Energy Savings)
Start date of the Project	15/09/2008
Duration:	48 months
Work package	11
Deliverable:	D11.7: BYPAD Cycle Audits
Due date of Deliverable:	15 th September 2011
Actual submission date:	15 th September 2011
Dissemination Level	Public
Organisation Responsible	Transport & Travel Research Ltd
Authors	Samantha Jones
Quality Control	Alan Lewis
Version	1.0
Date last updated	30 th August 2011

Contents

1. INTRODUCTION.....	5
1.1 BACKGROUND CIVITAS.....	5
1.2 BACKGROUND ARCHIMEDES.....	6
2 PARTICIPANT CITIES	6
2.1 LEADING CITY INNOVATION AREAS	6
2.2 AALBORG	6
2.3 BRIGHTON & HOVE	7
2.4 DONOSTIA - SAN SEBASTIÁN	8
2.5 IASI.....	8
2.6 MONZA.....	9
2.7 ÚSTÍ NAD LABEM.....	9
3. BACKGROUND TO THE DELIVERABLE	10
3.1 THE BYPAD PROCESS	10
3.1.1 <i>The Aims of a BYPAD Audit</i>	10
3.1.2 <i>Structure of a BYPAD Audit</i>	10
3.2 SUMMARY DESCRIPTION TASK 11.6.6	12
4. SUMMARY OF THE BYPAD AUDITS.....	12
4.1 INTRODUCTION TO THE CONDUCT OF BYPAD AUDITS IN EACH ARCHIMEDES SITE.....	12
4.2 SUMMARY OF THE AALBORG BYPAD AUDIT	12
4.3 SUMMARY OF THE BRIGHTON & HOVE BYPAD AUDIT	12
4.4 SUMMARY OF THE IASI BYPAD AUDIT	13
4.5 SUMMARY OF THE MONZA BYPAD AUDIT	13
4.6 SUMMARY OF THE SAN SEBASTIÁN BYPAD AUDIT	13
4.7 SUMMARY OF THE ÚSTÍ BYPAD AUDIT.....	13
5. BENCHMARKING OF BYPAD AUDITS WITHIN ARCHIMEDES	13
5.1 COMPARISON AND SUMMARY OF BACKGROUND CYCLING DATA	13
5.1.1 <i>Aalborg</i>	13
5.1.2 <i>Brighton & Hove</i>	14
5.1.3 <i>Iasi</i>	15
5.1.4 <i>Monza</i>	15
5.1.5 <i>San Sebastián</i>	15
5.1.6 <i>Ústí</i>	16
5.2 COMPARISON AND SYNTHESIS OF CITY AUDITS BY MODULE	17
5.2.1 <i>User Needs</i>	17
5.2.2 <i>Leadership & Co-ordination</i>	17
5.2.3 <i>Policy on Paper</i>	18
5.2.4 <i>Personnel & Means</i>	18
5.2.5 <i>Infrastructure & Safety</i>	19
5.2.6 <i>Information & Education</i>	20
5.2.7 <i>Promotion & Partnerships</i>	20
5.2.8 <i>Complementary Actions</i>	21
5.2.9 <i>Evaluation & Effects</i>	22
5.3 COMPARISON OF RECOMMENDATIONS AND ACTION PLANS	22
5.4 LINKS TO ARCHIMEDES MEASURES AND ACTUAL IMPLEMENTATION	23
5.4.1 <i>Aalborg</i>	23
5.4.2 <i>Brighton & Hove</i>	23
5.4.3 <i>Iasi</i>	24
5.4.4 <i>Monza</i>	24

5.4.5 San Sebastián	24
5.4.6 Ústí.....	25
5.5 REFLECTIONS ON THE BYPAD PROCESS	25
5.5.1 Aalborg.....	25
5.5.2 Brighton & Hove	25
5.5.3 Iasi.....	26
5.5.4 Monza.....	26
5.5.5 San Sebastián	26
5.5.6 Ústí.....	26
5.6 LESSONS LEARNED	26
5.6.1 Aalborg.....	26
5.6.2 Brighton & Hove	26
5.6.3 Iasi.....	27
5.6.4 Monza.....	27
5.6.5 San Sebastián	27
5.6.6 Ústí.....	27
6. CONCLUSIONS AND RECOMMENDATIONS	27
6.1 MAIN OUTCOMES	27
6.1.1 Overview of BYPAD module scores	27
6.2.2 BYPAD actions.....	27
6.3.3 Usefulness of the BYPAD process	28
6.2 PROBLEMS IDENTIFIED	28
6.3 RECOMMENDATIONS	28
6.4 FUTURE PLANS	29

APPENDICES: INDIVIDUAL SITE BYPAD AUDITS

- The Aalborg BYPAD Audit
- The Brighton & Hove BYPAD Audit
- The Iasi BYPAD Audit
- The Monza BYPAD Audit
- The San Sebastian BYPAD Audit
- The Usti BYPAD Audit

1. Introduction

1.1 Background CIVITAS

CIVITAS - cleaner and better transport in cities - stands for Clty-VITAlity-Sustainability. With the CIVITAS Initiative, the EC aims to generate a decisive breakthrough by supporting and evaluating the implementation of ambitious integrated sustainable urban transport strategies that should make a real difference for the welfare of the European citizen.

CIVITAS I started in early 2002 (within the 5th Framework Research Programme);
CIVITAS II started in early 2005 (within the 6th Framework Research Programme) and
CIVITAS PLUS started in late 2008 (within the 7th Framework Research Programme).

The objective of CIVITAS-Plus is to test and increase the understanding of the frameworks, processes and packaging required to successfully introduce bold, integrated and innovative strategies for clean and sustainable urban transport that address concerns related to energy-efficiency, transport policy and road safety, alternative fuels and the environment.

Within CIVITAS I (2002-2006) there were 19 cities clustered in 4 demonstration projects, within CIVITAS II (2005-2009) 17 cities in 4 demonstration projects, whilst within CIVITAS PLUS (2008-2012) 25 cities in 5 demonstration projects are taking part. These demonstration cities all over Europe are funded by the European Commission.

Objectives:

- To promote and implement sustainable, clean and (energy) efficient urban transport measures
- To implement integrated packages of technology and policy measures in the field of energy and transport in 8 categories of measures
- To build up critical mass and markets for innovation

Horizontal projects support the CIVITAS demonstration projects & cities by:

- Cross-site evaluation and Europe wide dissemination in co-operation with the demonstration projects
- The organisation of the annual meeting of CIVITAS Forum members
- Providing the Secretariat for the Political Advisory Committee (PAC)
- Development of policy recommendations for a long-term multiplier effect of CIVITAS

Key elements of CIVITAS:

- CIVITAS is co-ordinated by cities: it is a programme “of cities for cities”
- Cities are in the heart of local public private partnerships
- Political commitment is a basic requirement
- Cities are living ‘Laboratories’ for learning and evaluating

1.2 Background ARCHIMEDES

ARCHIMEDES is an integrating project, bringing together 6 European cities to address problems and opportunities for creating environmentally sustainable, safe and energy efficient transport systems in medium sized urban areas.

The objective of ARCHIMEDES is to introduce innovative, integrated and ambitious strategies for clean, energy-efficient, sustainable urban transport to achieve significant impacts in the policy fields of energy, transport, and environmental sustainability. An ambitious blend of policy tools and measures will increase energy-efficiency in transport, provide safer and more convenient travel for all, using a higher share of clean engine technology and fuels, resulting in an enhanced urban environment (including reduced noise and air pollution). Visible and measurable impacts will result from significantly sized measures in specific innovation areas. Demonstrations of innovative transport technologies, policy measures and partnership working, combined with targeted research, will verify the best frameworks, processes and packaging required to successfully transfer the strategies to other cities.

