



CiViTAS
Cleaner and better transport in cities

ARCHIMEDES

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

Exploitation Synthesis Report

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Authors	David Blackledge, Samantha Jones
Quality Control	Ole W. Jensen, Gustav Friis
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Aalborg
Brighton & Hove
Donostia - San Sebastián
Iași
Monza
Ústí Nad Labem

1. Executive Summary

This report describes the extent to which the measures implemented in ARCHIMEDES have been exploited by the cities and local partners in terms of continuation of the measures beyond the life of the project, extension to other areas of the city and transfer to other cities and regions. The report is paying specific attention to the focused measures of the project – a total of 20 of the ARCHIMEDES 83 measures which has been selected from a range of parameters, including political priority, innovation, expected impact and transferability. All measures have been assessed locally for exploitation potential available in this report's appendices. From the 20 focused measures, 15 have been assessed with a high level of exploitation potential, 4 with a medium level of exploitation potential and only one with low exploitation potential.

Concerning *alternative fuels and clean vehicles*, all four focus measures (electrical charging points in Brighton & Hove, biofuels in Aalborg, Donostia-San Sebastian and Iasi) have exploitation potential although Aalborg will not continue using biofuels due to economic reasons. The charging points in Brighton & Hove will be expanded and will become part of a regional network. Knowledge gained in Aalborg from trials of alternative fuels will be used to investigate electric cars for the municipal fleet. The Donostia experience with biofuels has been widely disseminated to international audiences. In Iasi the use of LPG will be extended.

High Quality Bus Corridors in Donostia-San Sebastian have proved to be extremely successful. The measure will be continued and extended to other corridors in the city and there appears to be good potential to transfer the experience within the region and throughout Spain and the EU.

Demand management strategies were exemplified in ARCHIMEDES by two measures – the Clear Zone in Brighton & Hove and the extension of cycling and walking infrastructure in Donostia-San Sebastian. The latter has various elements - cycle lane design guidelines, monitoring data and promotional campaign - which are informing continued expansion of the cycling and walking network beyond ARCHIMEDES. The measure also shows potential for exploitation regionally, nationally and elsewhere in Europe. The results from Brighton & Hove's Clear Zone could inform transport planning and urban design in other cities in Europe. Both cities carried out indirect exploitation actions, by disseminating project activities, lessons and results. Dissemination occurred via various events and other media.

The *“walking bus” services* in Monza will continue after ARCHIMEDES and will be extended to other schools. Communication and promotional activities will be especially important in expanding the walking bus routes. There is potential to transfer the measure to other cities nationally and within Europe.

Innovative mobility services included the cycle motorway and city bike scheme in Aalborg and vertical transport in Donostia-San Sebastian. The city bike scheme will be continued in its present form after the end of the project. The other two measures will be expanded at city level. Aalborg's measures could be transferred elsewhere in

Denmark and "cycling cities" outside Denmark, while Donostia - San Sebastián's measure has potential for transfer to other cities in Europe.

Exploitation of *transport telematics* measures has been relatively successful. All focus measures (personalised travel information website in Brighton & Hove, public transport information for visually impaired people in Brighton & Hove, bus management system in Iași and UTC system in Monza) will continue in their current form beyond the project, while the information for visually impaired people and the Iași bus management system will be expanded to other parts of the cities. Co-funding has been obtained to support these expansions. All measures have potential for transfer nationally.

The vast majority of ARCHIMEDES measures will continue beyond the project lifetime and many will be extended to other areas of the city as a result of the positive experiences gained during the project. Most measures are transferable to other cities and a range of dissemination activities has taken place to highlight the work of the project to other cities in Europe and worldwide. A number of innovative products developed in and used by ARCHIMEDES are capable of being exploited commercially.

The CIVITAS ARCHIMEDES project has been a major contributor to the CIVITAS Initiative. The ARCHIMEDES measures and the processes followed to implement them are capable of replication in similar cities and have the potential to achieve similar impacts: positive environmental and social benefits from use of clean fuels and vehicles; progressive implementation of electromobility in cities; public transport patronage growth; increase in walking and cycling; behaviour change due to travel planning; reduction in private cars due to access control (but with significant challenges); positive impacts on safety, security and health; and effective management of urban freight movements. Each city has contributed by doing New Things or doing things in New Ways or with New Groups of people.

2. Introduction

The new cleaner urban transport economy in Europe is potentially huge. At the conclusion of ARCHIMEDES it is appropriate to review the policies, measures and tools that have been implemented during the project and to consider what plans are in place or have already been implemented by the consortium to exploit the results.

There are four types of organisations involved in the project with different target markets:

- Public authorities (scheme strategy, design, implementation and funding);
- Education and research (providing skill levels and knowledge);
- Commercial companies (provision of products, systems and services);
- Commercial consultants (policy advice, assessment and management of schemes).

In general exploitation is about using the good experiences from the ARCHIMEDES project and using them within the cities themselves beyond the timeframe of the

project, extending them to other areas of the city and encouraging the adoption of similar measures elsewhere.

To monitor the exploitation activities in a consistent way, an exploitation planning tool was developed for use by all cities. The exploitation tool was organised in an excel sheet and filled in by local dissemination managers in co-operation with measure leaders and local evaluation co-ordinators. This division of work was chosen in order to ensure integration between the specific exploitation potential and stakeholders known by the measure leader, the expected results and impacts of the measure known by the evaluation co-ordinators and suitable communication approaches known by the dissemination managers.

The exploitation tool was also used by the cities to assess the exploitation potential of each measure in the city. The assessment was carried out during 2009 and 2010 and updated in 2012. At an exploitation workshop in Monza in May 2010, all cities were explained how to assess the exploitation level of the measures and exercises were carried out. From November 2011 the templates for measure exploitations have been included in the dissemination and exploitation plan as a tool for local dissemination and exploitation managers to plan and monitor exploitation activities within the ARCHIMEDES project. The plans were updated in March 2012 and as the foundation of this report including also the possible derived future activities after the end of the ARCHIMEDES project.

This report will primarily be focussing on the focused measures of the project. Focused measures have been selected for all project work packages and in every city from a range of parameters, including political priority, innovation, expected impact and transferability. Due to this, the exploitation potential for these measures should be relatively high. From the 20 focused measures, 15 have been assessed with a high level of exploitation potential, 4 with a medium level of exploitation potential and only one with low exploitation potential.

Four different types of potential are identified:

- Specific Product – e.g. a bio-fuel product, an electric bike, traffic control system, etc.
- Service – e.g. city bike scheme, bike on the bus scheme, car sharing, etc.
- Methodology – e.g. surveys, Citizens participation, Staff exchanges, etc.
- Policy – e.g. BYPAD audit, SUTP, etc.

Detailed exploitation reports for each city are contained in the Appendices. Section 3 of the report summarises the exploitation capability of the 15 focus measures. Section 4 deals with exploitation by individual partners and stakeholders including extension of measures to other areas of the city, transfer to other cities and commercial exploitation. Section 5 highlights the contribution of ARCHIMEDES to urban transport development in Europe.

3. Exploitation by measure

Fifteen of the measures implemented in ARCHIMEDES cities were identified as “Focus Measures”. The following table shows the breakdown of these focus measures by measure category and by city.

Measure Category	Aal	BHCC	DSS	Iași	Monza	UNL	Total
Clean fuels and vehicles	1	1	1	1			4
Collective passenger transport			1	2			3
Demand management strategies		1	1			1	3
Mobility Management					1		1
Safety and Security						1	1
Car independent lifestyles	2		1				3
Urban Freight Logistics	1						1
Transport telematics		2		1	1		4
Total	4	4	4	4	2	2	20

The colours indicate the potential for exploitation assessed through the exploitation tool. Red indicates a high potential, yellow indicates medium potential and green indicates low potential for exploitation. The following sections will synthesise the exploitation reports per measure in the eight thematic categories.

3.1 Clean fuels and vehicles

Four focus measures were identified:

- Measure 1 Biofuels in Aalborg (High potential)
- Measure 2 Electrical charging points in Brighton & Hove (High potential)
- Measure 4 Biofuels and clean vehicles in Donostia - San Sebastián (High potential)
- Measure 5 Biofuels in Iași. (High potential)

The city exploitation plans (see Appendix) revealed varying degrees of exploitation of these measures. In Brighton & Hove, the electrical charging points will be expanded in the city after ARCHIMEDES finishes. It has also been possible to create a regional partnership with the aim of facilitating access to electrical charging points across south east England. In contrast, in Aalborg most elements of the measure will not continue when ARCHIMEDES ends for economic reasons, although results will be transferred to other projects.

All cities undertook indirect exploitation actions, in the form of dissemination of project activities, lessons and results. This was carried out via various events and other media. All measures show potential for transfer regionally or nationally. Donostia - San Sebastián's measure has potential for exploitation internationally.

3.1.1 Exploitation actions during the project / planned for the future

Aalborg demonstrated 50 buses and 50 postal service vehicles on at least 10-15% biodiesel, a hybrid shuttle bus and 10 electric cars used by families. During ARCHIMEDES, staff contributed expertise to another similar project, and developed requirements for including use of biodiesel in tenders for bus operation. Although the measure was successful, the municipal element will not continue in the city after the project ends due to the unfavourable economic situation. However Aalborg will utilise knowledge from the measure to investigate use of electric cars in municipal fleets. The postal service has not yet decided whether it will continue to use biodiesel. Another project demonstrating electric vehicles will exploit measure results.

Brighton & Hove installed 8 on-street electric vehicle charging points. During the project, staff transferred experience to other partner cities through site visits. After the project ends, these charging points will remain in use. It is planned to expand the number of charging points in Brighton & Hove. A partnership of relevant stakeholders has been set up in the south east. Its objective is to develop a scheme allowing access to charging points across the region.

Donostia - San Sebastián stored and mixed biodiesel, which was subsequently used in the CTSS-DBUS fleet, the urban bus operator. During the project site visits were hosted, including visits from other public transport companies from Spain, and from Mexico and Puerto Rico. An international conference *Clean Fuels, Clean Vehicles, Cleaner Cities* was organised in co-operation with BIOSIRE and CIVITAS VANGUARD. City staff also participated in the second Hybrid User Forum Bus Section workshop in the Netherlands.

Iași modified 30 buses to run on LPG and provided an LPG distribution station. This measure will continue in its current form after the project finishes.

3.1.2 Additional potential for exploitation

The tendering requirements developed by Aalborg could be exploited by other regional transport authorities in Denmark. It gives the opportunity to include clean fuel requirements in tenders for PT operation. There may be further potential for expansion of the Brighton & Hove measure, as the south east partnership for the electric vehicle charging network develops and the regional scheme for subscribing to the network is established. In Donostia - San Sebastián, biodiesel could be used in other vehicle fleets. It could also be used by public transport operators in other cities in Spain and elsewhere in Europe. Petrol stations in the city and the wider region could purchase mixing equipment to offer biodiesel. There is potential to use LPG in buses and petrol stations in other cities within Romania. In general warranty issues in relation to vehicles can be a hindrance to realise the potentials. In order to avoid this action at EU level could be required.

3.1.3 Activities undertaken to ensure exploitation

In Aalborg activities comprised interaction with other relevant projects, specification of tendering requirements and dissemination through several events. These included

a meeting with a consultant working on the tendering process for buses in Mid Jutland.

Brighton & Hove co-operated with other stakeholders in the south east to form a regional partnership. Dissemination activities were undertaken at various high profile events, on municipal websites, in magazine articles and via a film. Additionally the electric vehicle charging points were registered with the national electric vehicle network which provided an online directory of charging points.

Donostia - San Sebastián liaised with other stakeholders including public transport operators. The city also disseminated the measure via a number of events, press coverage and a promotion campaign about recycling cooking oil for biodiesel production.

Iasi disseminated the measure via ARCHIMEDES publications.

3.2 Collective passenger transport

Three focus measures were identified:

- Measure 12 Improved Ticketing in Iasi (High potential)
- Measure 13 Video Surveillance System (High potential)
- Measure 16 High Quality Bus Corridors in Donostia - San Sebastián (High Potential)

In San Sebastian, The city will exploit this measure beyond ARCHIMEDES, through introduction of more high quality bus corridors. There also appears to be good potential to transfer the measure regionally and to other cities in Spain. City staff interacted with stakeholders from other cities to support this. Further transfer to other medium sized European cities with ambitions to improve their PT network seems likely.

In Iasi, two measures have been identified as focused measure with a high level of exploitation, primarily in the local, regional and national context. Iasi has implemented 10 ticketing vending machines in the city and set up a video surveillance system in Public Transport vehicles to reduce fraud and crime and to increase the safety of passengers.

3.2.1 Exploitation actions during the project / planned for the future

Within this measure the ambitious UNE EN-1313816 quality standard for public transport was implemented in two main urban corridors (lines 5 and 28). During the project site visits were hosted, including visits from other public transport companies from Spain, and from Mexico and Puerto Rico. Donostia - San Sebastián also liaised with a number of other Spanish cities who showed interest in the measure. These include Pamplona, Gijón, Vitoria, Barcelona, Madrid, Valencia, Málaga, Santander, Lleida, Granada, Bilbao and Palma de Mallorca. In the years following the ARCHIMEDES finish, CTSS DBUS will work to extend the high quality bus corridor standards to other lines. It will concentrate on improving service frequency, introducing more articulated buses, and implementing further bus priority measures.

During the project, analyses to determine the benefits of the measures have been carried out and the evaluation reports are being finalised. The results from the measures in Iasi have been presented in ARCHIMEDES publications and news.

3.2.2 Additional potential for exploitation

There is potential to transfer this measure to intercity buses operating in the region, particularly as they use some of the same technologies as CTSS-DBUS. As noted above a number of other Spanish cities are already interested in the measure. The surveillance camera system utilised could also be implemented in taxis and police vehicles.

At first, local partners in Iasi can investigate an extension of the measures in the city.

3.2.3 Activities undertaken to ensure exploitation

The city of San Sebastian liaised with other stakeholders including public transport operators and other Spanish municipalities. The measure was disseminated via events and publications both nationally and within Europe.

3.3 Demand management strategies

Three focus measures were identified:

- Measure 21 Clear Zone in Brighton & Hove (Medium Potential)
- Measure 24 Extension of the infrastructure for cycling and walking in Donostia - San Sebastián. (Medium Potential)
- Measure 28+67 Noise reduction and efficient goods distribution in Usti nad Labem (High Potential)

The Donostia - San Sebastián measure has various elements - cycle lane design guidelines, monitoring data and promotional campaign - which are informing continued expansion of the cycling and walking network beyond ARCHIMEDES. The measure also shows potential for exploitation regionally, nationally and elsewhere in Europe. The results from Brighton & Hove's Clear Zone could inform transport planning and urban design in other cities in Europe. Both cities carried out indirect exploitation actions, by disseminating project activities, lessons and results. Dissemination occurred via various events and other media.