2 Participant Cities

The ARCHIMEDES project focuses on activities in specific innovation areas of each city, known as the ARCHIMEDES corridor or zone (depending on shape and geography). These innovation areas extend to the peri-urban fringe and the administrative boundaries of regional authorities and neighbouring administrations.

The two Learning cities, to which experience and best-practice will be transferred, are Monza (Italy) and Ústí nad Labem (Czech Republic). The strategy for the project is to ensure that the tools and measures developed have the widest application throughout Europe, tested via the Learning Cities' activities and interaction with the Lead City partners.

2.1 Leading City Innovation Areas

The four Leading cities in the ARCHIMEDES project are:

- Aalborg (Denmark);
- Brighton & Hove (UK);
- Donostia-San Sebastián (Spain); and
- Iasi (Romania).

Together the Lead Cities in ARCHIMEDES cover different geographic parts of Europe. They have the full support of the relevant political representatives for the project, and are well able to implement the innovative range of demonstration activities.

The Lead Cities are joined in their local projects by a small number of key partners that show a high level of commitment to the project objectives of energy-efficient urban transportation. In all cases the public transport company features as a partner in the proposed project.

2.2 Aalborg

The City of Aalborg, with extensive experience of European co-operation and having previously participated in CIVITAS I (VIVALDI) as a 'follower' city, is co-ordinating the consortium and ensures high quality management of the project. The City has the regional public transport authority (NT) as a local partner, and framework agreements with various stakeholder organisations.

Aalborg operates in a corridor implementing eight different categories of measures ranging from changing fuels in vehicles to promoting and marketing the use of soft measures. The city of Aalborg has successfully developed similar tools and measures through various initiatives, like the CIVITAS-VIVALDI and MIDAS projects. In ARCHIMEDES, Aalborg aims to build on this work, tackling innovative subjects and combining with what has been learned from other cities in Europe. The result is an increased understanding and experience, in order to then share with other Leading cities and Learning cities.

Aalborg has recently expanded its size by the inclusion of neighbouring municipalities outside the peri-urban fringe. The Municipality of Aalborg has a population of some 194,149, and the urban area a population of some 121,540. The ARCHIMEDES corridor runs from the city centre to the eastern urban areas of the municipality and forms an ideal trial area for demonstrating how to deal with traffic and mobility issues in inner urban areas and outskirts of the municipality. University faculties are situated at 3 sites in the corridor (including the main university site). The area covers about 53 square kilometres, which is approximately 5 % of the total area of the municipality of Aalborg. The innovation corridor includes different aspects of transport in the urban environment, including schools, public transport, commuting, goods distribution and traffic safety. The implementation of measures and tools fit into the framework of the urban transport Plan adopted by the Municipality.



Figure 1: The ARCHIMEDES Corridor in Aalborg

2.3 Brighton & Hove

Brighton & Hove is an historic city, in the south-east of England, known internationally for its abundant Regency and Victorian architecture. It is also a seaside tourist destination, with over 11 km of seafront attracting eight million visitors a year.

In addition, it is a leading European Conference destination; home to two leading universities, a major regional shopping centre, and home to some of the area's major employers. All of this, especially when set against the background of continuing economic growth, major developments across the city and a growing population, has led the city council to adopt a vision for the city as a place with a co-ordinated transport system that balances the needs of all users and minimises damage to the environment.

The sustainable transport strategy that will help deliver this vision has been developed within the framework of a Local Transport Plan, following national UK guidelines. The ARCHIMEDES measures also support the vision, which enables the city to propose innovative tools and approaches to increase the energy-efficiency and reduce the environmental impact of urban transport.

2.4 Donostia - San Sebastián

The city of Donostia -San Sebastián overlooks the sea and, with a bit more than 180,000 inhabitants, keeps a human scale. Some people consider the balanced combination of small mountains, manor buildings, and sea as the setting for one of the most beautiful cities in the world. We have a tradition in favouring pedestrians, cyclists and public transport.

For about twenty years, the city has been enforcing a strong integrated policy in favour of pedestrians, bicycles and public transport. Considering walking and cycling as modes of transport, has led to the building of a non-motorised transport network for promoting this type of mobility around the city.

Likewise, the city has extended its network of bus lanes. The city holds one of the higher bus-riding rates, with around 150 trips per person per year.

The CIVITAS project is being used as the perfect opportunity to expand Donostia -San Sebastián's Sustainable Urban Transport Strategy. With the package of CIVITAS measures Donostia-San Sebastián will:

- Increase the number of public transport users
- Decrease the number of cars entering in the city centre
- Increase the use of the bicycle as a normal mode of transport
- Maintain the high modal share of walking
- Reduce the number of fatal accidents and accidents with heavy injuries
- Reduce the use of fossil fuels in public transport.

2.5 Iasi

The City of Iasi is located in north-eastern Romania and is the second largest Romanian city, after Bucharest, with a population of 366,000 inhabitants. It is also the centre of a metropolitan area, which occupies a surface of 787.87 square kilometres, encompassing a total population of 398,000 inhabitants.

Iasi is the centre of a metropolitan area, which spans a surface of 787.87 km², with a total population of 398,000 inhabitants. The city seeks to develop possibilities for habitation, recreation and relaxation for all citizens in the region, business opportunities and provide opportunities for more consistent investments.

The city has five universities with approximately 50,000 students, the second largest in Romania. The universities and their campuses are located in the central and semi-central area of the city. In the same area, there are also a large number of kindergartens, schools and high schools with approximately 10,000 pupils. This creates a large number of routes along the main corridor, served by the public transport service number "8" (Complex Tudor Vladimirescu - Copou) with an approximate length of 10 km. The City of Iasi will implement its integrated measures in this area to be known as the "CIVITAS+Corridor".

The city's objectives in CIVITAS - ARCHIMEDES are based on the existing plans related to transport, Local Agenda 21, approved in 2002, and the Sustainable Social-Economic Development Strategy for City of Iasi. The CIVITAS Plus objectives will be integrated in the Strategy for metropolitan development to be finalized in May 2009.

2.6 Monza

Monza is a city on the river Lambro, a tributary of the Po, in the Lombardy region of Italy, some 15 km north-northeast of Milan. It is the third-largest city of Lombardy and the most important economic, industrial and administrative centre of the Brianza area, supporting a textile industry and a publishing trade. It is best known for its Grand Prix.

The City of Monza, with approximately 121,000 inhabitants, is located 15 km north of Milan, which is the centre of the Lombardia area. This area is one of the engines of the Italian economy; the number of companies is 58,500, i.e. a company for every 13 inhabitants.

Monza is affected by a huge amount of traffic that crosses the city to reach Milan and the highways nodes located between Monza and Milan. It is also an important node in the Railways network, crossed by routes connecting Milan with Como and Switzerland, Lecco and Sondrio, Bergamo and Brianza. "Regione Lombardia", which in the new devolution framework started in 1998, has full responsibility for establishing the Local Public Transportation System (trains, coaches and buses) and has created a new approach for urban rail routes using an approach similar to the German S-Line or Paris RER.

Monza has recently become the head of the new "Monza and Brianza" province, with approximately 750,000 inhabitants, so will gain the full range of administration functions by 2009. Plan-making responsibilities and an influence over peri-urban areas will require the city to develop new competencies.

In this context, the objective of the City of Monza in participating in CIVITAS as a Learning City is to set up an Urban Mobility System where the impact of private traffic can be reduced, creating a new mobility offer, where alternative modes become increasingly significant, leading to improvements to the urban environment and a reduction in energy consumption (and concurrent pollution).