In Usti nad Labem, the aim is to reduce traffic noise, including noise made from freight vehicles in the city. The exploitation potential for the measure in order to implement measures to decrease noise is considered potentially high.

3.3.1 Exploitation actions during the project / planned for the future

The Clear Zone in Brighton & Hove comprised implementing a package of measures to control access to and movement along a specific road and nearby junction. Research was also conducted to explore the social and emotional impact of street improvement schemes on different user groups. It is uncertain whether the Clear Zone will continue after ARCHIMEDES ends or whether similar zones will be implemented in other parts of the city. However during the project many dissemination activities were undertaken to support exploitation of project activities, lessons and results.

The extension of cycling and walking infrastructure in Donostia - San Sebastián was accompanied by classification of types of cycle lanes, definition of design and construction criteria for different types and testing a cyclist counting system used in measure evaluation. Moreover it was linked to vertical transport measures to compensate for topographic challenges. During the project a learning history workshop was organised covering several measures, including this one. The city also hosted site visits on cycling and walking for mobility professionals from other cities. After the project the cycling and walking network will continue to be extended. This will make use of the guidelines for design and construction of cycle lanes developed by the measure. It will also be informed by cycling monitoring data collected during the project. Targeted dissemination activities will be delivered to accompany the implementation of specific cycle lanes. These will build on the information campaign conducted during the measure.

Roads with the highest level of noise were identified in Usti nad Labem and measures reducing traffic noise and impact of noise on the city environment were proposed for the most affected areas. Effectiveness of individual noise reducing scenarios was assessed. Based on the noise map, a research study of traffic noise reduction in the city was elaborated and suitable solutions were recommended.

3.3.2 Additional potential for exploitation

The Brighton & Hove Clear Zone results could serve as a valuable aid to transport planners and urban designers in other towns and cities, both in the UK and elsewhere in Europe.

There is potential to extend cycling networks in other parts of Donostia - San Sebastián's region and in other cities nationally and elsewhere in Europe. It is also noted that private developers could construct cycling lanes in private areas, making use of the design and construction criteria.

3.3.3 Activities undertaken to ensure exploitation

Brighton & Hove's dissemination activities included a conference presentation, study tour, magazine articles and film.

Donostia - San Sebastián ran a learning history workshop aimed at local technical experts and mobility advisory board partners. Dissemination activities included production of maps of the cycling network, publication of monitoring data and a conference presentation.

The measure is exploitable in the city, where the municipality of Usti nad Labem will continue initiated efforts, transferring traffic from sensitive zones and applying other technical solutions, such as noise barriers, use of innovative materials preventing noise, tunnel solutions, etc.

3.4 Mobility Management

One focus measure was identified, Measure 41 School Travel Plans in Monza (High Potential). This focussed on "walking bus" services. They will continue after ARCHIMEDES and be extended to other schools. Communication and promotional activities will be especially important in expanding the walking bus routes. There is potential to transfer the measure to other cities nationally and within Europe.

3.4.1 Exploitation actions during the project / planned for the future

This measure focused on activating walking bus routes to and from four primary schools. During the project a promotional campaign was undertaken to support measure exploitation. This will continue after the project ends, as will the demonstration of walking bus services. It is planned to extend these to other schools of the city to get more children walking to school, more parents involved and further reduce traffic during peak hours.

3.4.2 Additional potential for exploitation

There is potential to develop waking bus routes in other small-medium sized towns and cities, in both Italy and elsewhere in Europe.

3.4.3 Activities undertaken to ensure exploitation

A learning history workshop was held. Promotional activities consisted of walking bus open days during which pupils not yet subscribing to this form of travel could try it out, an interactive DVD including a walking bus video and leaflet. The DVD will be sent to around 40 other small-medium sized Italian towns and cities. Exploiting the experience of the pilot schools, new subscriptions of children entering the first year of primary schools will be gained. The city will also try to recruit new parents who will participate actively in the demonstration stage, showing them the good results of the first period of implementation. Moreover, new schools will be approached to start the up scaling of the experience of the pilot schools to the whole city.

3.5 Safety and Security

Two combined measures in Usti nad Labem are defined as a focused measure with a high exploitation potential.

Measure 40 – Drive Safely Campaign in Usti nad Labem

Measure 49 - Road Safety Measures in Usti nad Labem

The aim with the measures is to reduce the amount of traffic accidents in the city and their consequences through road safety measures. The measures consisted of traffic calming measures, campaigning and education during the CIVITAS ARCHIMEDES project.

3.5.1 Exploitation actions during the project / planned for the future

During the project, traffic calming measures, road improvements and traffic education was ongoing. The education was in terms of trainings, workshops and conferences on road safety issues. After the end of CIVITAS ARCHIMEDES it is the plan to continue the initiated efforts for road safety improvements and campaigns, raising awareness about safety issues, causes and consequence of traffic accidents, periodically repetition of safety audits and inspections of frequented road sections to remove safety deficits. The activities will be within the city of Usti nad Labem

3.5.2 Additional potential for exploitation

There is potential to develop drive safely campaigns and road safety measures similar to the ones carried out in Usti nad Labem in other small-medium sized towns

and cities, in both Czech Republic and elsewhere in Europe. On national level in the Czech Republic, there is a focus on traffic safety and the results from Usti nad Labem could potentially be of interest for other cities.

Within the measure, safety improvements for schools in the city were designed. The solutions are suitable for up-scaling to other public areas, especially with frequent flow of children and other vulnerable road users.

3.5.3 Activities undertaken to ensure exploitation

Recommendations were included in the action plan for future implementation within the SUTP of Ústí nad Labem. To support its activities, the CIVITAS team participated at the international conference on Safe Transport in Prague, promoted campaign events through local media, including newspaper, radio, local TV and the Facebook page. All campaign activities were supported by distribution of safety gadgets and attractive educational materials, and promoted via various media.

3.6 Innovative mobility services

Three focus measures were identified:

- Measure 51 Cycle motorway in Aalborg (High Potential)
- Measure 52 City bikes in Aalborg (High Potential)
- Measure 57 Vertical transport in Donostia - San Sebastián. (Low Potential)

Measure 52 will continue in its present form once the project finishes. The other two measures will be expanded at city level. Aalborg's measures could be transferred elsewhere in Denmark, while Donostia - San Sebastián's measure has potential for transfer to other cities in Europe. Aalborg engaged in knowledge transfer and dissemination activities to support exploitation.

3.6.1 Exploitation actions during the project / planned for the future

The Aalborg cycle motorway is a high quality cycling commuter route, connecting the city centre and the University. During the project similar routes were developed on two other stretches in the city. Measure knowledge and experience was transferred at European level, and additional dissemination activities took place to assist exploitation. These routes will be maintained after the project finishes. It is also intended to continue development of other commuter routes in the city Aalborg also implemented a bicycle sharing scheme with 21 stations and 200 bicycles. During the project the city advised other interested municipalities about scheme development, implementation and results. Dissemination of the measure was also undertaken. Aalborg's scheme will continue in its present form beyond ARCHIMEDES.

Within Donostia - San Sebastián's vertical transport measure analysed existing vertical transport and identified possible locations for new lifts, ramps and escalators. Subsequently new vertical transport facilities were installed at various locations. After the project, more lifts and escalators will be constructed according to the city's Vertical Transport Plan.

3.6.2 Additional potential for exploitation

Both the Aalborg cycle motorway and bicycle sharing measures could be applied in other parts of Denmark. An innovative bicycle was produced especially for the

sharing scheme and this has commercial potential. There is scope to apply vertical transport measures in other cities with hilly terrains. The methodology used to analyse existing provision and propose further interventions in Donostia - San Sebastián could be adapted by other cities in Europe.

3.6.3 Activities undertaken to ensure exploitation

Aalborg contributed expertise about the cycle motorway to a European workshop. The output was a publication on best practices in Europe for citizen engagement. Dissemination activities comprised magazine articles, contributions to a webinar, and website publicity. Aalborg also disseminated the bicycle sharing scheme at a workshop in Croatia.

3.7 Urban Freight Logistics

One measure is defined as a focused measure – Measure 63 Environmental Zone in Aalborg (High Potential). Aalborg has implemented an environmental zone (low emission zone, LEZ) in the city centre, bounded by the ring road and by the fjord.

This project developed in the framework of Danish National legislation, wants to reduce emissions and pollution derived from goods distribution and buses within the city centre. Only HGV and buses (>3.5 tonnes) that comply with the standards are allowed to drive in the zone.

3.7.1 Exploitation actions during the project / planned for the future

The environmental zone in Aalborg has been implanted with support from local stakeholders making it possible to actually set up some strict regulations without any problems at all.

The process with working with stakeholders, being the city commerce association, the postal service, freight operators, the harbour and freight associations has been ongoing for 11 years now and various results have been obtained. This process or methodology for implementing freight measures is the exploitable component of this measure.

3.7.2 Additional potential for exploitation

On the city level, the work with stakeholders should continue in order to ensure effective planning procedures on this field in the future. On the regional level, the process of including stakeholders to ensure effective planning procedures in the field of freight distribution could be transferred to other cities in the region. However, freight is not a major concern for the smaller municipalities in the region. (Aalborg being the biggest)

Other major cities in the country, e.g. Aarhus, Odense and Copenhagen are also working with freight and could apply the methodology to their planning processes. The process is also transferable to other cities in Europe.

3.7.3 Activities undertaken to ensure exploitation

During the project, the development of a heavy traffic strategy is ongoing, paying special attention to process and process strategy. This document will be disseminated and hopefully other cities will see the benefit of the way of organising work.

Providing information to other cities in Europe on the impact evaluation of the zone. I.e. Aalborg has provided the evaluation results to City of Newcastle, UK and the IEE project C-Liege.

Entry about low emission zones are for a Civitas Workshop in Rotterdam on CO2-free city logistics in October 2012. This also provided input to the European Commission for the work with the proposal for urban freight plans, which will be issued in 2013.

3.8 Transport telematics

Four focus measures were identified:

- Measure 71 Personalised travel information website in Brighton & Hove (Medium Potential)
- Measure 72 Public transport information for visually impaired people in Brighton & Hove (Medium Potential)
- Measure 76 Bus management system in Iași (High Potential)
- Measure 81 Urban traffic control (UTC) system in Monza. (High Potential)

Exploitation of measures in this field has been relatively successful. All measures will continue in their current form beyond the project, while measures 72 and 76 will be expanded to other parts of Brighton & Hove/Iași. Co-funding has been obtained to support these expansions. Most cities undertook indirect exploitation actions, in the form of dissemination of project activities, lessons and results. This was undertaken through various events and other media. All measures have potential for transfer nationally.

3.8.1 Exploitation actions during the project / planned for the future

Measure 71 in Brighton & Hove focused on creating a mobile version of the City Council's travel information website, "JourneyOn". During the project the measure was disseminated to support exploitation. This measure will continue after the project ends.

Brighton & Hove also installed audio devices at 12 bus stops with real time information (RTI) displays. These devices relay the RTI to visually impaired people. The measure also funded 200 key fobs used to operate the system. During the project dissemination activities were carried out to encourage exploitation. This measure will continue beyond ARCHIMEDES. It will be extended to other bus stops in the city.

Iași's bus management system was applied to 36 trams and 64 buses. It will continue after the project ends. The system will be expanded across the entire city public transport network via a new traffic management system project.

In Monza, the UTC was applied to eight important intersections, and traffic light plans were managed to improve the flow on several critical routes. The UTC also enabled public transport priority management which was addressed in another ARCHIMEDES measure (82). During the project, staff took various steps to disseminate the measure, which aided exploitation. The measure will continue in its current form after ARCHIMEDES ends. The municipality is to evaluate the feasibility of extending the

UTC system to other areas of Monza. Staff will also liaise on exploitation with colleagues leading the provincial mobility plan.

3.8.2 Additional potential for exploitation

Although Brighton & Hove's "JourneyOn" will continue beyond ARCHIMEDES in its present format, it is unclear whether its functions will be enhanced. This is dependent upon available funding. There is potential for other UK local authorities to apply the measure. Brighton and Hove's "talking bus stops" could potentially be transferred to other cities in both the UK and elsewhere in Europe.

There is potential to transfer Iași's bus management system to other cities in Romania and elsewhere in Europe. Possibly it could also be adapted for rail transport or other service sectors.

In Monza, there is potential to use the UTC to address new requirements that could emerge from measure 82, public transport priority. Potentially the UTC are relevant in most cities where traffic levels causes problems at intersections.

3.8.3 Activities undertaken to ensure exploitation

Promotion and continuation of "JourneyOn" are part of Brighton & Hove City Council's core work programme. Funding for future expansion of Brighton & Hove's "talking bus stops" has been secured from the national government through the Local Sustainable Transport Fund (LSTF).

Dissemination activities for the two Brighton & Hove measures included a film, presentation at the CIVITAS Forum in 2012 and other events, and promotion at European Mobility Week 2010.

Analyses of the efficiency and benefits of the bus management system were undertaken in Iași. Financing for future expansion of the system has been obtained from the EC under the Regional Operational Programme.

Monza disseminated the results of the UTC system measure through workshops, including a meeting with other cities. The UTC system also featured in the interactive DVD referred to in section 3.4.3.

4. Exploitation by stakeholders in each city

4.1 Extension of measures to other areas of the city

4.1.1 Aalborg

Nearly all of Aalborg's 15 measures will at least continue in their current form. The exception is the use of alternative fuels in buses and domestic electric cars. However, knowledge from the measure will be exploited when investigating use of electric cars in municipal fleets.

Eight measures, relating to collective transport/intermodal integration, behavioral change, safety/security and cycling, have already been or will be extended to other city areas. Many of these measures also have an intelligent transport systems component:

- the travel smart card, updated travel information websites, mobile 'phone travel information and on-bus travel information already cover the entire city. The types of information offered by the on-bus system will be expanded
- the parking information system will be extended to new areas during the coming years
- the school cycling campaigns will continue. This work includes leaflets for all the schools within the municipality giving directions on the safest way to specific schools. In addition, school road analyses have resulted in a number of infrastructure projects being implemented at the schools in 2012 and more are planned for the coming years
- the cycling commuter routes have already been applied on two other stretches in Aalborg and other routes will be developed after the project finishes.

4.1.2 Brighton & Hove

Most of Brighton & Hove's 13 measures will at least continue in their current form. The exceptions are emissions variable message signs (VMS), car clubs and the Freight Quality Partnership (FQP). The VMS were installed in three primary schools. Although this was covered by a contract with Imperial College which has now ended, Brighton & Hove City Council will continue to work with schools to promote sustainable travel. The car clubs measure was intended to cover more socially disadvantaged and less populated areas. It was formally cancelled as it was not seen as viable by the operators, mainly due to economic reasons. However, the City Council will continue to encourage car clubs in viable locations in Brighton & Hove. If their core market becomes saturated, it is likely that the originally planned work will be supported by the Council outside ARCHIMEDES. Freight stakeholders proved difficult to engage through the FQP. Alternative methods of engagement will be considered, including via wider public consultation on amendments to traffic regulations.

Nine measures have already been or will be extended to other city areas. These cover a range of fields - clean vehicles, collective transport/intermodal integration, behavioural change, safety/security, cycling and telematics:

- it is planned to expand the number of electric vehicle charging points
- the multi modal smartcard ticket system has already been applied with the main local bus operator which comprehensively covers all areas of the city. The system will be extended to the main local rail operator. It is also planned to provide further promotional materials and enhance the ticket range
- support for commuter, school and personalised travel plans will be expanded via the City Council's core work programme and a four year LSTF project
- road safety will continue to be promoted. There will be expansion of engineering measures to enhance road safety. These activities will be financed through the City Council's core work programme and the LSTF project
- cycle security/safety and infrastructure will continue to be promoted through the Council's core work programme

- the “JourneyOn” mobile travel information website already covers the entire city and will continue to be promoted
- the “talking bus stops” will be extended to other areas of the city, funded through the four year LSTF project.

4.1.3 Donostia - San Sebastián

Most of Donostia - San Sebastián’s 18 measures will at least continue in their current form. 12 measures have already been or will be extended to other city areas. These cover a range of fields - alternative fuels/clean vehicles, collective transport/intermodal integration, behavioural change, safety/security, cycling, freight and telematics:

- other local fleets could change to using biodiesel. Private petrol stations could purchase mixing equipment to offer any blend
- the city bus operator plans to extend the high quality bus corridor standards to other lines
- introduction of a shuttle bus in one new industrial area as a pilot is under consideration
- a promotional campaign for new parking schemes will be launched which will cover the entire municipality. A new parking meter network will be extended to both new parking regulation zones and other city districts. In addition, the main business areas of the municipality will be part of a new regulation study area that will cover 15% of their parking surface. Within these business areas new ways to reduce the pressure on parking could be addressed, for instance through travel plans. The continuous monitoring of the parking system has suggested restructuring of certain parking rates, Furthermore there are plans to extend the high occupancy vehicles zone close to universities
- the cycling and walking network will continue to be extended in Donostia - San Sebastián
- the workplace travel plans measure could be applied to other business districts
- it is intended to gradually extend travel plans to all schools in the city. A specific methodology will be developed to help incorporate cycling routes to school, especially at the stage of secondary education
- more lifts and escalators will be constructed according to the city’s Vertical Transport Plan
- the municipality will seek funding to build a second urban freight consolidation centre in another area of the city. This would be served by the Txita Cargobikes utilised in the ARCHIMEDES measure
- the city bus operator will continue implementing real-time information panels at bus stops. It is expected that in 2012 the number of bus stops with this panel will reach 100 stops (approximately 20 % of all bus stops in the city). Also, the information system via SMS is expected to be expanded to the whole network. Increased functionalities will be added to the mobile version of the travel information website
- the bus management system already covers the entire city network
- although there are no future plans to enlarge the parking guidance system in the short term, the information provided by it is continuously under review to improve its usefulness.

4.1.4 Iași

All of Iași's 15 measures will at least continue in their current form. 10 measures have already been or will be extended to other city areas. These cover a range of fields - collective transport/intermodal integration, behavioural change, safety/security cycling, freight and telematics:

- it is intended to create new bus links similar to the one that transports Romany school children from Ciurea village to the city centre
- Iași plans to install more ticket vending machines (TVMs) in various zones of the city, their locations to be determined using the same main criteria when locating the TVMs provided during the project
- it is hoped to extend the video surveillance system, contributing to increase in passenger safety across the entire public transport fleet. This system will be integrated with the new traffic management system project, to be implemented across the city in the next two years
- Iași envisages extending the access control scheme implemented in the historic city center to other city areas, based on traffic levels associated with them
- the programme to educate about and promote sustainable transport already covers the whole city. It will continue after ARCHIMEDES ends, focusing on public transport
- the public transport user forum is already open to people across the city. It will continue beyond the project
- Iași will continue to maintain school travel plans and continue to educate pupils about sustainable transport
- city cycle routes will be extended forming a network with a total of 50km of routes. This will be supported by other European projects
- Iași hopes to form partnerships with freight stakeholders in other large commercial areas of the city to increase the efficiency of goods distribution
- Iași's bus management system will be extended across the whole urban public transport network, linked to the new traffic management system project.

4.1.5 Monza

Most of Monza's ten measures will at least continue in their current form. It is not yet clear whether a real Demand Responsive Transport Service (DRTS) will be implemented, as a needs analysis has to be carried out first. Seven measures will be or are likely to be extended to other city areas. These have an emphasis on telematics, which partly reflects the coverage of the measures as a whole:

- the school travel plans measure will be expanded by promoting further take up of the "walking bus" service
- it is intended to extend provision of cycle routes and other facilities such as parking. The city government has approved a Bike Plan and a document which contains criteria for construction of cycle routes
- the bus management system is integrated with the measures covering improved traveller information, UTC and public transport priority. Real time data from the public transport fleet could be used to find alternative routes to alleviate congestion during peak hours. This measure involved one public transport operator. There is potential to extend this and the improved traveller information measure to cover management of data related to other public transport fleets in the city. Other public transport companies have already been approached about this. The improved traveller information measure provided RTI at 30 key bus stops and the main interchange in Monza The

implemented technological framework was designed to host other functionalities that could be implemented in future, such as software applications to provide information through SMS and online, and on-bus information screens

- Monza will evaluate the feasibility of extending the UTC system to other urban areas, especially those which provide routes in and out of the city. There is potential to sue the system to manage traffic associated with specific events e.g. at the racetrack. New requirements will also emerge from the public transport priority measure. It is hoped to implement this measure at other sets of traffic lights on intersections served by public transport routes
- the parking guidance system provides RTI about occupancy of certain parking areas in the city. Companies that build new parking areas will be obliged to provide data on occupancy rates and information panels connected to the existing scheme.

In addition, the car sharing scheme was extended until December 2012. According to the number of new subscriptions, it will then be evaluated whether to increase the number of available cars in the city and launch other marketing initiatives, such as communicating through social networking channels.

4.1.6 Ústí Nad Labem

All of Ústí Nad Labem's ten measures will at least continue in their current form. All measures have already been or will be extended to other city areas. These relate to demand management, behavioural change, safety/security, cycling and freight:

- the short term parking and strategic traffic management schemes already appear to cover the main parts of the city. Ústí will monitor compliance with the short term parking scheme and envisages further promotional activities. In continuing the traffic management system, the city intends to take account of further developments in ITS
- the city centre access control measure will be linked to public transport improvements. Its future success is dependent on completion of the highway D8 in the coming years. This leads from Prague to Dresden, passing the city, and can be utilised by transit traffic instead of passing through the city centre
- the city map of noise generated from traffic will be used to inform noise reduction measures such as noise barriers, tunnels and use of materials that prevent noise. Moreover it a useful tool in planning of future urban development to prevent increases in noise affected dwellings
- the public transport promotion, drive safely and road safety campaigns already cover the whole city. It is intended to build on campaign results to encourage further take up of public transport and further improve road safety. Public transport promotional activities will mainly be continued by the Public Transport Company of Ústí, while training will be performed by the Municipal Police. Existing information and training materials will be further distributed and utilised. Public transport measures will be incorporated into the Action Plan for Public Transport Improvements within the Sustainable Urban Transport Plan. Road safety audits will be repeated periodically and safety problems addressed
- the mobility improvements measure provided a web portal of barrier-free routes for citizens with mobility restrictions. It also identified mobility barriers on other important access routes. The city aims to remove these barriers and will continue to update the web portal

- the cycle transport improvements measure provided a web portal for cyclists. This will continue to be updated. The feasibility of connecting two existing major cycle routes of cross-regional importance was also assessed and an implementation plan proposed. Subsequently new sections of cycling infrastructure are planned, as well as their interconnection with the existing network. This is dependent on securing political and financial support
- Ústí will continue to support efficient goods direction through application of traffic management and noise reduction solutions. This measure is therefore integrated with the city's demand management measures.

4.2 Transfer to other cities

4.2.1 Aalborg

There is potential to transfer most of Aalborg's measures to other cities. Aalborg has supported this by undertaking a range of activities to disseminate measures locally, nationally and at European level. There are ten measures where specific opportunities have been identified, mostly for transfer nationally. These cover a range of fields:

- requirements for including use of biodiesel in tenders for bus operation are available for exploitation by other Danish cities. Regional public transport authorities are responsible for tendering, the process for which is the same for all authorities
- the travel smart card is part of a national plan. It will be implemented across Denmark once ARCHIMEDES ends, drawing on Aalborg's experience
- the travel information websites could be transferred to other regional online traffic portals in Denmark, including the personalised function MinTrafik. At present there are three similar portals all provided by the Danish Road Directorate where this function could be implemented
- city staff are discussing with a Belgian NGO the possibility of exploiting the school cycling campaign concept in Belgian schools. The methodology developed for engaging with children approaching or in their early teenage years could be applied in other campaigns, e.g. on healthy eating
- a dedicated innovation workshop was held as part of the planning process for the cycle motorway. Aalborg has identified that this approach could be applied nationally and elsewhere in Europe
- another municipality in North Denmark has asked Aalborg for advice in implementing their own city bicycle sharing scheme, and other cities have contacted Aalborg to express interest
- other major Danish cities such as Aarhus, Odense and Copenhagen are working on freight. The methodology for collaborating with stakeholders in implementing Aalborg's environmental zone could be applied in these cities. The low emission zone is linked to ongoing development of a heavy traffic strategy. This will pay special attention to process issues. Once finalised the strategy document will be disseminated to other cities. Aalborg has also provided other European cities with impact evaluation results from the zone
- the mobile phone information service is already available regionally and Belgium has expressed interest in it
- the on-bus travel information system is being expanded to include other regional buses in Northern Jutland. It is expected that the system will be

exploited more widely within Denmark, as it currently exists in a limited and sporadic form in other areas

- the adaptive traffic signal control element of the congestion monitoring measure may be of interest to other major cities in the region. Other large cities in the country, such as Aarhus, Odense and Copenhagen would benefit from a congestion monitoring system including the adaptive signal control element.

4.2.2 Brighton & Hove

There is potential to transfer most of Brighton & Hove's measures to other cities. Brighton & Hove has facilitated this by carrying out a range of activities to disseminate measures locally, nationally and within Europe. There are three measures where specific opportunities have been identified, for transfer regionally and nationally. These relate to clean vehicles, collective transport/intermodal integration and telematics:

- the City Council is in discussions with neighbouring towns and cities to set up a regional scheme for access to electric vehicle charging points. This would allow people to use electric cars to travel between Brighton & Hove and elsewhere in the south east, including London
- as part of the emissions VMS measure, Imperial College developed new emissions monitoring technology. This technology will be used by the college for future research. The College's school engagement unit will also continue to operate and will offer similar programmes to other schools in the country
- there is potential to integrate the multi modal ticketing system with the London 'Oyster' multi modal ticketing system. Potential also exists to integrate tickets with other bus operators across the county of East Sussex in which Brighton & Hove is located, providing they have compatible ticket machines.

4.2.3 Donostia - San Sebastián

There is potential to transfer most of Donostia - San Sebastián's measures to other cities. The city has supported this by undertaking a range of activities to disseminate measures at local, national and European levels. There are nine measures where specific opportunities have been identified, mainly for transfer regionally and nationally. These cover a range of fields:

- both public and private bus companies could take up the biofuels measure elsewhere in Europe and further afield internationally. Site visits from several companies have already been hosted and more are planned. Within Spain, exploitation could be facilitated via the national association of public transport operators (ATUC), in which Donostia - San Sebastián plays an important role. At regional level, private stations could purchase mixing equipment to offer biodiesel blends
- the high quality public transport corridors, shuttle bus and bus traveller information measures could be adapted for intercity buses operating in the region, which use some of the same technologies as CTSS-DBUS. Donostia - San Sebastián and other cities in the region are currently working together on a project to improve business district bus services. Furthermore, a number of other Spanish cities have shown an interest in these measures. Again exploitation could be supported via ATUC collaboration

- there is potential to extend the cycling network regionally, supported by a regional plan
- car pooling software was developed during the mobility management at the university campus. This could be used by other large organisations
- Donostia - San Sebastián is the capital of its province and leads the way regionally on school travel planning. Some of the smaller provincial towns have already begun to draw on examples of good practice from Donostia - San Sebastián. The export of the school travel plan model is also possible to other cities in Europe with a similar geographical structure, i.e. a compact city with clear geographical reference points that can link citizens on a neighbourhood level
- exploitation of the car sharing measure could build on existing co-operation within the Basque region regarding car sharing in the three main cities. It would be relatively easy to extend car sharing schemes to other medium sized cities in the territory, as it is accessible and travel between cities is frequent
- the leader of the energy efficient freight measure, IVL, is a regional network for logistics. It is therefore ideally placed to spread the concept of the measure to other cities and companies in the Basque region and elsewhere in Spain. The target groups are both private distribution companies and municipalities. In the Basque region three cities have already implemented the cargo bicycle freight system. Many other Spanish cities have expressed interest in the measure

4.2.4 Iași

There is potential to transfer some of Iași's measures to other cities. Iași has supported this by undertaking a range of activities to disseminate measures at European level. There are five measures where specific opportunities have been identified, mainly for transfer regionally and nationally. These relate to alternative fuels, collective transport/intermodal integration, behavioural change, cycling and freight:

- the public transport company involved in the alternative fuel demonstration is willing to contact other operators and organize visits from them to study best practice
- shuttle bus services could be transferred to the largest cities in Romania which have been established by EU regional policy as Urban Growth poles. The same applies to public transport provisions for disabled people
- Iași has offered to share its experience of the sustainable transport education and promotion programme to other Romanian cities, via the Romanian Association of Municipalities. The programme could also be used as a model by other central and Eastern European cities to change citizens' travel behaviour
- there is considerable interest in creation and expansion of cycle routes in other Romanian cities. This is due to the younger generation's increased use of cycling for a range of purposes such as leisure, competitions and daily urban travel
- other Romanian cities would benefit from introduction of efficient freight strategies to reduce congestion and pollution during the daytime.

4.2.5 Monza

There is potential to transfer most of Monza's measures to other cities. Monza has facilitated this by carrying out a range of activities to disseminate measures locally, nationally and within Europe.

Although the experience in Monza was not successful the hybrid bus could be transferred to other medium sized cities in the province or region, with impetus provided by the recent launch of the provincial strategic mobility plan. But it requires that technical issues are solved and that lifetime equipment costs is comparable with traditional EEV buses. It could also be adopted by firms that run buses to transport workers or customers. Potential also exists for the telematics measures to be implemented as an integrated package in other Italian cities. A meeting has been held with other cities and exploitation will be discussed with staff working on the provincial mobility plan.