2.7 Ústí nad Labem

Ústí nad Labem is situated in the north of the Czech Republic, about 20 km from the German border. Thanks to its location in the beautiful valley of the largest Czech river Labe (Elbe) and the surrounding Central Bohemian Massive, it is sometimes called 'the Gateway to Bohemia'. Ústí is an industrial, business and cultural centre of the Ústí region.

Ústí nad Labem is an important industrial centre of north-west Bohemia. The city's population is 93,859, living in an area of 93.95 km². The city is also home to the Jan Evangelista Purkyně University with eight faculties and large student population. The city used to be a base for a large range of heavy industry, causing damage to the natural environment. This is now a major focus for improvement and care.

The Transport Master Plan, to be adopted in its first form in 2007, will be the basic transport document for the development of a new urban plan (2011), which must be developed by the City subject to the provisions of the newly adopted Building Act. This will characterise the development of transport in the city for the next 15 years, and so the opportunity to integrate Sustainable Urban Transport Planning best practices into plan development during the project means an ideal match of timing between city policy frameworks and the ARCHIMEDES project.

The project's main objective is to propose transport organisation in the city, depending on the urban form, transport intensity, development of public transport, and the need for access. The process, running until 2011, will include improving the digital model of city transport that Ústí currently has at its disposal. The plan will have to deal with the fact (and mitigate against unwanted effects that could otherwise arise), that from 2010, the city will be fully connected to the D8 motorway, running from Prague to Dresden.

3. Background to the Deliverable

This deliverable summarises the activities conducted in relation to the BYPAD Cycle Audits conducted in each of the six ARCHIMEDES cities.

3.1 The BYPAD Process

BYPAD stands for BicYcle Policy AuDit. It is an instrument for cities and regions to evaluate and improve the quality of their local cycling policy. BYPAD analyses the strengths and weaknesses in current policy and provides clear indications for future improvement.

3.1.1 The Aims of a BYPAD Audit

The aim of a BYPAD audit is to develop a quality management tool which indicates the quality level of cycling policy in cities/towns or regions and prepares a Quality/Action Plan to develop this cycling policy. BYPAD regards cycling policy as a dynamic process where different components must fit together in order to get a well-balanced sustainable cycling policy.

BYPAD offers cities/towns or regions an objective monitoring tool for following up improvements of their cycling policy through the conduct of an audit. Repeated applications of BYPAD give cities/towns/regions the basis for setting out and monitoring the development of their cycling policy. For many cities the BYPAD audit is the door opener to start up improvement actions for local cycling policy.

3.1.2 Structure of a BYPAD Audit

There are 9 modules in total within the BYPAD audit, which consider the planning of cycling policy, actions in practice and the evaluation of the planning and actions within a standardised assessment framework.

Each BYPAD audit is moderated by a qualified BYPAD auditor. Before administering the main questionnaire the BYPAD auditor receives background information about the cycling policy and facts and figures about practical cycle infrastructure and bicycle use through a standard checklist. The background information covers:

- History of cycling policy
- Cycling support measures implemented
- Current cycling plans or strategies designed to increase bicycle use

The auditor is responsible for encouraging the relevant stakeholders in each location to complete a BYPAD questionnaire. Relevant stakeholders include:

- Politicians
- Officials
- User groups

Having completed the questionnaire on an individual basis, some or all of these stakeholders would be brought together by the BYPAD auditor to discuss and analyse the results in the context of the BYPAD assessment methodology. The assessment methodology is based around allocation of a score to each of 9 modules within the BYPAD questionnaire.

The entire BYPAD quality management chain consists of the following 9 modules which all together ensure a balanced cycling policy:

1. User Needs
2. Leadership & co-ordination
3. Policy on paper
4. Personnel & means
5. Infrastructure & safety
6. Information & education
7. Promotion & partnerships
8. Complementary actions
9. Evaluation & effects

The first 4 modules are combined under the heading of 'planning' and modules 5-8 are combined under the heading of 'actions'.

For every module a separate quality score is generated according to 4 levels from what is termed the 'ladder of development', where level four is the most developed. An overall score is given for cycling policy as a whole. When calculating the overall score, a weighting factor can be given to each module. The planning modules count for 35%, the action modules for 60% and the evaluation module for 5%.

Module and overall scores can be within a range of 0-4. Scores may also be expressed as percentages. For example, an overall score of 2.1 equates to 53%, and is within the lower end of the third level of development, the system oriented approach.

	Score (%)
• Level 1: Ad hoc oriented approach	1-25
• Level 2: Isolated approach	26-50
• Level 3: System oriented approach	51-75
• Level 4: Integrated approach	76-100

More information is available about the BYPAD modules and levels of development in the BYPAD manual¹.

Taken together the scores reflect the quality of the current cycling policy in a town, city or region. As a result of a BYPAD audit process, a city/ town/ region receives scores for each of the 9 modules and for its cycling policy as a whole and, most importantly given that this is part of a continuous improvement process, the end result of the process is a BYPAD Action Plan, which provides detailed guidance on how the site can improve the development and implementation of its cycling policy.

BYPAD has already been carried out by over 101 cities and 18 regions in 21 countries to increase quality, ensure quality, certify quality and compare quality. BYPAD also defines quality

¹ The BYPAD Manual is available at <http://bypad.org/docs/BYPAD-Manual.pdf>

standards by collecting information on different aspects of cycling policy in a standardised manner. Based on experiences in many cities, a set of quality standards can be created. This helps cities/towns and regions to reset their ambitions and goals with regard to becoming a better cycling city.

3.2 Summary Description Task 11.6.6

Task 11.6.6 is classed as an integrating activity for cycle policy development taking place in each of the 6 cities. The results of the BYPAD audits in each of the six cities have been compared in order to benchmark the cycling policies, not just from the perspective of a direct comparison, but more importantly in terms of a comparison of the processes which are recommended as a result of the audit for implementation to improve cycling quality and the progress made in achieving the quality goals set during the ARCHIMEDES project duration.

4. Summary of the BYPAD Audits

The following summary and synthesis is based on the information obtained during the city BYPAD audits and recorded in the individual audit reports. For more detailed information regarding a particular city's BYPAD audit, please refer to the individual audit reports which form the appendices to this deliverable.

4.1 Introduction to the conduct of BYPAD Audits in each ARCHIMEDES Site

Five out of the six cities engaged approved BYPAD auditors and audits were conducted during 2009 and 2010. The exception was Donostia-San Sebastián; since they had already conducted a BYPAD audit in 2007 they wanted to delay a follow up audit by a year to give them as much chance as possible to implement the recommendations from the original audit. Therefore Donostia-San Sebastián undertook their audit in 2011.

Within the audit summaries in section 4.2, overall scores for each city's cycling policy are noted. However, it is important to recognise that these figures are based on scores for each of the 9 modules within the audit, which vary. Scores for individual modules are considered in section 5.2.

4.2 Summary of the Aalborg BYPAD Audit

The audit included one stakeholder meeting held in March 2010 to discuss the results. The stakeholders involved were four individuals representing the city and two members of the national Cyclists Federation. The overall audit score for cycling policy was 81.0%, which places Aalborg cycling policy overall at development level 4, integrated approach. Another stakeholder meeting was held in April 2010 to consider actions arising from the audit. Based on the audit results it was decided to prioritise certain areas for action. The audit report included a draft Action Plan setting out actions relating to each of these focus areas.

4.3 Summary of the Brighton & Hove BYPAD Audit

The audit incorporated a stakeholder meeting held in January 2010 to discuss the results. The stakeholders involved were two officers representing the city and two individuals representing users (cyclists). The overall, weighted audit score for cycling policy was 2.0 or 50.9%. This means that Brighton & Hove cycling policy overall falls on the borderline between development level 2, isolated approach and 3, system orientated approach. A second stakeholder meeting was held in March 2010 to consider the Action Plan. The audit report contained the Plan which sets out actions associated with each of the modules covered by BYPAD.