4.2.6 Ústí Nad Labem

There is potential to transfer most of Ústí Nad Labem's measures to other cities. There are four measures where specific opportunities have been identified, mainly for transfer regionally. These relate to demand management, behavioural change, safety/security and cycling:

- there is potential to transfer the noise reduction measure regionally, as noise pollution is a problem across the entire region
- the driving and road safety measures could also be adopted elsewhere in the region or by other cities nationally, as road safety is an important issue both at regional and national levels
- the two existing major cycle routes are of cross-regional importance. Once connected this will enhance regional cycling infrastructure.

4.3 Exploitation of commercial potential

4.3.1 Aalborg

Five Aalborg measures have been identified as having commercial potential, which could facilitate exploitation. These relate to clean fuels, collective transport/intermodal integration, behavioural change, cycling and telematics:

- the 2nd generation AFME biodiesel
- the travel information websites
- the school cycling campaigns. These involved innovative use of mobile phone and the internet to interact with school children. The developer of the concept would be able to sell it to other municipalities
- the bicycle designed specifically for the city bike sharing scheme. The producer of the bicycle will be able to sell this to other cities
- mobile phone and on-bus travel information services, with commercial exploitation by the service developers. For example there is potential for exploitation with customers of the on-bus service developer, who are based in other countries.

4.3.2 Brighton & Hove

The City Council has highlighted that further development of the multi modal ticketing system project will include mobile top-ups of cards and mobile phones being used as smartcards in themselves. The funding for this will be provided by the bus company partner. This is a good example of a viable public-private partnership being developed to promote sustainable travel and increase integration between modes.

4.3.3 Donostia - San Sebastián

Three Donostia - San Sebastián measures have been identified specifically as having commercial potential, which could facilitate exploitation. These relate to alternative fuels/clean vehicles, car sharing and freight

- petrol stations in the city and the wider region could purchase mixing equipment to offer biodiesel
- the car sharing scheme could be used by the electric vehicle industry to demonstrate use of electric vehicles. It is envisaged that the scheme would be operated through tender to a private company. Donostia - San Sebastián can provide advice on the tendering process
- the Txita Cargobike service is operated by a company called Txitrans. The company is providing training and consultancy to several other Spanish cities, having already “exported” the service to them.

Additionally innovative technologies were used in eight measures, mostly in the collective transport and telematics fields. These could have commercial application:

- the high quality public transport corridors, shuttle bus, bus traveller information and bus management system , e.g. GPS location, WIFI communication and surveillance camera systems
- car pooling software utilised in the university mobility management measure
- software for tracking and data control systems for the city bike scheme
- software used to manage the vertical transport system, as well as specialised technology for construction of lifts, ramps and escalators
- data management software for the parking guidance system.

4.3.4 Iași

No specific commercial opportunities are identified in Iași's exploitation report. However, the innovative technologies applied in the video surveillance, bus priority and bus management systems could have commercial potential. The same could be said of shuttle bus services which could be exploited in conjunction with the biofuels measure.

4.3.5 Monza

No specific commercial opportunities are identified in Monza's exploitation report. However, the innovative technologies applied in the bus management, RTI, UTC, public transport priority and parking guidance systems could have commercial potential.

4.3.6 Ústí Nad Labem

No specific commercial opportunities are identified in Ústí Nad Labem's exploitation report. However, the traffic planning software used in the noise reduction measure could have commercial potential.

5. Relevance for Urban Transport Development in Europe

The CIVITAS Programme has been operating for ten years. During this time a series of demonstration projects has been implemented in 59 cities across Europe. These projects have become beacons for the development and implementation of clean urban transport on the ground, based as they are on an integrated approach embracing a comprehensive range of sustainable mobility measures.

The CIVITAS ARCHIMEDES project has been a major contributor to the CIVITAS Initiative. Six cities and 16 partner organisations came together to implement a project containing 83 measures covering all 8 CIVITAS measure categories. The cities are typical of many small and medium size cities in Europe, ranging in size from 100,000 to 400,000 inhabitants. Two of the cities are in countries in Eastern Europe.

The ARCHIMEDES measures and the processes followed to implement them are capable of replication in similar cities and have the potential to achieve similar impacts: positive environmental and social benefits from use of clean fuels and vehicles; progressive implementation of electromobility in cities; public transport patronage growth; increase in walking and cycling; behaviour change due to travel planning; reduction in private cars due to access control (but with significant challenges); positive impacts on safety, security and health; and effective management of urban freight movements.

One way of summarising the achievements of ARCHIMEDES is to reflect on the extent to which each city has done New Things or has done in things in New Ways or with New Groups of people.

Prime examples of *New Things* are:

- Trials of biodiesel in Aalborg and Donostia
- Smartcard in Aalborg
- Bus management systems in Aalborg, Donostia and Iasi
- Private EVs in Aalborg
- Talking bus stops in Brighton
- Mobile information in Aalborg
- Multimodal ticketing in Brighton
- Bus priority and ITS package in Monza
- Sustainable Urban Mobility Plans in Monza and Usti

The measures that have been implemented in *New Ways* include:

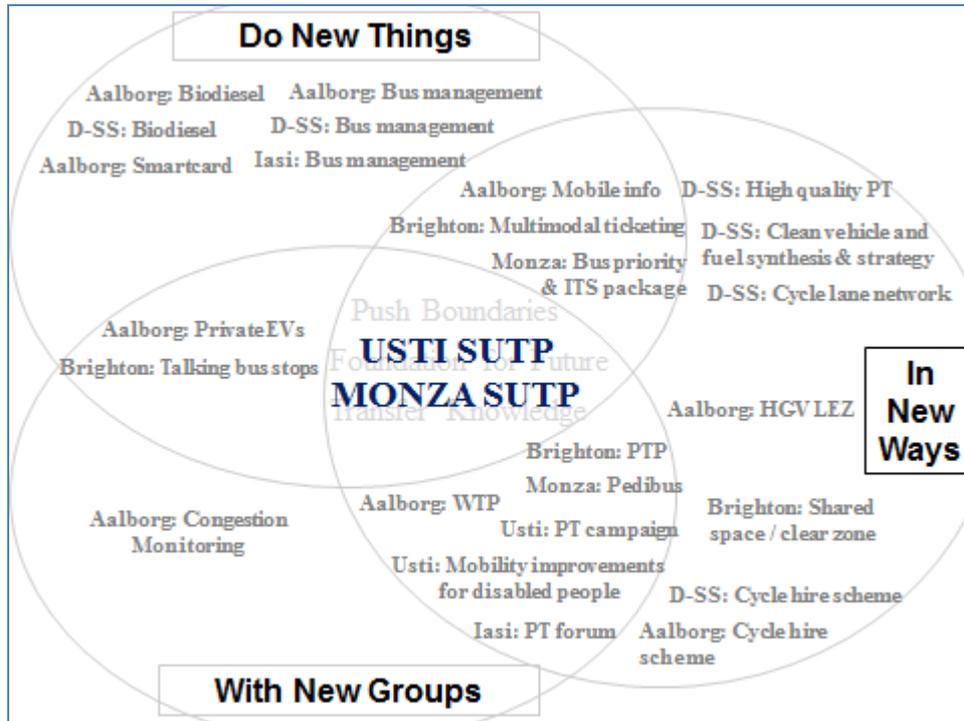
- Sustainable Urban Mobility Plans in Monza and Usti
- Mobile information in Aalborg

- Multimodal ticketing in Brighton
- Bus priority and ITS package in Monza
- High quality public transport in Donostia
- Clean vehicle and fuel strategy in Donostia
- Cycle lane network in Donostia
- HGV low emission zone in Aalborg
- Personalised Travel Planning in Brighton
- Pedibus in Monza
- Workplace travel plans in Aalborg
- Public transport campaign in Usti
- Mobility improvements for disabled people in Usti
- Public transport forum in Iasi
- Shared space / Clear Zone in Brighton
- Cycle hire schemes in Aalborg and Donostia

Measures done with *New Groups* include:

- Sustainable Urban Mobility Plans in Monza and Usti
- Private EVs in Aalborg
- Talking Bus stops in Brighton
- Personalised travel planning in Brighton
- Pedibus in Monza
- Workplace travel plans in Aalborg
- Public transport campaign in Usti
- Mobility improvements for disabled people in Usti
- Public transport forum in Iasi
- Congestion monitoring in Aalborg

There is a degree of overlap between these lists as illustrated in the Figure below, reflecting the richness of the project. Moreover, the SUMP's developed in Monza and Usti show how ARCHIMEDES has really pushed the boundaries in some cases.



The relevance and coherence of the ARCHIMEDES project within the participating cities is clearly demonstrated by the fact that the vast majority of the measures will be continued. In some cases the cities already intend to expand the measures to other areas of the city (although the extent to which this is currently possible is in some cases limited by the financial crisis). The situation in each city can be summarised as follows:

Aalborg

Most of the 15 measures will continue except for specific campaigns that were part of the project. The bike-sharing scheme has been a great success and it has already been decided to continue it for the next 4 years. The experience with biodiesel has shown that it is too expensive in Denmark to justify its continuation.

Brighton & Hove

The EV charging points, multimodal ticketing, personalised travel planning, travel plans for commuters and schools and talking bus stops will continue and will be extended. Road safety campaigns will continue in a different form. It proved impossible to implement the planned freight management systems for political reasons, but the city is now developing a new freight strategy. The emissions VMS equipment will continue to be used. The bike-off campaign will stop due its high cost compared to the benefits. The proposed car clubs were cancelled. Cycle ramps will not be implemented due to the cost.

Donostia-San Sebastian

Most of the 18 measures will continue, although the current financial crisis means that economic considerations are considered more important than environmental ones. The clean vehicle strategy is important for the city and will continue. Electric vehicles will be introduced. There could be a problem with the biodiesel buses if the fuel tax increases, but this is outside of the city’s control. High quality bus corridors

will be extended throughout the city. The technological measures for public transport will continue. The expansion of cycling measures will continue – there has been a big increase in cycling. New city bike projects are being implemented. Measures for vertical transport will continue. The city will continue to work on its parking and business district mobility policies, which are controversial.

Iasi

ARCHIMEDES has proved to be extremely useful for the city and is leading to significant upscaling. The city will go further with most of the 16 measures. It is unfortunate that the planned bio-waste measure had to be cancelled due to decisions taken at national level. The LPG experiment may not continue due to the high cost – the price increased by 42% during the project. The new traffic management system is being extended to the whole city, cycle lanes will be increased fivefold and the new bus management system is being extended to provide real-time passenger information, all thanks to European infrastructure funding. Video surveillance has been very successful and it is hoped to extend it through a public-private partnership. It is hoped that funding can be found to expand the automatic ticket machines. The freight strategy is temporarily suspended due to the amount of road works and traffic diversions in the city.

Monza

Eight of the 10 measures will continue, in particular the pedibus, cycling measures (cycling in the city has doubled) including creation of a true cycle network with a bike-sharing scheme, and the car-sharing scheme. The access control system and its related technologies will be extended. The city will cease to subsidise the hybrid bus (due to high costs) but the bus company could decide to continue it. Institutional changes affecting public transport provision mean that it is unclear whether the new bus services will continue.

Usti nad Labem

All of Ústí Nad Labem's ten measures will at least continue in their current form. Most of the measures have been used as input to the city's transport strategies and will be implemented as part of the realisation of the strategies. For example the noise objectives will be handled through the noise mapping carried out as part of ARCHIMEDES. The same situation goes for traffic safety measures that will be implemented to reach the city's objective on road safety.

Appendices

City Exploitation Plans

Measure n°/ Title 1 Bio-fuels in Aalborg

The measure consists of three main tasks, one supporting task and one research task. The main demonstration tasks have been to operate 50 buses and 50 postal service vehicles on at least 10% 2nd generation bio-diesel. This resulted in two demonstrations, 10% and 20% bio-diesel in the buses and an average of 15% in the postal fleet vehicles. The supporting task was to establish three tanking facilities for supply of bio-diesel at the involved companies.

A shuttle bus has been a green showcase for three summer seasons, testing hybrid technology and higher blends of bio-diesel (30% and 100%).

A demonstration of 10 electric cars being used by Aalborg families has been carried out to collect information about performance and perception of electric cars. In total 80 families tested the EV during 2 years.

Exploitation Component

Product: *2nd generation bio-diesel which are used in different blends in the two fleets, made from animal waste that could not have been used for consumption. The product is produced by DAKA amba, in Denmark*

Methodology: *The requirements for using bio-diesel in the buses have been added to a tender for the operation of city buses in Aalborg. An economic model for ensuring realistic extra costs for operating the fleet on bio-fuels has been developed, and the tender requirements for ensuring the use of second generation bio-diesel has been written. The formulation of the requirements could be used in more tenders for bus operation.*

Results and policies: *The results of the demonstration should be disseminated in order to encourage more operators to use bio-diesel. Also the results and experiences should be used as input to this policy field both nationally and internationally.*

Results: *Results related to the EV demonstration should be exploited through the “TestEnElbil.dk” demonstration project. Results concerns consumption, use and acceptance of electric vehicles.*

Where can take place the Exploitation / Detail why

In the city: *The use of bio-diesel in buses is the responsibility for the regional public transport authority. Hence, exploitation of bio-diesel in this sector is region wide, even though the demonstration is taking place in Aalborg.*

In the region: *Methodology for including bio-diesel in the tendering process for operating buses was developed by the regional public transport authority and is hence available for exploiting in the region.*

In the country: *Methodology for including bio-diesel in the tendering process for operating buses was developed by the regional public transport authority and can hence be exploited to other regional transport authorities in the country. The tendering process for bus operation is the same in each authority.*

In other cities (DK): Methodology for including bio-diesel in the tendering process for operating buses was developed by the regional public transport authority and can hence be exploited to other regional transport authorities in the country. The tendering process for bus operation is the same in each authority.

Results and product can be disseminated to cities in Europe. This has already happened at more occasions – see below.

In other sectors: Results and specific product: More companies could be encouraged to operate their fleets on bio-diesel based on the results produced through the ARCHIMEDES project.

Who will be the exploitant(s) / key players for exploitation?

The City of Aalborg will be in charge of evaluation and thereby a key player in order to exploit the results to other cities.

Danish Technological Institute will provide knowledge of the product and results for exploitation purposes.

The Regional Transport Authority will be in charge of exploiting the methodology for the tendering process and the results of the demonstration

DAKA amba and Q8 – (bio)diesel suppliers will have knowledge about the product and experiences with the use of the specific product.

Post Danmark (Postal Service) will be involved in sharing results and experiences from the demonstration.

TestEnElbil.dk demonstration project lead by ChoosEV will exploit results and experiences from this project e.g. at conferences, through newsletters, web site etc.

What activities will be undertaken to ensure this is happening ?