4.4 Summary of the Iasi BYPAD Audit

The audit included a stakeholder meeting held in August 2010 with two sessions to a) gather information and visit the local cycling infrastructure and b) discuss the audit results. The stakeholders involved were two ARCHIMEDES project staff, two city councilors, the head of the city Architecture Institute and two staff from a non-profit, non-governmental organisation that promotes sustainability, local businesses and traditions, and assists with environmental issues. The overall, weighted audit score for cycling policy was 1.6 or 40.9%, which places Iasi cycling policy overall at development level 2, isolated approach. At a third session of the stakeholder meeting an Action Plan was proposed. This Plan was incorporated in the audit report, outlining actions relating to each of the modules covered by BYPAD.

4.5 Summary of the Monza BYPAD Audit

The audit included a stakeholder meeting involving politicians, technicians and citizens. The overall audit score for cycling policy was 2.0 or 49.4%. This means that Monza cycling policy is at development level 2, isolated approach. The audit report incorporated an Action Plan.

4.6 Summary of the San Sebastián BYPAD Audit

The follow up audit brought together politicians, technicians and cyclists. The overall score for cycling policy was 69.6%. This means that San Sebastián cycling policy is at development level 3, system-oriented approach. The overall BYPAD audit score has increased from 67.9% arising from the original audit in 2007. The follow up audit report contained an Action Plan outlining actions associated with each of the modules covered by BYPAD. The report also compared module results from the initial and follow-up audits, and included a conclusions section identifying strengths and weaknesses of local cycling policy.

4.7 Summary of the Ústí BYPAD Audit

The audit included stakeholder meetings involving city politicians, responsible authorities, officers and cyclists. There were three meetings, the first being held in September 2009 to review current cycling policy and the BYPAD aims and process, the second being held in November 2009 to discuss the audit results, and the third being held in April 2010 to develop an Action Plan. The overall audit score for cycling policy was 27%, which places Ústí cycling policy overall at development level 2, isolated approach. The audit report incorporated the Action Plan specifying actions relating to each of the modules covered by BYPAD.

5. Benchmarking of BYPAD Audits within ARCHIMEDES

5.1 Comparison and Summary of Background Cycling Data

5.1.1 Aalborg

The audit report notes that, since 1994, Aalborg has focused on increasing the share of journeys undertaken by bicycle, particularly in relation to short trips. Cycle traffic increased over 2001 to 2009. As of 2007, 15% of all trips in Aalborg were taken by bicycle.

The city currently has a total of 413 km of cycle paths and lanes, and it is planned to expand the network by another 50 km by 2020. Aalborg is currently building an overview of the number of cycle parking facilities in the municipality and has drawn up cycle parking guidelines for use in new developments or redevelopments.

Cycling strategies are incorporated in the following municipal plans/strategies: the local plan 2005-17, sustainability strategy 2008-11, the municipal Traffic and Environmental Action Plan 2009, and policies on rural areas and health, both dating from 2007. A municipal Cycle Path Action Plan was also elaborated. The city regularly interacts with the local division of the Danish Cyclists Federation, schools and traffic planners on cycling issues. User surveys which covered cycling were conducted in 2005 and 2008. There is also monitoring of registered traffic accidents involving cyclists.

The audit report also refers to the following specific cycling projects and campaigns in Aalborg (in addition to BYPAD):

- a nationally funded Aalborg Cycle City project, focusing on high-grade commuter routes, road safety and ITS solutions
- free use of bicycles from pools in the city (an ARCHIMEDES measure)
- establishing a cycle commuter route between city centre and university a cycle commuter route (an ARCHIMEDES measure)
- an online cycle route planner covering the entire municipality
- a number of safety campaigns
- cycling campaigns aimed at schools (an ARCHIMEDES measure).

5.1.2 Brighton & Hove

The audit report indicates that work on assessing modal split by journeys to work within the city shows high levels of cycling amongst the organisations surveyed. However, since this process only recently started, it is too early to report figures. There has been a 50% increase in cycling since 2000.

Cycling strategy is referred to in the Local Transport Plan 2006-11. A key aspect of the cycling strategy is that Brighton & Hove is a nationally funded Cycling Demonstration Town. Together with local match funding, this has enabled the local authority to deliver a range of measures designed to get more people cycling, more safely, more often. Through the Cycling Demonstration Town programme, the city works with employers and schools. Various user surveys are conducted which cover cycling, e.g. behaviour and attitude survey every two years. Automatic cycle counts are undertaken continually with manual counts conducted quarterly. A parked cycle count is conducted twice yearly in the city centre.

The audit report also refers to the following specific cycling projects and campaigns which are part of the Cycling Demonstration Town

- a Cycle Freeway Network
- a range of infrastructure improvements, including the radical redesign of certain streets, the refurbishment and extension of the seafront cycle route, and developing plan to improve cycle access and facilities at Brighton rail station
- new cycle parking at certain workplaces and schools
- cycle training for 1,300 school pupils annually
- installation of an interactive unit displaying daily information about the number of people using bikes to travel around the city (an ARCHIMEDES measure)
- a large-scale Personal Travel Planning (PTP) programme, delivered to 30,000 households since 2006, with an aim to reach a further 15,000 households (also supported through ARCHIMEDES). The focus has been on the health benefits of cycling, supported by events such as guided bike rides.

In addition to BYPAD and the PTP, Brighton & Hove is implementing the following ARCHIMEDES measures specifically related to cycling:

- a scheme to tackle cycle theft
- a scheme to give cyclists priority at various intersections along the city's cycle network.

5.1.3 Iasi

The audit report notes that, so far, there are no official, centralised data on the level of bicycle use in Iasi because there is no specialised structure within the municipality to provide such data. However, a school/university travel survey carried out in 2010 indicated that 0.5% students regularly used the bike for travel between home and school/university.

Strategy regarding creation of cycling routes is taken into account within certain projects within the Integrated Development Plan for Growth Pole of Iasi (PIDPC). The city works with schools to promote cycling in the context for school/university travel plans (another ARCHIMEDES measure). School and university travel surveys which covered cycling were conducted in 2010. Based on the survey results the school/university travel plans contain various actions relevant to cycling, e.g. increasing the number of students travelling by bicycle, improving the health of young people, ensuring safe travel to schools, setting up cycle lanes and planning in schools/universities.

The audit report also refers to the following specific cycling projects and campaigns in Iasi (in addition to BYPAD):

- a cycling centre run by the Green Revolution Association and a bank under the Ministry of Environment and Forests, and supported by the municipality. The centre offers free use of bicycles
- 10 km of cycle routes are being introduced in the city, including parking at strategic locations. The new facilities are being supported by a promotion campaign to encourage citizens to take up cycling (an ARCHIMEDES measure).

5.1.4 Monza

The audit report indicates that modal split data was collected in 2003. The proportion of trips made by bicycle in the city centre and outer ring were 9% and 1% respectively. However, it is noted that modal split data for cycling may have been underestimated, while car modal data share may have been overestimated.

Monza has a considerable demand for cycling, especially in the central district and in specific locations, e.g. the train station. There is a network of bikeways which is still incomplete, but serves a number of connections and offers some quality routes. Within the city, there is also an identifiable system of residential areas, located away from major traffic, which could encourage the use of bicycles. Currently there is no specific plan for cycling mobility, although Monza has undertaken a study of cycling strategy to identify suitable actions to implement regarding cycling mobility (an ARCHIMEDES measure).