Presentations at international conferences to disseminate results and experiences of the demonstration projects,

During the project:

- *The “Clean Fuels, Clean Vehicles, Cleaner Cities conference” in Donostia-San Sebastian where three presentations from Aalborg were made (2 on bio-diesel and one by ChoosEV on the EV trial), June 2011*
- *Presentation at Civitas Forum – one presentation held at CIVITAS Forum 2011 in Funchal on 2nd generation bio-diesel.*
- *Presenting results and possibilities from the Electric Vehicle demonstration (TestEnElbil.dk) at the CIVITAS Forum in Vitoria-Gasteiz (September 2012).*
- *Input to other projects working with the same challenges. Representatives from the*

City of Aalborg was in January 2012 interviewed by consultancy “Agro Business Park” who’s currently investigating the possibilities and challenges in tendering and operation on 2nd generation biodiesel for the Region of Mid Jutland, Denmark.

- *Open Alternative Fuels seminar in Aalborg on bio-diesel and electric cars amongst other topics. The seminar will have some 8-10 presentations, from CIVITAS ARCHIMEDES cities and Denmark, involving the Regional Transport Authority, the bus operators, Post Danmark and the Danish Technological Institute. The seminar aims at communicating drivers and barriers of the implementation of biodiesel to other companies, transport authorities, bus operators and public bodies.*

After the project:

- *The Public Transport Authority and the City of Aalborg have decided not to continue the demonstration after the end of the project. Although the project has turned out successfully, the economic situation in the city makes it impossible to carry on with this for the moment. Hence, exploitation from this site will be put on hold until the financial situation changes and / or the surplus price for the bio-fuel is lowered*
- *The Postal Service has not yet decided whether they will continue to use bio-diesel in the fleet. A continuation, however, has not been foreseen from the beginning.*
- *The knowledge gained in the EV-demonstration, will be used in the city to investigate possibilities for using electric cars in the municipal fleets.*

Measure n°/ Title 8 Travel Smart Card in Aalborg

As an extension of a national project, the Public Transport Authority of North Denmark (NT) in collaboration with the City of Aalborg implemented the Travel Smart Card in Aalborg including design and implementation of two new facilities:

- Linking a fully integrated contact less Smart Card IT-system with the Bus PC infrastructure.
- A Travel Card Light solution to expand the use of electronic ticketing to public transport taxis.

Exploitation Component

Product: The technical setup of Travel Card Service and practical experiences with the implementation and installation can be exploited.

Methodology: The ARCHIMEDES-project is co-financing a demonstration implementation of the smart travel card in 80 buses. The national project is managed by the company Rejsekortet A/S, owned in common by the regional public transport authorities in Denmark and the train company DSB. The experiences with cooperation between the regional public transport authorities can be exploited.

Where can take place the Exploitation / Detail why

In the country: The service will be nationwide after the end of the ARCHIMEDES Project, hence exploitation nationwide will be on experiences of operation in Aalborg. Specifically NT has generated experiences with integrating the new travel card service with the existing bus computers. NT is part of the nationwide company Rejsekort A/S, which is implementing the travel card nationwide. The experiences with the implementation in Aalborg have been transferred to the rest of Denmark through Rejsekort A/S in order to draw on the experiences when implementing the service nationwide.

In other sectors: The Smart Travel Card is specifically developed for public transport, hence use in other sectors can be done, but not likely on the basis of experiences of the ARCHIMEDES demonstration.

Who will be the exploitant(s) / key players for exploitation?

NT will be in charge of disseminating the product at international conferences.

NT has transferred results and experiences to Rejsekort A/S to ensure successful implementation of the scheme nationally.

What activities will be undertaken to ensure this is happening?

National meetings between public transport authorities and Rejsekort A/S.

Presentation at international conferences or meetings i.e. at the consortium meeting in Iasi, September 2011.

Through ARCHIMEDES publications and news. (2 news items on customer satisfaction and use have been posted at civitas.eu in December 2011 and February 2012), however these activities can more be seen as dissemination activities to also promote the card more than ensuring transferability to other cities or regions.

Measure n°/ Title 9 Modernising Travel Information in Aalborg

A growing demand for more, accurate information in society has led to this measure, which includes updating and modernization of two existing web services, www.NordjyllandsTrafikselskab.dk and www.trafikken.dk/Nordjylland. The main objective of this measure is to increase transport user satisfaction by providing simple access to up-to-date travel information.

Exploitation Component

Product: *Personalised web-service product implemented on www.NordjyllandsTrafikselskab.dk and www.trafikken.dk/nordjylland offering the user to create a personalised travel web page with the information needed for each user.*

Methodology: *The premise for the implementation in Aalborg is a strategic collaboration between different levels of public administration, the public transport authority and the police.*

Where can take place the Exploitation / Detail why

The product is transferable to other cities,

In the region: *Both web pages are covering the region. However, for trafikken.dk/Nordjylland, Aalborg is the only one of the municipalities contributing to the web page at the present. The reason for this is that fact that only Aalborg is of a size where congestion matters. More of the municipality in the region should be included in the work, but the congestion-drives are missing. Broader participation could result in exploitation on the regional level.*

In the country: *The product could be transferred to other regional traffic portals. At the moment there are three similar regional traffic portals all provided by the Danish Road Directorate – but all without the personalised functions developed in the ARCHIMEDES project. The functions could be disseminated to the authorities in charge of these portals.*

In regards to the personalised function on the public transport information site, MitNT, this could be transferred to other regional transport authorities, which are in charge of public transport information.

In other cities: *In regards to other cities in Europe, the product could mainly be disseminated through international conferences or through working groups.*

Who are the exploitant(s) / key players for exploitation?

The City of Aalborg is in charge of exploiting the product in co-operation with product developers **Diaphoni** (Aalborg based web developer) and the **Danish Road Directorate** to other municipalities in the region, in order for them to include data to the personalised traffic portal.

The product might have a commercial potential, which will facilitate the exploitation of the product.

The Regional Transport Authority will be in charge of exploiting the product to other regional

transport authorities in the country.

What activities has been and will be undertaken to ensure this is happening?

During the project:

Presentation at Civitas Forum – one presentation held at CIVITAS Forum 2009 in Krakow on personalised traffic information.

Through ARCHIMEDES publications and news.

After the project:

The work with development will continue on both websites will be continue by the City of Aalborg and the Danish Road Directorate and by the Public Transport Authority.

A working group is now developing a mobile version of trafikken.dk/Nordjylland which will air in 2012. This version is a direct output of the ARCHIMEDES project.

Measure n°/ Title 20 Changing Parking behaviour in Aalborg

Exploitation Component

Implementation of this measure has experienced delay and is only recently finalised. No exploitation components are foreseen at the moment.

Where can take place the Exploitation / Detail why

N/A

Who will be the exploitant(s) / key players for exploitation?

N/A

What activities could be undertaken to ensure this is happening?

N/A

Measure n°/ Title 29 School Cycling Campaigns in Aalborg

A new campaigning method to reach school children has developed. The campaign focuses at ways of reaching grade 5 to 7 (11-14 years old children) which has previously proved to be a difficult task through new ways of communicating, i.e. the interactive use of mobile phone and the internet and riddle solving. The concept has been used twice at schools in the ARCHIMEDES Corridor (August 2010 and August 2011).

Exploitation Component

Product: Campaign method to reach school children build on interactive use of mobile phone, and the internet.

Methodology: The premise for the implementation in Aalborg has been to directly communicate with the school children and keeping parents and schools informed about the campaign.

Where can take place the Exploitation / Detail why

In the city: The concept can be used by the City of Aalborg in a new campaign for the schools involved or for more schools in the city.

In the region: The campaigning concept or the campaigns in themselves can be used in other schools in the region. The concept can be transferred directly where as the exploitation of the specific campaign would mean that other municipalities should buy it from the developer.

In the country: The campaigning concept or the campaigns in them selves can be used in other schools in the country. The concept can be transferred directly where as the exploitation of the specific campaign would mean that other municipalities should buy it from the developer.

In other cities: The campaigning concept or the campaigns in themselves can be used in other schools in Europe. The concept can be transferred directly where as the exploitation of the specific campaign would mean that other municipalities should buy it from the developer.

In other sectors: The concept and methodology on how to reach children approaching their teenage years can be used in campaigns with other purposes for example healthy eating habits and similar. Exploitation activities in the ARCHIMEDES Project will not directly address other sectors.

Who will be the exploitant(s) / key players for exploitation?

The City of Aalborg and the developer of the concept and the campaigns will be the exploitants of this measure. The measure will have a commercial potential, hence this could positive impact on exploitation

What activities will be undertaken to ensure this is happening?

Presentations through municipality networks about the concept, the campaigns and the actual results of the work undertaken.

The School Cycling campaign concept, challenges and results were presented at the CIVITAS VANGUARD, CIVITAS ARCHIMEDES and The CIVITAS working group of “Less car intensive lifestyle” webinar the 2nd of March, with participation of 25 people. The presentations and the recorded webinar will be available for more people at civitas.eu.

Consultations with cities or campaign developers in Europe based on European dissemination activities such as deliverables, news items and website information. I.e. the City of Aalborg is currently speaking to Belgian Consultancy Mobiel 21 to further investigate the possibility to transfer the campaigning concept and maybe the campaign itself to Belgian Schools.

Through ARCHIMEDES publications and news.

Measure n°/ Title 30 Commuter Travel Plans in Aalborg

Commuter travel plans have been created by the City of Aalborg for public and private organisations in the ARCHIMEDES corridor. The green commuter travel plans were implemented at 7 companies that in total employ approximately 20,000 people.

The commuter travel plans contain a first part with the description of the current travel behaviour of the employees based on a questionnaire; a second part with the employees experienced drivers and barriers for more sustainable transport (also based on results from the questionnaires) and a third part with recommendations on viable mobility initiatives for the company.

Exploitation Component

***Framework (setup)** for commuter travel plans has been developed and can be used as the framework for similar projects at other companies.*

*Web-questionnaire **methodology** developed for the commuter plans by Aalborg University and the City of Aalborg. The questionnaire can be used online or compiled to a paper version. The web questionnaire is used to collect data about travel behaviour. The web questionnaire has by now been adopted by the City of Aalborg and can be exploited by the city.*

Where can take place the Exploitation / Detail why

***In the city:** The framework can be applied for more companies in Aalborg.*

***In the region:** The framework can be disseminated to other municipalities in the region. So can the methodology. The City of Aalborg might also be able to provide help to other municipalities who are starting the process.*

***In the country:** The framework can be disseminated to other municipalities in the country. So can the methodology. The City of Aalborg might also be able to provide help to other municipalities who are starting the process.*

***In other cities:** The framework can be disseminated to other municipalities in Europe. So can the methodology. The City of Aalborg might also be able to provide help to other municipalities who are starting the process.*

***In other sectors:** Even though, the commuter travel plans are developed in cooperation between the municipality and a private or public company, the framework could also be adopted by other companies without the municipality being involved. The framework and the methodology for getting data do not require the municipalities to be involved.*

Who will be the exploitant(s) / key players for exploitation?

***The City of Aalborg** will be the main exploitant. The framework and the methodology for collecting data are both developed by the municipality. Involved companies can provide input for dissemination through experiences from the processes.*

What activities will be undertaken to ensure this is happening?

Dissemination of process evaluation, presentation of framework and methodology at several national seminars or meetings has been undertaken during the project.

After the project:

No activities planned but the framework for further work with commuter travel plans can continue.

Measure n°/ Title 42 Provision for Soft Modes in Aalborg

Cycling and walking are important elements in any strategy for sustainable urban transport. In the Østerbro area, which is in front of the cultural hub “Nordkraft”, the city of Aalborg has established a shared space area to provide for soft modes. The street is approximately 200 metres in length and around 40 metres of Kjellerupsgade has also been reconstructed. The redesign of the area is expected to contribute to general traffic safety in the area and to ensure a better environment for particularly vulnerable citizens such as the elderly, disabled people and children.

Exploitation Component

Product: Provision for soft Modes. Design for soft modes is demonstrated in Aalborg with a potential to be used in other cities.

Methodology: N/A

Where can take place the Exploitation / Detail why

In the city: The ideas behind the design can be applied other places, but the specific solutions are linked to this specific area.

In the region: It can be applied to other areas in the region.

In the country: It can be applied to other areas in the country. T

In other cities: It can be applied to other areas in Europe.

In other sectors: N/A

Who will be the exploitant(s) / key players for exploitation?

The City of Aalborg have kept track on the results of the new design, i.e. is the rebuilt road section more safe than before it was rebuilt, has modal split on the section changed and hence made it a better environment for soft modes. These are the results that are interested to disseminate in order to obtain exploitation in other cities in nationally and internationally.

The designing company could provide information on the actual design.

What activities will be undertaken to ensure this is happening?

During the project:

No specific actions have been undertaken, but the results have been published through ARCHIMEDES publications and news.

After the project:

No specific actions are planned.

Measure n°/ Title 43 Traffic Speed Reduction Zones in Aalborg

A new approach of speed reduction has been demonstrated in the City of Aalborg. This means that in one of the speed reduction zones no physical changes have been made, but the speed limit has been lowered by signage. The demonstration aims at testing whether this approach is as successful in decreasing the actual speed as is the approach in which physical changes of the roads are implemented.

<p>Exploitation Component</p> <p>Product: Test of different ways of implementing speed reduction zones through different means of physical infrastructure and signage.</p> <p>Methodology: The main exploitable component to exploit is that establishing speed reductions zones lowers the speed and improves the experienced safety. It is more difficult to make clear conclusions on the effects of the zone with no physical changes.</p>
<p>Where can take place the Exploitation / Detail why</p> <p>In the city: It has already been applied to other areas in the city. Speed Reduction Zones is a traditional traffic safety measure.</p> <p>In the region: Speed Reduction Zones is a traditional traffic safety measure in the region.</p> <p>In the country: It Speed Reduction Zones is a traditional traffic safety measure on the national level as well.</p> <p>In other cities: The experiences can be used in other cities that has not previously worked with traffic speed reduction zones.</p> <p>In other sectors: N/A</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p>The city of Aalborg has been doing the construction and the implementation of the zones and is hence be the only exploitant for this specific task.</p>
<p>What activities has been and will be undertaken to ensure this is happening?</p> <p>During the project: Presentation of the results of the demonstration focusing on the differences between the zone where no physical changes were made, besides signage and the other fore zones in which physical changes were made. No specific actions have been undertaken.</p> <p>Through ARCHIMEDES publications and news.</p> <p>After the project: No specific activities are planned.</p>

Measure n°/ Title 51 Cycle Motorway in Aalborg

This measure has focussed at creating a high classed commuter routes for cyclists to be used internal in the City of Aalborg. For this task a new concept for the high classed commuter route has been developed with focus at free flow conditions, safety and service/visibility.

Exploitation Component

Product: *The concept of working with a commuter route network for cyclists where a hithe certain facilities can be expected.*

Methodology: *A new **process of citizens' engagement** was tested through this measure.*

Concept *of finding the right solutions for the right cities based on their current development stage of bicycle planning. The measure is linked to the BYPAD analysis carried out through the ARCHIMEDES project. The measures implemented in the cities should be based on the current stage of their cycling planning. These considerations could be exploited in order to help cities to find the right solutions for their specific city based on current situation.*

Where can take place the Exploitation / Detail why

In the city: *The concept has been applied to other areas in the city.*

In the region: *It can be applied to other areas in the region.*

In the country: *If can be applied to other areas in the country.*

The process of having an innovation workshop as part of planning process could be disseminated through other cities in Denmark, including cities in the region.