5.1.5 San Sebastián

The audit report notes that in 2001 the modal split for San Sebastián included 6% in an 'other' category which incorporated cyclists. There were 6,459 cyclists at that time. By 2010 the number of cyclists had risen to 12,278, a 90% increase.

The overall length of the bicycle lane network doubled between 2007 and 2010, and is currently 47 km. There are 6.5 km of lanes in streets where traffic calming measures have been implemented. The most important infrastructural developments in recent years few years are extending the network to outlying and hilly neighbourhoods taking advantage of new vertical

means of transport (an ARCHIMEDES measure) and adapting an old railway tunnel to meet cyclists' needs. The audit report cites a major achievement of San Sebastián cycling policy as enabling the coexistence of cycling and walking in the city's main streets, and integrating bicycle paths in pedestrian areas. There are currently 6,189 cycle parking spaces, having increased by 50% in recent years.

Cycling policy is incorporated in the Bicycle City Plan approved in 2001 and in the city's Sustainable Urban Mobility Plan 2008-14. The former plan focused on guidelines for building a comprehensive cycling network. The latter plan sets out various objectives and targets regarding growth of cycling, and improving cycling infrastructure, security and safety.

The creation of a local Bicycle Observatory in 2005 was a significant initiative. The Observatory is managed by the City Council and the Urban Cyclists Union. Its tasks are:

- managing citizens' complaints
- monitoring cycling mobility
- monitoring compliance with the measures of the Bicycle City Plan
- suggesting new initiatives to increase bicycle use
- producing reports and data about cycling in the city, e.g. an annual report, and reports about the cycle network, parking, citizens' complaints and compliance with the Bicycle City Plan.

5.1.6 Ústí

The audit report notes that in 2001, cycling accounted for 1% of trips to work. Also, in summer 2009, cycle counts were undertaken in Ústí along the main cycle route. The average number of counts on a working day was 400.

The city has 6 cycle routes, and the main one consists of several paths. 65 cycle stands are located throughout the city, most installed recently. There are also two cycle storage rooms, one by the railway stations and one in the municipality building, as well as a bike park in the area of Bukov. There is a scheme to certify facilities as being suitable for cyclists. In Ústí certified facilities comprise the information centre, zoo and several accommodations. Between April to October, on Wednesdays, at weekends and on holidays, two bus services operate that cyclists can use. These services run through attractive locations for cyclists in the city.

The Strategy for Urban Development of Ústí nad Labem for the year 2015 and the Integrated Plan for Urban Development 2007-13 both include assessment of cycling potential in the city. Further development of cycling routes is underway.

The number of cyclists involved in traffic accidents is monitored in the city, although the data are not utilised further and co-operation with local police is limited. User surveys are not regularly conducted. Road safety education for cyclists is aimed primarily at children, with regular events held throughout the year.

The audit report mentions that Ústí is undertaking cycle transport improvements supported by ARCHIMEDES. A web portal for cyclists is being developed. This will provide cycling news, detailed information about cycle routes, and information about cycling services and local points of interest for cyclists.

5.2 Comparison and Synthesis of City Audits by Module

This section compares and synthesises the results for each module from each audit report.

5.2.1 User Needs

User Needs is one of the 'Planning' group of modules. This module examines how bicycle user needs are ascertained and managed.

Table 1: City scores for User Needs module

City	Score (%)	Level of development
Aalborg	81	4, integrated approach
Brighton & Hove	70	3, system oriented approach
Iasi	38	2, isolated approach
Monza	48	2, isolated approach
San Sebastián	81	4, integrated approach
Ústí	38	2, isolated approach

Cities at development levels 3 and 4 demonstrated various ways of involving users in cycling policy and projects, and finding out about their needs. These included a Bicycle Observatory to address cyclists' suggestions and complaints, user surveys, meetings with cyclists' representatives, and evaluation of the outcome of cycling activities. However, various areas of improvement were identified, e.g. better publicity concerning cycling projects and how users could contact the local council about cycling issues, maintaining an effective cycle users forum, more engagement with certain sectors of the population such as young people and business, and involving cyclists from the start of policy/project development not just from the time decisions were made.

For the cities at development level 2, there was currently limited investigation of user needs.

5.2.2 Leadership & Co-ordination

Leadership & Co-ordination is one of the 'Planning' group of modules. This module examines the impact and commitment of politicians and chief officers on the quality of cycling policy. Attention is also paid to the existence of steering platforms and the way cycling policy is communicated with decision makers.

Table 2: City scores for Leadership & Co-ordination module

City	Score (%)	Level of development
Aalborg	88	4, integrated approach
Brighton & Hove	50	2, isolated approach
Iasi	50	2, isolated approach
Monza	54	3, system oriented approach
San Sebastián	72	3, system oriented approach
Ústí	44	2, isolated approach

The city at development level 4 demonstrated good political commitment to cycling policy, with good communication between officials and politicians, and between relevant administrative bodies.

There was also strong commitment of politicians and chief officers in the city at the higher end of development level 3. Political decisions paid attention to user needs. However, the audit

identified a need for more regular communication between cycling and other municipal departments, and the city's Mobility Advisory Board was undermined because it lacked a schedule programme.

Cities at development level 2 and the lower end of level 3 showed mixed results for this module. For one city, it was felt that there was limited integration of cycling policy within its overall transport policy and a poor appreciation of what cycling could deliver in meeting the local authority's transport objectives (this was attributed to political changes and no one political party having overall control locally). However, relations with other relevant bodies, e.g. public transport operators, were good. In two other cities, there was co-operation with external bodies, but no integrated transport system. In another city, a mobility office existed, but both experts and politicians felt there should be better strategic co-ordination of cycling activities.

5.2.3 Policy on Paper

Policy on Paper is one of the 'Planning' group of modules. This module examines how cycling policy is developed, its content and to what extent is it integrated into the broader framework.

Table 3: City scores for Policy on Paper module

City	Score (%)	Level of development
Aalborg	88	4, integrated approach
Brighton & Hove	38	2, isolated approach
Iasi	75	3, system oriented approach
Monza	50	2, isolated approach
San Sebastián	75	3, system oriented approach
Ústí	38	2, isolated approach

The cities at development levels 3 and 4 showed that cycling policy was embedded within broader local development and transport plans.

Mixed results were revealed for cities at development level 2. In one city, cycling was considered as part of the core strategy expressed in the local transport plan. However, the cycling strategy had not been updated since first prepared in 2003. Another city lacked a comprehensive cycling strategy within a broader sustainable mobility strategy at city level. In another city, cycling was included in major development documents, but there was no coherent policy for developing cycling.

5.2.4 Personnel & Means

Personnel & Means is one of the 'Planning' group of modules. This module examines how cycling policy is financed, who prepares and implements policy, and how their skills are being improved.

Table 4: City scores for Personnel & Means module

City	Score (%)	Level of development
Aalborg	96	4, integrated approach
Brighton & Hove	70	3, system oriented approach
Iasi	56	3, system oriented approach
Monza	55	3, system oriented approach
San Sebastián	83	4, integrated approach
Ústí	31	2, isolated approach

In the city at the higher end of development level 4, cycling policy was noted as being financed via municipal budgets. Specific, skilled staff worked on cycling policy who continuously developed their competencies, as was also the case in the city at the lower end of level 4. Funding for cycling policy in this city at came mainly from the municipal budget, but also from the EU.

All four cities at development levels 3 and 2 referred to fact that cycling policy was funded from number of sources, EU (including ARCHIMEDES), national, regional, and city level. There was some uncertainty over funding. One city's budget was planned on a short term basis and subject to variation. In another city, there was pressure on resources and cut backs were anticipated; therefore the city intended to continue exploiting opportunities for securing funds through partnerships such as EU projects, with cycling to be integrated more fully with other transport programmers.

Varying observations were made about staffing in level 3 and 2 cities. In two cities, there was no specific person responsible for cycling development. Another city had dedicated cycling staff, but staffing arrangements did not appear clear to external stakeholders. In another city, there were no provisions for training staff.

5.2.5 Infrastructure & Safety

Infrastructure & Safety is one of the 'Actions' group of modules. This module examines what cycling infrastructure exists and how it is maintained. Safety is given special attention. The integration of cycling with public transport and additional services is also considered.

Table 5: City scores for Infrastructure & Safety module

City	Score (%)	Level of development
Aalborg	69	3, system oriented approach
Brighton & Hove	50	2, isolated approach
Iasi	31	2, isolated approach
Monza	51	3, system oriented approach
San Sebastián	69	3, system oriented approach
Ústí	22	1, ad hoc oriented approach

The cities at the higher end of development level 3 already had major cycle routes in place. In one of the cities the network was being continuously developed; local plans encompassed cycling parking, accident data were analysed and cycle routes classified according to damage points. However, areas for improvement were identified, including infrastructure maintenance, integration of travel by cycling and public transport and accident data quality.

In the other higher scoring level 3 city, the cycle network had been significantly expanded and almost completed as foreseen in the Bicycle City Plan. However, there remained some unconnected neighbourhoods; maintenance of cycle lanes occurred but this was not systematic, traffic calming measures had been implemented recently, and accident data was analysed showing a decrease in the seriousness of accidents. Areas posing the biggest safety risks had been identified, as had solutions, but these had not been prioritised. Some challenges concerning management of cycle parking were identified.

The city at the lower end of development level 3 had some cycle tracks, but they did not form a complete network and had not been well planned. Cycle parking was insufficient.

One of the cities at development level 2 was referred to as being impermeable for cyclists. Cycle parking provision had increased over the last five years, but it was not currently possible to use public transport as a means of promoting cycle trips in a nearby national park. In both cities, it was identified that more could be done to improve maintenance and safety. (For the other city at level 2, no comments were made in the audit report regarding the results of this module.)

In the city at development level 1, cycling infrastructure was poorly developed and maintained, which could affect the safety of cyclists. The city was not connected to the surrounding cycling infrastructure and local cyclists rarely used public transport.

5.2.6 Information & Education

Information & Education is one of the 'Actions' group of modules. This module examines how citizens are informed about cycling policy, and education and training activities.

Table 6: City scores for Information & Education module

City	Score (%)	Level of development
Aalborg	71	3, system oriented approach
Brighton & Hove	38	2, isolated approach
Iasi	44	2, isolated approach
Monza	39	2, isolated approach
San Sebastián	71	3, system oriented approach
Ústí	38	2, isolated approach

All cities at development levels 3 and 2 demonstrated evidence of work with schools on road safety education.

Both cities at level 3 regularly informed its citizens about cycling initiatives. However, in one of the cities, there was no overall communication strategy, nor plan for road signage. Relevant activities in other city at level 3 included those in European Mobility Week, the website of the Department of Mobility and information campaigns on local radio stations.

One of the cities at level 2 also had no communication strategy, although communication was undertaken regarding specific projects. Another city at level 2 undertook a number of communication activities in different forms of media, e.g. regular events, billboard advertising, sustainable travel website. However, it felt that the means of publicising cycling initiatives should be diversified further. In another level 2 city, cycling information was available on the municipal website and primarily aimed at recreational cyclists.

5.2.7 Promotion & Partnerships

Promotion & Partnerships is one of the 'Actions' group of modules. This module examines how cycling policy addresses specific target groups, and co-operates with relevant partners. It considers what is being done to increase different types of cycle use.

Table 7: City scores for Promotion & Partnerships module

City	Score (%)	Level of development
Aalborg	65	3, system oriented approach
Brighton & Hove	63	3, system oriented approach
Iasi	38	2, isolated approach
Monza	38	2, isolated approach
San Sebastián	52	3, system oriented approach
Ústí	13	1, ad hoc oriented approach

For one of the cities at development level 3, the focus of promotion work was with schools, a department within the local authority and commuters in local companies. It was identified that there was limited promotion of cycling when shopping and of the health benefits. Another city at level 3 had forged partnerships to obtain funding (e.g. with a national cycling body), and with local public transport operators and the police. It had targeted municipal staff, schools, and residents via PTP. However, it was considered that more could be done to engage with young people, and with older people to promote the health benefits of cycling. The audit report of other city at level 3 referred to a decrease in promotional campaigns due to budget cuts. However, cycling was promoted indirectly in the city's overall communication policy. Also, different departments of the City Council worked in partnership to encourage cycling to work, e.g. through parking facilities in municipal buildings and company travel plans in industrial areas of the city.

In one of the cities at development level 2, promotion of cycling concentrated on home-school routes. There was little promotion of cycling within workplaces, nor for shopping or leisure trips. Better integration with train travel was highlighted as a key means of improving cycling promotion. (For the other city at level 2, there were no observations in the audit report concerning the results of this module.)

In the city at development level 1, promotional activities focused on recreational cycling and young people.

5.2.8 Complementary Actions

Complementary Actions is one of the 'Actions' group of modules. This module examines activities or decisions that can have an effect on cycle use, specifically relating to land use planning and curbing car use. It also addresses how health benefits are used to encourage cycle use.

Table 8: City scores for Complementary Actions module

City	Score (%)	Level of development
Aalborg	88	4, integrated approach
Brighton & Hove	45	2, isolated approach
Iasi	25	1, ad hoc oriented approach
Monza	58	3, system oriented approach
San Sebastián	75	3, system oriented approach
Ústí	19	1, ad hoc oriented approach

The cities at development levels 4, 3 and 2 demonstrated that various actions had been implemented to curb the use of motorised vehicles in the city centre.

In one of the cities at development level 1 cyclists, mobility was hindered by lack of signage and links to the city transport system. (For the other city at level 1, no observations were present in the audit report about the results of this module.)

5.2.9 Evaluation & Effects

Evaluation & Effects represents the single module within the ‘Monitoring’ section of the modules. This module examines how the effects of cycling policy are measured, including cycle use and safety levels.

Table 9: City scores for Evaluation & Effects module

City	Score (%)	Level of development
Aalborg	94	4, integrated approach
Brighton & Hove	63	3, system oriented approach
Iasi	41	2, isolated approach
Monza	39	2, isolated approach
San Sebastián	63	3, system oriented approach
Ústí	19	1, ad hoc oriented approach

The cities at development levels 4 and 3 both monitored cycle traffic, and analysed accident data to identify danger points for cyclists. The city at level 4 conducted pre-and post-assessments of infrastructure projects. One city at level 3 had a Bicycle Observatory which was the main assessor of data. It was suggested the methodology for cyclist counts be updated. The other city at level 3 was part of a national cycling demonstration initiative implemented in a number of urban areas. Although it contributed a good deal of data for surveys undertaken by the national co-ordinating body, it was felt that there was insufficient sharing of results with demonstration towns.

In one of the cities at development level 2 evaluation of different projects was carried out, but not in a systematic way. The level of cycle usage was assessed only sometimes, and seemed not to be taken into account when preparing cycling strategy. (For the other city at level 2, no comments were made in the audit report concerning the results of this module.)

In the city at development level one, surveys of cycle use were rare. Accident data was collected but not utilised.

5.3 Comparison of Recommendations and Action Plans

The review of the audit reports shows that Action Plans were developed and structured in different ways, and go into different levels of detail. This is due to factors such as the level of development of local cycling policy and availability of resources to implement actions. For example:

- Brighton & Hove's, San Sebastián's and Iasi's Action Plans were structured around the 9 BYPAD modules, while Aalborg's was organised by 3 focus areas based on the audit results
- Brighton & Hove's Action Plan was the only one which specified targets for increased scores in each of the 9 BYPAD modules.