In other cities: *The approach and the results can be disseminated in Europe.*

The process of having an innovation workshop as part of planning process could be disseminated through other cities in Europe.

In other sectors: *N/A*

Who will be the exploitant(s) / key players for exploitation?

The City of Aalborg has kept track on the results of the new design, i.e. is the rebuilt road section more safe than before it was rebuilt, has modal split on the section changed and hence made it a better environment for soft modes.

In terms of European exploitation the City has been involved in a workshop in Leuven organised by Mobiel21 and the output from this workshop has been applied to a publication on best practices in Europe for citizens' engagement. The publication is distributed by ICLEI.

What activities will be undertaken to ensure this is happening?

During the project:

News Items on websites or transport magazines.

Article on the holistic cycling concept in Aalborg was published in the Transport Magazine "Trafik & Veje" in January 2012. In this article this measure is the main focus.

Through "Reaching the citizen: Toolkit on effective communications and marketing" – VANGUARD, June 2011. Available at the civitas website.

Exploitation have ongoing internally in the organisation, meaning that the concept and the process of implementing the concept has been applied to two other stretches in the city, of which the first stretch will be constructed in 2012.

A webinar concerning the concept of "Finding the right solutions for the right cities" has been held in June 2012 including short presentations on various provisions for cyclists in the six CIVITAS ARCHIMEDES cities. Aalborg contributed with this measure.

Through ARCHIMEDES publications and news.

After the project:

The work with outcomes of the project will continue with development of new commuter travel routes in the city.

Several visits from other cities (both Danish and Swedish) are planned during autumn 2012.

Measure n°/ Title 52 City Bike Scheme in Aalborg

With this measure a city bike scheme with 200 bikes and 21 stations has been implemented. The scheme is designed to especially suit student, tourists and people with a spontaneous transport need in the city centre and the university area.

Exploitation Component

Product: *The actual bike made for the scheme. The first aluminium bike in a city bike scheme in Aalborg.*

The scheme itself, the number of bikes, financing, maintenance etc. have exploitation potential. Involved stakeholders have together set up the system which can be transferred to other cities.

Methodology: *Considerations made through the planning phase on target groups, type of bike, how to operate the scheme and communication and visibility of the scheme.*

Where can take place the Exploitation / Detail why

A city bike scheme has to be set up differently in different countries, dealing with different cycling cultures. In countries where people with a low share of biking, and a low bike ownership, the scheme should you provide the citizen with a bike. In Denmark, almost everybody has access to a bike, so the target group is not people who bike for commuting but for example visitors to the city. This set up some requirements for the scheme, meaning for example that the scheme in Aalborg should be very easily accessible.

In terms of exploitation the view is that the scheme and the bike itself can be exploited only to the regional or the national level, and no attention to European exploitation will taken.

Hence, the exploitation can take place in the city, region or country.

Within the city, *its important to note, that through ARCHIMEDES the scheme has had a specific size covering the CIVITAS ARCHIMEDES corridor of the city. A description of how to handle the scheme after the end of the project should be made in order to ensure exploitation of the scheme in the city. This of course will rely on political support.*

In the region: *One municipality in the region has already asked for advice when implementing their city bike scheme.*

In the country: *Other cities in the country could implement the scheme and the city of Aalborg would be able to advice them.*

Considerations about the scheme can be exploited upon request.

In other cities: N/A

In other sectors: N/A

Who will be the exploitant(s) / key players for exploitation?

The City of Aalborg will in co-operation with the operators of the scheme, AFA JCDecaux be able to advice other cities in setting up the scheme, including the considerations to be made before doing it.

The producer of the bike will be able to sell his bike to other cities. This will have a commercial potential, and the exploitation of the bike will hence not involve the City of Aalborg.

What activities will be undertaken to ensure this is happening?

During the project:

The city of Aalborg has participated in a workshop as presenter of the scheme and considerations at "Bicycle Community Centre and Social Bike initiative" workshop, 6. - 8. June, 2011, City of Koprivnica, Croatia

Interested municipalities have during the project been in contact with the City of Aalborg, showing the scheme and the results of having a scheme.

Providing results of the scheme in newsletter, press releases and transport magazines if possible.

After the project:

The scheme will continue to be in operation the next years and therefore it will still be possible for interested cities to experience how the system works in practice.

Measure n°/ Title 53 Car Sharing in Aalborg

Four campaigns have been conducted. Three of them towards the target group of young people, mainly students with a low demand for a car in daily life. The campaigns have had no measurable effect and are thus not seen as an exploitable component. No exploitation activities planned.

Exploitation Component

Not applicable

Where can take place the Exploitation / Detail why

Not applicable

Who will be the exploitant(s) / key players for exploitation?

Not applicable

What activities could be undertaken to ensure this is happening?

Not applicable

Measure n°/ Title 63 Efficient Goods Distribution in Aalborg

Aalborg has implemented an environmental zone (low emission zone, LEZ) in the city centre, bounded by the ring road and by the fjord.

This project developed in the framework of Danish National legislation, wants to reduce emissions and pollution derived from goods distribution and buses within the city centre. Only HGV and buses (>3.5 tonnes) that comply with the standards are allowed to drive in the zone.

Exploitation Component

The environmental zone in Aalborg has been implanted with support from local stakeholders making it possible to actually set up some strict regulations without any problems at all.

The process with working with stakeholders, being the city commerce association, the postal service, freight operators, the harbour and freight associations has been ongoing for 11 years now and various results have been obtained. **This process or methodology for implementing freight measures** is the exploitable component of this measure.

Results from the evaluation modelling shows a reduction in emissions as an impact from the introduction of the environmental zone. These results are useful for other cities.

Where can take place the Exploitation / Detail why

In the city: The work with stakeholders should continue in order to ensure effective planning procedures on this field in the future.

Results should be used to see whether vans should be included. Results show, however, that there are no exceed of the emission limit values, and due to national legislation, vans cannot be included.

In the region: The process of including stakeholders to ensure effective planning procedures in the field of freight distribution could be transferred to other cities in the region. However, freight is not a major concern for the smaller municipalities in the region. (Aalborg being the biggest)

In the country: Other major cities in the country, e.g. Århus, Odense and Copenhagen are also working with freight and could apply the methodology to their planning processes.

In other cities: Process is transferable to other cities in Europe.

In other sectors: N/A

Who will be the exploitant(s) / key players for exploitation?

The City of Aalborg and stakeholders in the process will disseminate the process results.

What activities will be undertaken to ensure this is happening?

During the project:

Development of a heavy traffic strategy is taking place at the moment, paying special attention to process and process strategy. This document will be disseminated and hopefully other cities will see the benefit of the way of organising work.

Providing other cities in Europe with the impact evaluation of the zone. I.e. Aalborg has provided the evaluation results to City of Newcastle, UK and the IEE project C-Liege.

After the project:

Entry about low emission zones are for a Civitas Workshop in Rotterdam on CO2-free city logistics. This also provided input to the European Commission for the work with the proposal for urban freight plans, which will be issued in 2013.

Measure n°/ Title 68 Pre-trip and On-trip Mobile Phone Information in Aalborg

The measure makes it possible for users to get Real Time Passenger Information (RTPI) for all stops in the city on their mobile phones – based on the mobile phones build in GPS.

This way of providing information is expected to increase user satisfaction and could also be a way to attract new user groups to public transport.

Exploitation Component

*The NT mobil portal gives the user possibility to get access to travel planning through the mobile phone, assisted by the GPS. This is a very innovative product developed through the ARCHIMEDES project. **The product** is developed by several stakeholders for The Public Transport*

Where can take place the Exploitation / Detail why

The product is currently rolled out on regional level. Hence, it could be introduced nationally by other public transport authorities – but only a minor part of the public transport outside the region has the real time information, that this product is transferring on to the users.

As for European exploitation, there have been contact from Belgium to learn more about the service “Take me home”

Who will be the exploitant(s) / key players for exploitation?

The Public Transport Authority of North Denmark is the main exploitant in co-operation with the developers of the service. Since, this product have commercial potential, exploitation of it might happen outside the public transport authority.

What activities could be undertaken to ensure this is happening?

The work with ITS solutions, primarily within the Public Transport sector, has been presented at the CIVITAS Result Exploitation Workshop in Athens, 24th April 2012.

Through ARCHIMEDES publications and news items, information about this product will be disseminated at the European level. This could also happen at international conferences if possible.

Measure n°/ Title 69 On-trip Bus Traveller Information in Aalborg

Nordjyllands Trafikselskab NT (the Public Transport Authority of North Denmark) has implemented the on-trip bus information. The 50 buses operating in the CIVITAS ARCHIMEDES corridor were equipped with flat screen monitors, giving the passengers real time information regarding the current trip including the forthcoming bus stops, which routes the passengers can transfer to at these stops and real time information regarding the routes that they may be connecting to. This traffic information is supplemented with information as news, weather and commercials.

Exploitation Component

*The technology and process about this **service** could be useful for other public transport authorities.*

Where can take place the Exploitation / Detail why

After showing the success of the systems in the first half of the ARCHIMEDES period, the Public Transport Authority has rolled the system out on regional level. (internal exploitation)

The service does only exist sporadically elsewhere in Denmark and in no other areas as a full scale implementation. Thus exploitation on national level is expected.

Similar systems is known in other European countries but as this product is developed in cooperating with a major commercial partner, exploitation is expected to some of this companies customers in other countries.

Who will be the exploitant(s) / key players for exploitation?

The Public Transport Authority of North Denmark will be the main exploitant in co-operation with the developers of the service. Since this product have commercial potential, exploitation of it might happen outside the public transport authority.

What activities could be undertaken to ensure this is happening?

On a national level the ARCHIMEDES initiatives in Aalborg is being exploited as part of regular meeting between the public transport authorities.

The measure and the measure results have been presented at the open final ARCHIMEDES seminar in Aalborg October 2012.

The ARCHIMEDES ITS solutions, primarily within the Public Transport sector, have been presented at the CIVITAS Result Exploitation Workshop in Athens, 24th April 2012.

Through ARCHIMEDES publications and news items, information about this product has been disseminated at the European level.

Measure n°/ Title 70 Congestion Monitoring using Telematics in Aalborg

This measure consists of two demonstration parts and a research task.
- Based on Floating car data collected from GPS navigational units a Congestion monitoring system has been developed. The purpose of the system is to strengthen the basis for planning decisions. In parallel speed profiles and data on accessibility is

published to the road users on interactive maps with the purpose to influence their choice of route and departure time, to reduce congestion.

- To reduce congestion by optimising the traffic flow an advanced adaptive signal control system is implemented on a part of the main ring road.

Exploitation Component

Product: Floating car data collected by a commercial supplier for planning and information purposes.

Product: Advanced adaptive signal control system able of reducing congestion, reducing averages travel times and reducing fuel consumption.

Methodology: The main exploitable component is the approach to use Floating car data collected by an extern, commercial supplier for planning and information purposes instead of investing a large amount of resources in terms of money and time in setting up and running own data- collection, storages and quality assurances systems.

Where can take place the Exploitation / Detail why

In the city: The adaptive signal control system can be exploited to other parts of the major city road network, where the traffic conditions resemble the conditions on the demonstration stretch. The strength of the system is its network optimisation capabilities. Thus exploitation is not optimal to minor roads, or to major roads that is not part of a network.

The congestion monitoring system covers all roads in the larger Aalborg arrear. Exploitation on city level would be to roads in the municipality outside this larger Aalborg arrear. As congestion does not exist in these rural arrears such exploitation is not recommendable.

In the region: The adaptive signal system might be exploitable to the 3-4 larger cities in the region. As the system is a network optimisation system exploitation is only optimal to major roads that is part of a network.

As non of these cities experience serious congestion, the congestion monitoring system is not exploitable at this level.

In the country: Other major cities in the country, as Århus, Odense and Copenhagen would benefit from a well tuned adaptive signal control system as well a congestion monitoring system.

In other cities: Both parts is transferable to other larger cities in Europe on the conditions that congestion exists at a moderate or high level. Where as adaptive signal control systems is known at European level, the concept of a congestion monitoring system based on data collected by a large amount of navigational units and bought from a private company is rather advanced.

Who will be the exploitant(s) / key players for exploitation?

The city of Aalborg is doing exploitation as part of the ARCHIMEDES project and by the cities

usual communication channels as presentations on conferences and in meeting with partners.

The private supplier TomTom is doing a major exploitation effort as part of their commercial promotion of the product – using Aalborg and ARCHIMEDES as a reference.

What activities could be undertaken to ensure this is happening?

Both parts, but especially the congestion monitoring system and the technical concept behind, have been presented on a range of seminars, national as international. For example on a meeting for ITS specialists from the Nordic countries, on ITS Europe in Lyon, on ITS World in Orlando, on 'Road Forum' in Denmark and on the final open ITS seminar in the ARCHIMEDES project.

Through ARCHIMEDES publications and news items, information about the products has been disseminated at the European level.

Brighton & Hove

Measure n° 2 - Electric Vehicle Charging Points

- This measure involved the installation of 8 on-street electric vehicle charging points in Brighton & Hove.
- It was the first of its type in the UK outside London.
- The charging points are all powered by sustainably generated electricity.
- The measure helped to realise the potential for densely located fuelling stations to impact on the take up of alternative fuels; and tested the belief that scarcity of supply is holding back the wider take up of electrically powered vehicles.

Exploitation Component

- This project links into Brighton & Hove's City Council's (BHCC) Corporate Priority, 'Making Brighton & Hove the most sustainable city in the UK'.
- We invested in technology that could be upgraded and expanded upon as demand for electric vehicles increases and technology advances. This included adapting to new and advanced designs of connectors.
- The infrastructure is easy to use, monitor and maintain.
- Updates are received every 6 months detailing usage at the different locations and the CO2 emissions saving calculations.

Where Exploitation took place / Detail why

The product is transferable to other cities.

- **In the city:** The Brighton & Hove City Council Travel Planning website, journeyon.co.uk; and the Brighton & Hove City Council Corporate website promotes the measure and its registration scheme. Both have dedicated web pages.
- A film to further promote/exploit the measure was created. It featured local registered business users of the electric vehicle scheme. The film is shown on the BHCC corporate website and YouTube. It has been viewed 291 times on YouTube, since its creation in 2010.
- To encourage uptake we incentivised the registration scheme. Scheme registration, parking and electricity used whilst charging are all free. Several press releases were published (both online/and in news paper publications) to make people aware of this. The registration scheme began in February 2010. Initially we had 2 registered users which, over the last two years, has grown

steadily to 42 registered users.