In many ways it the subsequent successful implementation of the activities in the Action Plans that will determine the usefulness, or otherwise, of the BYPAD audit programme. It is intended that the process highlights not only the actions needed but also any changes to the structures needed to ensure successful implementation.

5.4 Links to ARCHIMEDES Measures and Actual Implementation

5.4.1 Aalborg

The city has an approved Cycle Path Action Plan that extends until 2020 and includes the basis for cycle traffic planning in the next 4 years. Therefore the BYPAD process and the recommendations are seen as complementing this plan. Many of the more strategic actions identified in the BYPAD audit report relate to some of the already planned initiatives within the Cycle Path Action Plan.

Some of the actions in the BYPAD Action Plan are on a lower level, more practical and relate to how cycle planning is conducted on an everyday basis. A range of these initiatives have been implemented directly, for instance some of the actions regarding the focus area of co-operation and involvement. Therefore the BYPAD process revealed initiatives that were valuable and easy to implement.

Aalborg has 4 ARCHIMEDES measures directly related to cycle planning:

- school cycling campaigns (measure 29, task 4.1)
- commuter travel plans (measure 30, task 4.2)
- cycle motorway (measure 51, task 6.1)
- city bike scheme (measure 52, task 6.2).

(Other measures, e.g. measure 43, traffic speed reduction zones, have an indirect effect on the cycle conditions in the city.)

When the BYPAD process was conducted, two measures were partly or fully implemented, and two measures were at the end of the planning phase. Therefore the BYPAD audit results were not included in the planning of the other ARCHIMEDES measures. However, the BYPAD audit report includes actions that are linked with measure 30 and measure 43 (see page 45 in BYPAD Action Plan).

5.4.2 Brighton & Hove

Since the BYPAD audit was carried out in 2010 and the audit report finalised in January 2011, Brighton & Hove City Council started to progress a number of actions and to put measures in place so that other longer term actions can be realised. The following is a summary of work already undertaken linked to certain BYPAD modules:

- **User Needs:** The City Council began refreshing its cycle strategy.
- **Leadership and Co-ordination:** The City Council has made progress with all three actions identified, although there is still some way to go. A Cycle Champion has been re-appointed (although it is not possible to demonstrate that this was completed as a result of the BYPAD) Action Plan. The City Council has actively sought communication with the two local universities, and great contacts have been obtained as a result of the work of the Council's Travel Plan Officers and Road Safety department. The Council is also investigating the use of social media to improve electronic communication between and with the two universities. A relationship is being forged with the South Downs National Park Authority, through attending meetings with the Local Access Forum and developing interchangeable strategies.

The ARCHIMEDES measures in Brighton & Hove that are cycling focused are:

- Bike Off anti-theft scheme (measure 45, tasks 5.4 and 11.5.1)

- cyclist priority (measure 55, task 6.5)
- cycle counters (measure 71, task 8.5), which is linked to the PTP initiative (measure 31, task 4.3, and measure 71, task 8.4).

These measures were planned largely before or during the BYPAD audit process, so it is felt that there are limited links. However, it is anticipated that projects such as those pursued through CIVITAS will benefit from the BYPAD process in future and after there has been sufficient time to implement the actions arising from the audit.

5.4.3 Iasi

A series of recommendations from the BYPAD Action Plan have been implemented, among them those related to infrastructure and safety (e.g. construction of a cycle route), organisation of an education and promotion campaign for cycle use, and surveys to identify needs and preferences of cyclists.

BYPAD actions are linked to 2 ARCHIMEDES measures:

- city cycle routes (measure 59, task 6.9). The actions in the BYPAD Action Plan relating to infrastructure and safety, and promotion of cycling are the subject of the activities within this measure
- school travel plans (measure 37, task 4.12). Travel plans for schools and universities provide for education and promotion initiatives aimed at students regarding using the bicycle for daily trips.

5.4.4 Monza

Monza has one ARCHIMEDES measure relating to cycling, cycle transport improvements (measure 62, tasks 11.6.5 and 6.12). This consists of planning cycling strategy to identify appropriate actions for subsequent implementation, followed by actual implementation of cycling improvements. The recommendations arising from the BYPAD audit are the same as those which have emerged from the study to plan cycling.

Monza notes that cycle transport improvements will have to involve interventions concerning cycle infrastructure, complementary services, and communication and marketing. It will also be necessary to integrate cycling within the overall transport urban system, to exploit the synergies of intermodality. All these activities will be implemented over a medium to long term timeframe, during the lifetime of ARCHIMEDES, but also in the following years.

5.4.5 San Sebastián

The BYPAD follow up audit was conducted 4 years after the initial audit and the results highlighted developments in cycling policy during this period. Measures associated with bicycle mobility are designed to make cycling a normal part of urban mobility, increasing the role it plays in both the city and its surrounding area as a result of combination with collective transport.

Progress has been made in implementing audit recommendations; the following activities were highlighted:

- the cycle lane network has been extended, to connect hilly neighbourhoods with the lowest part of the city. This development has helped increase cyclists' security
- information campaigns and cycle training courses to help promote take up of cycling
- it has been very important to co-ordinate between the different departments of the municipality and other public organisations.

The following ARCHIMEDES measures are related to BYPAD actions:

- implementation of measure 24 (task 3.5), extension of the infrastructure for cycling and walking. which is audited in the BYPAD module on infrastructure and safety. This has increased cycle lanes by more than 15 km
- measure 57 (task 6.7), vertical transport aids to support cyclist and pedestrians in a hilly terrain, has been very important in creating new cycling and walking routes connecting hilly and low areas
- measure 58 (task 6.8), a bike rental service for citizens and visitors, has been crucial in promoting cycling and intermodality, and reducing car use.

5.4.6 Ústí

The BYPAD audit recommendations have not yet been implemented. There was a change of political authorities in the city after the local elections in November 2010 and the recommendations are waiting for official approval.

It is anticipated that the Action Plan will be integrated into the city's Sustainable Urban Transport Plan (SUTP). The SUTP is part of ARCHIMEDES work package 11, research and technical development (task 11.8.9). The BYAPD audit is also linked with ARCHIMEDES measure 60, cycle transport improvements (task 6.10). Within this measure, Ústí is developing a web portal for cyclists to provide route information and advice. The BYPAD audit is published on the portal and the results will be utilised.

5.5 Reflections on the BYPAD Process

5.5.1 Aalborg

In Aalborg the BYPAD audit proved to be a valuable tool to organise a discussion about the strengths and weaknesses of cycle policy and planning. The tool enabled politicians, cyclists and traffic planners to get involved in the work. This diversity of people secured a varied perspective on cycling initiatives and a good basis for discussion. The tool offered a structured way to reflect on policy and planning, and captured the results in a suitable way.

Having this overview of cycle policy strengths and weaknesses provided a good platform for setting new goals and designing new initiatives. In the longer term, conducting several BYPAD audits with specific time intervals could be used to evaluate the city's bicycle policy.

5.5.2 Brighton & Hove

The Brighton & Hove audit report mentioned that one stakeholder who was invited to participate in audit did not do so and another started the process but then dropped out. Brighton & Hove's Walking and Cycling Officer believes that the value of the audit process depends on the stakeholders involved in the discussions agreeing the Action Plan. From the start, it is important to have an audit team that is fully committed and willing to attend all meetings, to enable the views of all representatives to be taken into account throughout the discussions. It is also important to have enough time to discuss each of the audit questions raised, to enable full exploration of issues. It is very useful to have a qualified mediator who is able to prompt individuals and to ensure they feel comfortable to speak.