- **In the region:** The EVCPs have featured in a number of recent high profile media events. One EVCP location was used in a promotional video by Peugeot to advertise their new iOn electric vehicle, and the Future Car Challenge was the 1st Brighton to London electric car event.
- Following the installation of the on-street electric vehicle charging points in the city, interest was expressed by neighbouring authorities. In July 2010, representatives from 10 local authorities in the southeast region together with Electromotive and the Sussex Air Quality Partnership met to discuss forming a South East Partnership for an Electric Vehicle Recharging Network. This partnership is led by Brighton & Hove City Council, Hampshire County Council and West Sussex County Council. Its objective is to develop a joint working arrangement to allow subscribers access to the charging points throughout the network.
- **In the country:** BHCC registered the on-street electric vehicle charging points with the national network EV Network (www.ev-network.org.uk) a directory of charge points where such vehicles may be charged. The 8 points were added to the EV Network national database map.
- Presented at national transport/energy related conferences to promote the electric vehicle charging points.
- Site visits and demonstrations have been given to partner cities in CIVITAS ARCHIMEDES and their politicians during the consortium meetings and to a regional/national audience during the CIVINET UK & Ireland Conference. In addition, a stakeholder workshop was held.
- **In other cities:** Our focus on exploitation and the dissemination of results and education helped to ensure that the project objectives made a positive impact locally and nationally and provided lessons for citizens, practitioners and policy makers in similar small and medium-sized cities. We have disseminated/exploited measure results at the following forums/meetings and have published magazine articles and information online.
 - CIVITAS Forum
 - CIVITAS Consortium Meetings
 - CIVINET Conferences
 - CIVINET Management Meetings
 - Study Tours
 - Workshops / Conferences

Who are the exploitant(s) / key players for exploitation?

- The EVCPs were promoted/exploited to local businesses in the city, regional/national local authorities; and residents/visitors with electric vehicles.
- **Key Players for Exploitation:** Brighton & Hove City Council: was in charge of promoting / exploiting the on-street charging points and the registration scheme, European-wide.

- Elektromotive supplied / installed the electric vehicles charging points; and administers the registration scheme on behalf of the council.

What activities have been and will be undertaken to ensure this is happening?

- **During the project:** (see the 'Where Exploitation took place / Detail why' section above).
- **After the project:** We now have plans to expand the number of Charging Points within the city and are in discussions with neighbouring towns and cities to set up a regional registration scheme- allowing people to use their electric cars to travel to Brighton & Hove from the wider area including London.

Measure n°3 Emissions VMS

- This measure used static and mobile air quality monitoring equipment to record and analyse the air in and around the school playground to gain an understanding of how transport activities can affect local air quality, for example.
- The data from this equipment was displayed in real time in the premises of nearby schools, participating in the project, and used as the basis for an educational initiative in the schools on the effects of emissions and pollution.

Exploitation Component

- This project links into Brighton & Hove's City Council's (BHCC) Corporate Priority, 'Making Brighton & Hove the most sustainable city in the UK'.
- Three primary schools took part in the Emissions VMS project.
- Pupils carried out experiments with a portable unit that they moved around the playground to see how emissions travel, which helped pupils learn about the environment and gain an understanding of how transport activities can affect local air quality, for example.
- The educational programme included lessons on the impact of air pollution, the local significance of biodiversity and visits to the ReachOut laboratory at Imperial College London's South Kensington Campus and the nearby Science Museum.

Where can Exploitation take place / Detail why

- This groundbreaking science project is ideal to be rolled out on a larger scale or transferred to another city/region of UK or Europe.
- **In the city:** 'Testing the Air' is a short film made by pupils from Elm Grove Primary School about the project. The film was used to promote/exploit the project locally. Press releases and magazine articles were published online and in hard copies to inform others.
- The Brighton & Hove City Council Corporate website promotes the measure and the film is the Air Quality section. The film was also uploaded to You Tube and has been view 403 times.
- **In the region:** The film was shown to educational establishments and organisations in the region through Regional School Travel Plan Partnership meetings.
- **In the country:** Dugas Technology and The Open Air Laboratories (OPAL) (who worked with the city council and the three primary schools during the project) published magazine articles and information online to scientific audiences. The project was also talked about during a presentation at the OPAL scientific conference in May 2011.

- Imperial College, London also has project information on its website, to promote/exploit the measure to a scientific audience.
- **In other cities:** The city council gave a presentation about the project at a European-wide CIVITAS webinar.

Who will be the exploitant(s) / key players for exploitation?

Target audiences included:

- Local primary schools
- Parents / Guardians
- Pupils
- Primary school teachers / head teachers and other members of staff
- Local and regional authorities/ government based educational establishments / organisations.
- Academic / scientific audiences.

Key Players for Exploitation:

- Brighton & Hove City Council was in charge of promoting / exploiting the project European-wide. The city council also installed the project equipment.
- Imperial College, London was appointed in October 2009 to work in partnership with the City Council, to deliver the educational component of the project through its leadership of the OPAL¹ and outreach programme², while Duvas Technologies researched and provided the equipment required.

What activities will be undertaken to ensure this is happening?

- **During the project:** The results will be presented in a report published by OPAL. This report will be available to the public to generate public interest and awareness of how different types of activities can affect local air quality, for example.
- The project was discussed/disseminated/exploited by Dr Mark Richards (Senior Teaching Fellow & Schools Liaison, Imperial College, London) at the OPAL Conference, London in April 2012.
- A promotional film documenting the science project was used as a promotional tool to different audiences.
- The project was discussed by Dr Mark Richards (Senior Teaching Fellow & Schools Liaison, Imperial College, London) at the 19th International Conference on Modelling, Monitoring and Management of Air Pollution on 19

¹ OPAL is a national initiative led by Imperial College London that aims to encourage people to investigate study, enjoy and protect their local environment. See: <http://www.opalexplorenature.org>

² Imperial College London's Reach Out lab links public engagement and outreach initiatives at the university. See: <http://www3.imperial.ac.uk/outreach/reachoutlab>

- 21 September 2011 in Malta.

- **After the project:** The Brighton & Hove City Council School Travel Team continue to work with the whole school community to promote safe, healthy and sustainable travel on the school journey.
 - 1.
- No specific measure related research and development activities have been planned. However, data from this programme will help many understand how localised air pollution propagates around our urban environment.
 - 2.
- Results from this project will serve as a valuable aid for local environment policy makers and transport planners, and will also assist scientists in developing more accurate data-driven atmospheric models.

Measure n°10 Multi Modal Ticketing

- This measure involves the introduction of a multi modal ticketing system which gives passengers the ability to travel seamlessly by bus and rail (covering their entire journey irrespective of changes in transport type) with the use of a smartcard, called 'The Key'.
- Users will ultimately be able to load a bus and a train product onto their Smartcard and be able to travel where they want, when they want on Brighton & Hove Bus and Coach Company buses and Southern Railway trains³, in line with the products purchased.

Exploitation Component

- The introduction of the Smartcard, called 'The Key'. The credit card sized Smartcard is an alternative to paper tickets. With the Smartcard a passenger is able to easily pay for bus products (weekly/monthly travel, for example) online and board quicker by simply swiping their Smartcard across the electronic Smartcard device as they board the bus. The Smartcard is also secure and easily replaced if lost.
- The introduction of a multi modal ticketing system which gives passengers the ability to travel seamlessly by bus and rail (covering their entire journey irrespective of changes in transport type) with the use of their Smartcard.

What Exploitation has taken place / Detail why

- **In the city / region:** The Brighton & Hove Bus Company promotes 'The Key' through its website: <https://www.smartbuses.co.uk/smart-card>
- A video has been produced to show people how to use the Smartcard. This can also be seen on the Brighton & Hove Bus Companies website: <http://www.buses.co.uk/tickets/key.aspx>
- 3.
- The video has been viewed 8321 times on YouTube.
- 4.
- Users of 'The Key' can also take part in B&H Bus Company's smartcard survey. <http://www.buses.co.uk/survey/survey-key.aspx>
- 5.
- A leaflet has been produced about the 'The Key'. The leaflet has been distributed widely across the city.
- 6.
- Wide-spread media coverage: Press releases and magazine articles have been issued / published to promote/exploit the product.
- **In the country:** Brighton & Hove is renowned in the bus industry for its high

³ Other buses and trains operate in the Brighton & Hove region, but Brighton & Hove Buses comprehensively cover all areas of the city. Trains other than Southern operate from Brighton Train Station, however Southern form a large degree of the market.

standards of quality marketing and publicity. Its marketing achievements have been recognised over the years with a number of highly prestigious awards. Presentations have been given to professionals in the transport industry. For example, the B&H Bus Company gave a presentation about its innovative and successful marketing techniques at the CIVINET conference in London in 2010.

- **In other cities:** The measure has been promoted/exploited European-wide via the CIVITAS website and through CIVITAS newsletters and publications.
- Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. 'The Key' was part of this. The film was submitted as part of our 2012 'CIVITAS City of Year' award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.

Who will be the exploitant(s) / key players for exploitation?

The product has been exploited to:

- Brighton & Hove bus users, residents, students, visitors, businesses
- Travel based businesses
- Local/regional rail companies
- CIVITAS partner cities

Key Players for Exploitation:

- Brighton & Hove Bus & Coach Company Ltd was the measure leader for this project and therefore designed/implemented/promoted the project and its products locally, regionally and nationally.
- Brighton & Hove City Council promotes / exploits 'The Key' through its website in the public transport section.

What activities will be undertaken to ensure this is happening?

- **During the project:** (see the 'Where Exploitation took place / Detail why' section above).
- **After the project:** Work continues to fully integrate the Brighton & Hove Bus Company's multi modal ticketing system with Southern Railway Trains to enable passengers to travel seamlessly by bus and rail (covering their entire journey irrespective of changes in transport type) with the use of a smartcard, called 'The Key'.
7.
- Once the system is fully integrated, promotional materials to raise awareness of the new multi modal ticketing system.

Measure n°21 Clear Zone

- Clear Zones constituted a package of measures, which aim to reduce the impact of vehicles through controlling access and movement in the area.
- As part of this project, research was carried out to look at the social and emotional benefits of good urban design.

Exploitation Component

- Brighton & Hove City Council's Public Realm Strategy aims to establish a coordinated, consistent and high quality approach to all work in the public realm, including the streetscape. The overall objective is to ensure the city's streets and public spaces are designed to bring maximum benefit to all residents. If all areas of the city work to maximum potential for residents, they will also be much more attractive for visitors.
- The Social and Emotional Benefits of Good Design was the research study we carried out as part of this project to better understand the social and emotional benefits of balanced street design, and develop new methodologies for assessing and evaluating the social and emotional benefits of balanced street design. The research focuses on New Road and Church Street in Brighton.

After the research study had been carried out we communicated/exploited:

- The research findings
- The new methodologies we developed for assessing and evaluating the social and emotional benefits of balanced street design.
- How New Road was redesigned into a Shared Space to bring maximum benefit to all residents.

What Exploitation has taken place / Detail why

- **In the city / region / country:** Presentations and workshops were given to interested transport / urban design professionals (in both the private and local government sector, nationally); and to urban design students studying at Brighton University.
- A presentation about the Clear Zone project was given at the CIVINET UK & Ireland Conference in 2010.
- 8. A Clear Zone study tour was given at the B&H Consortium Event in 2009 and during the CIVITAS Cycle Study Tour in Brighton this year (2012).
- 9. Articles about the project were published in national trade urban design and transport magazines in 2011.
- Web coverage: Brighton & Hove City Council promotes / exploits the research

findings on its website in the travel and transport section.

- **In other cities, European-wide:** Information about the project and the research study are published on the CIVITAS website.
- Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. Clear Zone was part of this. The film was submitted as part of our 2012 'CIVITAS City of Year' award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.

Who will be the exploitant(s) / key players for exploitation?

Audience:

- Urban Designers
- Urban Design / Engineering/Highway Bodies
- Transport Professionals
- Architects
- Urban Design / Architect Students
- Engineers
- Local politicians

Key Players for Exploitation:

- Brighton & Hove City Council was responsible for implementing and publicising European-wide.

What activities could be undertaken to ensure this is happening?

- **During the project:** (see the 'Where Exploitation took place / Detail why' section above).
- **After the project:** Results from the study will serve as a valuable aid for transport planners and urban designers, and will assist in the design of other city streets and public spaces in the future.

Measure n°31 Personalised Travel Plans

- Personalised Travel Planning (PTP) provides a range of individualised, tailored information and incentives to encourage travel behaviour change within a concentrated population area.
- Brighton & Hove expanded its existing PTP project of 10,000 households per year to 15,000 households in 2009 and 20,000 in 2010, 5,000 of which were part of the CIVITAS measure in each year.
- PTP was delivered to a further 5,000 households in 2011, all (100%) of which were part of the CIVITAS measure. In total, 35,000 households were targeted, 43% of which were financed by CIVITAS.
- Participation in the CIVITAS ARCHIMEDES project has also allowed the inclusion of innovative measures involving social media and community engagement.

Exploitation Component

Our innovative approach:

- Community Engagement / Participation including social media
- Partnership working
- Designed & developed training / initiatives to meet peoples travel needs.
- Provided tailor-made information / incentives

We used different consultation and engagement techniques to engage with residents and members of the community. For example:

- We visited 15,000 households to conduct face-to-face travel surveys and promote sustainable and healthy ways of travelling. (5000 households in the CIVITAS area).
- We engaged with existing community groups in the area. These include the Scouts, pub groups, community centres, church groups, Mother and Toddler Groups, Ramblers, Libraries, Book groups, walking groups, cycling groups, residents associations, schools etc to discuss travel in the city.
- We held a number of events at existing community groups and a number of people have expressed interest in becoming more involved in the promotion of sustainable travel within the community.
- Through the 15000 household, 7791 conversations were undertaken and of these 5330 people were classed as 'participants'.
- This means that they engaged with the travel advisor, discussed their travel habits and requested some information on one or more sustainable travel

<p>modes.</p> <ul style="list-style-type: none"> • This is a 'success rate' of 68% which is high for PTP schemes. • Alongside the traditional approach of PTP, we engaged with people/communities on-line using existing established forums such as Twitter, Facebook, Flickr and Twago.
<p>Where can take place the Exploitation / Detail why</p> <ul style="list-style-type: none"> • In the city/region: Press releases were issued and published by the local media about personalised travel planning initiatives and measures delivered/implemented as part of this project. • Project specific information is published on the Brighton & Hove City Council website in the 'Travel and Transport section' and n the CIVITAS website. • A Travel Planning presentation was given at the CIVITAS 'Cycling for All' Study Tour in March 2012 and at the B&H Consortium event in October 2009. The CIVITAS 'Cycling for All' Study Tour was open to neighbouring authorities and CIVITAS partners interested in innovative cycling measures and developing new cycle related products. • In the country & in other cities: Brighton & Hove City Council gave a Travel Planning Presentation at the 2012 CIVITAS Forum in Vitoria, Spain in 2012. 10.
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p>Audience:</p> <ul style="list-style-type: none"> • Residents in the city • Students in the city • Residents Associations • Community Groups/organisations • On-line Communities <p><u>Key Players for Exploitation:</u></p> <ul style="list-style-type: none"> • Brighton & Hove City Council carried out this project.
<p>What activities will be undertaken to ensure this is happening?</p> <ul style="list-style-type: none"> • During the project: Please read the 'Where has Exploitation taken place' section above for details. • After the project: Brighton & Hove City Council continue to promote personalised travel plan measures though its core work programme and the 4 year Local Sustainable Transport Fund (LSTF) project.