The audit report noted that the report was completed at a time of considerable uncertainty about future funding for local authorities in England. Therefore the ability of city officers to predict what resources would be available in the future to support cycling policy was limited. However, the city took a constructive approach to the Action Plan, by maximising benefits for cyclists through improving existing activities, as much as seeking to undertake additional projects.

5.5.3 Iasi

Iasi reported that the BYPAD audit proved useful and effective, mainly in terms of:

- understanding and improving the quality of proposed cycling policies
- co-ordinating and organising cycling activities
- increasing the political support given to cycling measures.

5.5.4 Monza

Monza highlighted that the opportunity to share opinions between politicians, technicians and citizens who are cyclists was a good starting point to identify citizens' needs, then mediate their requests with the technical and administrative issues that a municipality has to face. However, it was also pointed out that audit results may be influenced by the presence or absence of some components of the stakeholder group. This is especially the case as far as politicians are concerned - if the major party is present and the opposition is missing, it will be easier to identify only drivers and not barriers.

5.5.5 San Sebastián

San Sebastián reported that the BYPAD audit had been useful in designing cycling policy. The first audit helped the city to know the state of its cycling policy in 2007 and an Action Plan was defined. The second audit in 2011, allowed comparison with the 2007 situation and highlighted which actions should be focused on. A new Action Plan was produced to redefine cycling policy on the way to solve some of the problems detected. This Plan will enable scheduling of actions and attempts to find funding for some actions.

It was also highlighted that the audit indicates different points of view, i.e. from politicians, technicians and cycling organisations.

5.5.6 Ústí

Ústí noted that the BYPAD audit resulted in:

- better co-operation with local cycling groups
- better co-ordination of cycling activities in the city, by setting goals and naming a person in charge of cycling activities.

5.6 Lessons Learned

5.6.1 Aalborg

Key lessons from the Aalborg audit were:

- the process itself, during which the different stakeholders have time to reflect together and combine their perceptions, is as important as the results
- the BYPAD tool offers a structured way to discuss strengths and weaknesses of cycle policy and planning, and to report results
- BYPAD offers a good platform for preparing bicycle Action Plans, establishing new goals and designing new initiatives, since it provides knowledge on the current status of cycling policy.

5.6.2 Brighton & Hove

For Brighton & Hove City Council, one of the key lessons was to ensure that actions agreed are realistic and achievable. It can be very disheartening for audit members not to see any outcomes from such a process, which required their time and effort.

5.6.3 Iasi

From Iasi's perspective, the main lessons from the audit process related to planning and prioritising long term cycling policies of cycle use (extending after completion of ARCHIMEDES), developing a complex database which provides the informational basis of these policies and the necessity of co-operating with interested external institutions.

5.6.4 Monza

Monza highlighted that the audit results showed a city trying to move towards cycling mobility, but needing a different approach. While recognising cycling improvements needed infrastructural interventions, behavioural change was seen as the key factor in achieving modal shift. Communication and dissemination activities should form the basis to change travel habits, also requiring a better offer of services and strong involvement of all relevant stakeholders for a long period of time.

5.6.5 San Sebastián

For San Sebastián, it was very enriching within the audit process to have different viewpoints of politicians, technicians and cyclists. It was particularly important to take account of cyclists' needs. The following technical lessons were also highlighted:

- the urban cycle lane network was well designed and there had been significant effort in providing parking points. The cycling network has to be secure, comfortable, well connected, and without slopes. The construction of vertical transport is an important means of solving the problem of slopes. Once network extension nears completion, maintenance must occur, and security at specific points reviewed and redesigned
- information campaigns are very important for promoting increased take up of cycling
- good co-ordination between different organisations and departments is vital to progress cycling policy effectively.

5.6.6 Ústí

Ústí commented that the BYPAD audit revealed, as expected, the city has poor conditions for cycling. It is seen as a leisure activity and will not act as a significant substitute for other means of transport in the city.

6. Conclusions and Recommendations

6.1 Main Outcomes

6.1.1 Overview of BYPAD module scores

Scores across the cities tended to be higher for the planning modules than the actions and monitoring modules, although there was considerable variation in individual city scores in each module. The largest range of scores across cities was revealed within the monitoring module on evaluation and effects.

6.2.2 BYPAD actions

It can be seen that there was some variation in the way in which Action Plans were formulated (and indeed in implementing other aspects of the audit process). Provided the approach and procedures set out in the BYPAD manual are followed, this flexibility is probably useful as it enables local circumstances to be taken into account.

The four leading cities had implemented some actions from their BYPAD Action Plans. The two learning cities had not yet instigated any actions (although they had outlined expectations

regarding implementation and were clear how actions related to other relevant ARCHIMEDES measures). It is evident that actions are being implemented over varying timeframes; for example, Aalborg so far has implemented practical actions relating to conduct of cycle planning on an everyday basis, and Brighton and Hove have put certain measures in place so that other longer term actions can be realised. None of the Action Plans as contained in the audit reports specified time schedules for actions, something which the BYPAD manual recommends.

There is evidence that in some cities, BYPAD Action Plans are feeding into/complementing other local transport/cycling plans. Differing degrees of linkage were revealed between the BYPAD audits and other ARCHIMEDES measures. In some cases other measures were already planned or put in place before BYPAD audits had finished; however, in future, ARCHIMEDES and other cycling measures might benefit from or be reinforced by BYPAD actions.

6.3.3 Usefulness of the BYPAD process

Positive observations about the usefulness of the process can be summarised as:

- provides a means of understanding and reviewing cycle policy
- facilitates co-operation with relevant stakeholders. However, some cities identified problems with this (see below)
- informs setting of new cycling policy goals
- informs co-ordination of cycling activities.

6.2 Problems Identified

When setting out background cycling data, the BYPAD audit reports focussed on qualitative descriptions of transport/development/sustainability plans and cycling plans/projects/campaigns. While this was useful, most reports provided limited quantitative data regarding cycling mode share and levels of cycling traffic, and in different formats - although in these cases it was reported that data were unavailable or data collection had only recently started. This made comparison of background cycling data harder.

Two cities referred to not being able to secure representation of all relevant stakeholders throughout the audit process. This could affect the audit outcome, and problems concerning stakeholder commitment to the process may be exacerbated if the Action Plan agreed is not realistic.

6.3 Recommendations

While it is sensible for there to be some flexibility regarding conduct and reporting of BYPAD audits at different locations, it may be useful to provide more guidance on audit report format. This may be particularly helpful where a number of audit reports are being compared and synthesised (as in the case of report D11.7). The BYPAD manual includes guidance on the format of Action Plans but does not provide any other advice on the producing the audit report. For instance guidance could be issued on the type of background qualitative and quantitative data that might be incorporated in the audit report, with a suggestion that it is explicitly noted in the reports if data is unavailable.

The timing of actions contained in BYPAD Action Plans will be affected by factors such as availability of resources and local political change. It may be useful to at least estimate timescales for actions, which may help manage expectations of those involved in the audit process.

6.4 Future Plans

As indicated in section 5.4, all cities have either started or intend to instigate actions arising from their BYPAD audits. The cities generally seemed to be clear about how actions linked to other aspects of cycling policy.

This report will be circulated to all ARCHIMEDES cities and the project's Evaluation and Dissemination Managers. It will be published on the project website (http://www.civitas-initiative.org/project_sheet?lan=en&id=9). It may be useful for cities to review each other's feedback on the BYPAD audit processes, to help inform future audits and implementation of cycling actions.

This report, and in particular its recommendations, should be sent to the BYPAD Secretariat/ Platform responsible for developing the audit tool.