Measure n°32 Commuter Travel Plans / School Travel Plans

The main aim of this measure was to reduce the number of single car journeys by employees travelling to and from work, and to reduce the impact of the ‘School Run’ (parents driving their children to and from school), so as to achieve a sustained increase in the number of safe sustainable journeys to and from school.

These aims were achieved by working with businesses and schools to help them develop Travel Plans which detailed a range of measures to encourage more employees/children & parents to walk, cycle, use public transport or car share.

Exploitation Component

Our innovative approach:

- Community Engagement / Participation including social media
- Partnership working
- Designed & developed training / initiatives to meet peoples travel needs.
- Provided tailor-made information / incentives

Brighton & Hove City Council offered schools and businesses the opportunity to start considering just one form of travel they thought could become more sustainable based on their particular travel patterns.

This innovative approach was very practical. The travel plans included tailor-made information for that individual, school or business; and were likely to be written at the end of the process, rather than at the beginning (as has been traditionally the case) to allow them to explore and trial different options available to them before deciding on one form of travel.

Where can take place the Exploitation / Detail why

- **In the city/region:** Press releases were issued and published by the local media about school/commuter travel plan initiatives and measures delivered/implemented as part of this project.
- Project specific information is published on the Brighton & Hove City Council website in the ‘Travel and Transport section’ and n the CIVITAS website.
- A short film called ‘Scootability’ was produced during the project. It shows the local children having scooter training at school. Over one thousand children were given scooter training during the CIVITAS project. The film can be viewed on the BHCC web site or on You Tube.
- School / Commuter Travel Plan site visits took place as part of the CIVITAS ‘Cycling for All’ Study Tour in March 2012 and at the B&H Consortium event in October 2009. The CIVITAS ‘Cycling for All’ Study Tour was open to neighbouring authorities and CIVITAS partners interested in innovative cycling measures and developing new cycle related products.

- **In the region:** School Travel Planning presentations have been given at regional school travel meetings over the course of the project 12.
- Commuter Travel Plan presentations have been given at B&H Commuter Travel Plan Partnership meetings over the course of the project.
- **In the country & in other cities:** Brighton & Hove City Council gave a Travel Planning Presentation at the 2012 CIVITAS Forum in Vitoria, Spain in 2012. 13.
- Brighton & Hove City Council led a Travel Planning workshop in Krakow in 2010 as part of a Travel Planning CIVITAS Study Tour. 14.
- Brighton & Hove City Council were awarded runner-up in the 2011 CIVITAS 'Public Participation' Award.

Who will be the exploitant(s) / key players for exploitation?

Audience:

- CIVITAS partner cities,
- Local authorities and other internal partners
- Nurseries and primary/junior schools in the city
- Parents and guardians of the school children.
- Teachers/ Head teachers
- Local businesses / organisations
- Brighton & Hove City Council Business Travel Plan Partnership members

Key Players for Exploitation:

- Brighton & Hove City Council carried out this project.

What activities will be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where has Exploitation taken place' section above for details.
- **After the project:** Brighton & Hove City Council continue to promote school and commuter travel plan measures through its core work programme and the 4 year Local Sustainable Transport Fund (LSTF) project.

Measure n°44 Road Safety Project: Communal Sign

- This measure involved the development and launch of a coordinated and branded road safety publicity campaign to increase road safety awareness and influence the behaviour in groups of people who are statistically most at risk of being injured in collisions.
- This was followed by the implementation of innovative road safety engineering measures, at 4 high risk sites in the CIVITAS area in order to improve safety.

Exploitation Component

- The coordinated and branded road safety publicity campaign.

Where can take place the Exploitation / Detail why

- **In the city/region:** Large road safety awareness campaign posters were displayed in bus shelters at 'at risk' sites across the city. To raise awareness and encourage public participation members of the community featured in the campaign posters walking, riding and driving in the city.
- Road safety awareness campaign banners were hung from lampposts in and around 'at risk' sites across the city.
- Press releases were issued and published by the local and national media to raise further awareness.
15.
- Online content was published via the Brighton & Hove city council website and other key national road safety websites.
- Two radio adverts were created and played on air locally/regionally.
- **In the country / other cities:** Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. CIVITAS Road Safety Measures were shown during the film. The film was submitted as part of our 2012 'CIVITAS City of Year' award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.
16.

Who will be the exploitant(s) / key players for exploitation?

Audience:

- Cyclists
- Moped / motor cycle users
- Pedestrians
- Drivers
- Other transport professionals locally, nationally and European-wide.

Key Players for Exploitation:

- Brighton & Hove City Council carried out the project

What activities will be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where has Exploitation taken place' section above for details.
- **After the project:** Brighton & Hove City Council continue to promote road safety and improve/expand road safety engineering measures through its core work programme and the 4 year Local Sustainable Transport Fund (LSTF) project.

Measure n°45 Bike Off

- Brighton & Hove has historically suffered from a high number of cycle thefts and initial research showed that people who experience bike theft are less likely to purchase another bike and cycle again. The Bike-Off project aimed to work with key stakeholders and implement a range of innovative measures to combat cycle theft and increase cycle use.
- The city council worked with the local police, the local crime reduction partnership and residents associations in the 10 identified areas.

Exploitation Component

To decrease the rate of stolen bicycles in the city, the project:

- Communicated good cycle locking practice to existing and new cyclists at local community events.
- Implemented secure cycle parking to facilitate good cycle locking practice.
- Introduced innovative cycle parking measures in conjunction with a high profile publicity and awareness campaign at 10 high-risk sites. For example,
- The 'Bike watch' Initiative developed a 'Bike watch' Weblog. This was a shared on-line journal where residents (living in the 10 identified areas) could contact the local 'Bike watch' Officer or post diary entries about local cycle parking and theft related issues affecting them and their neighbours.

Where Exploitation took place / Detail why

- **In the city:** Throughout the awareness campaign, press releases were issued/published in the local media.
- A 'Bike watch' initiative newsletter was designed and distributed to all residents living in the ten identified areas.
17.
- Communicated good cycle locking practice to existing and new cyclists at local community events. Secure cycle locks and bike marking kits were also issued at each event.
18.
- A 'Bike watch' Neighbourhood Area window sticker was designed and given to residents. Residents were encouraged to display the sticker in their front window to inform passers-by that the area was part of the 'Bike watch' area.
19.
- Cycle stand stickers were designed and attached to cycle stands in the ten areas to remind cyclists how to lock their bike securely to the cycle stand.
20.
- 'Good cycle locking practice' leaflets were designed and sent to all the residents and cycle shops in the 10 identified areas.
21.
- **In other cities:** The innovative cycle parking measures were shown to CIVITAS colleagues during the CIVITAS 'Cycling for All' Study Tour in March

2012 and at the B&H Consortium event in October 2009. The CIVITAS 'Cycling for All' Study Tour was open to neighbouring authorities and CIVITAS partners interested in innovative cycling measures and developing new cycle related products.

22.

- Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. The 'Bike Off' project was part of this. The film was submitted as part of our 2012 'CIVITAS City of Year' award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.

Who will be the exploitant(s) / key players for exploitation?

- New and existing cycle users in the city.
- Residents, visitors,
- Cycle shops/retailers in the city.
- The local police, local crime reduction partnership

Key Players for Exploitation:

- Brighton & Hove City Council carried out the project.
- 'Design Against Crime' (DaC) worked with BHCC to design of the awareness campaign materials.

What activities will be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where Exploitation took place / Detail why' for details
- **After the project:** Brighton & Hove City Council continue to promote cycling and cycle safety through its core work programme.

Measure n°54 Car Clubs

- Membership based car sharing organisations (known as ‘car clubs’ in the UK) provide pay-as-you-go access to vehicles. They have developed in recent years as a sustainable transport mode which encourages walking, cycling and the use of public transport, whilst giving users access to a car for journeys where this is the most suitable means of transport.
- Importantly, the journeys by other modes are trips that non-car club members may be more likely to make through personal car use, with associated consequences for congestion and the environment.
- However, car clubs are largely confined to more densely populated and affluent areas, as is the case in Brighton & Hove. It was planned that, through its participation in CIVITAS ARCHIMEDES, Brighton & Hove City Council (BHCC) would expand the existing scheme to more socially disadvantaged and less densely populated locations.
- Whilst significant efforts were made to progress this project, insurmountable barriers were encountered and the **project was formally cancelled**.

Exploitation Component
N/A
Where can take place the Exploitation / Detail why
N/A
Who will be the exploitant(s) / key players for exploitation?
N/A
What activities will be undertaken to ensure this is happening?
N/A

Measure n°55 Cyclist Priority

This measure introduced innovative engineering measures along the city’s cycle network to reduce stop-start cycling conditions, improve cycling journey times and reduce cycle conflict with other traffic.

Exploitation Component

The measure forms 3 elements:

- A shared surface through a reinvented ‘pocket park’.
- Innovative ramps that enable people with cycles to navigate physical barriers created by (rail bridge) steps.
- Road marking to enable cyclists to turn left at an otherwise straight ahead only junction.

Where did Exploitation take place / Detail why

- **In the city / region:** This project links into Brighton & Hove’s City Council’s (BHCC) Corporate Priority, ‘Making Brighton & Hove the most sustainable city in the UK’.
- Press releases were issued and published by the local media.
- Brighton & Hove published project web content online.
- The innovative cycle measures were shown to CIVITAS colleagues during the CIVITAS ‘Cycling for All’ Study Tour in March 2012. The CIVITAS ‘Cycling for All’ Study Tour was open to neighbouring authorities and CIVITAS partners interested in innovative cycling measures and developing new cycle related products.
- A presentation was given at the CIVINET UK & Ireland Conference in Brighton in 2010, during which the Cyclist Priority project was spoken about.
- **In the country & in other cities:** Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. Cyclist Priority measure were shown in the video. The film was submitted as part of our 2012 ‘CIVITAS City of Year’ award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.

Who will be the exploitant(s) / key players for exploitation?

- Transport / engineering professionals/students
- Cyclists
- Local Railway Stations (Footway Cycle Ramp project)
- Local Highway Authority (Footway Cycle Ramp project)

- Local Artists / urban designers ('Pocket Park' project)
- Local residents living near each element of the project.

Key Players for Exploitation:

- Brighton & Hove City Council carried out this project.
- Brighton University worked on designing the footbridge cycle ramp.

What activities will be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where did Exploitation take place / Detail why' section for details.
- **After the project:** Brighton & Hove continue to expand cycle infrastructure as part of its core work programme.

Measure n°64 Freight Quality Partnership

The work carried out within the measure comprised four tasks:

- Provide a review and elaboration of FPQ activity, taking into account best practice from European and United Kingdom cities.
- Perform surveys with businesses and freight carriers located within four distinct areas of central Brighton.
- Initiate an agenda to form either a formal or informal FQP.
- Implement a hard measure to reduce the impact of freight.

Exploitation Component

- Findings from the review and elaboration of FPQ activity.
- Research into possible means of improving freight delivery and loading arrangements in the city.
- Findings from surveys completed by businesses and freight carriers located within four distinct areas of central Brighton.

Where did Exploitation take place / Detail why

- **Locally:** A local Freight Quality Meeting was arranged so that the city council and local businesses and stakeholders could come together to discuss improving freight delivery and loading arrangements in the city and develop solutions.
- Unfortunately only one business turned up to the inaugural Freight Quality Meeting. The success of this project was always dependent upon the participation and willingness of stakeholders. It is likely that the Council will target these groups through wider public consultation on amendments to existing Traffic Regulation Orders (TROs).

Who will be the exploitant(s) / key players for exploitation?

- Audience: Local businesses / courier service providers.

Key Players for Exploitation:

- Brighton & Hove City Council carried out the project.

What activities could be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where did Exploitation take place /

Detail why' section for details.

- **After the project:** The research / findings from the review and elaboration of FPQ activity and surveys completed by businesses and freight carriers located within four distinct areas of central Brighton will serve as a valuable aid for transport planners, and will assist in design of measures to reduce the impact of freight in the future.

Measure n°71 Cycle Counter Display / JourneyOn Mobile

This measure involves the improvement of available public transport information. The travel information website (www.journeyon.co.uk) enables users to obtain personalised information about their journeys, including optimum route, time required, calories burnt (by mode) and topography.

Elements of this service were programmed to become accessible via handheld devices.

Exploitation Component

- The creation of a mobile version of the council's travel planning website 'JourneyOn' (www.journeyon.co.uk).
- Improving access to travel planning information for residents and visitors of the city.

Where did Exploitation take place / Detail why

- **In the city/region:** To mark the launch of 'JourneyOn' mobile, large publicity posters were displayed in bus shelters across the city. Smaller sized promotional posters were sent to hotels, libraries, all council buildings, universities etc in the city.
- Press releases were issued and published in the local media and through the city council's website online.
- A competition was launched to further promote 'JourneyOn'. Competition entrants were asked to register their details on the 'JourneyOn' website to be in with a chance of winning a Smartphone.
- **In the country / other cities:** Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. 'JourneyOn' mobile was featured as part of the video. The film was submitted as part of our 2012 'CIVITAS City of Year' award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.
- A presentation about travel planning in Brighton & Hove was given at the CIVITAS Forum in Vitoria, Spain, 2012. The JourneyOn website and JourneyOn mobile was discussed during the presentation.

Who will be the exploitant(s) / key players for exploitation?

Audience:

- Local residents
- Visitors to the city
- Commuters
- Other local authorities (regionally and nationally).

- Other organisations in the transport / web development field

Key Players for Exploitation:

- Brighton & Hove City Council carried out/publicised the project.
- Steer Davies Gleave developed the 'JourneyOn' mobile software
- Bite Studio designed 'JourneyOn' mobile interfaces.

What activities will be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where did Exploitation take place section' for details.
- **After the project:** Promotion and development of the 'JourneyOn' website and 'JourneyOn' mobile continue to be part of the city council's core work programme.

Measure n°72 Public Transport Information for the visually impaired

- This measure aimed to improve accessibility and public transport provision for people who are blind or partially sighted in Brighton & Hove by providing audio devices, known as React units or talking bus stops, to relay the information displayed on Real Time Information (RTI) signage.

Exploitation Component

- In August 2007 Brighton & Hove became the first area in the UK to introduce talking bus stops for blind and partially sighted people, which included real time bus information and orientation information.
- The ARCHIMEDES project allowed for 12 React units to be installed at 12 real time bus stops, thus improving access for those who previously used units in place at other locations in the city. A total of 42 ‘talking bus stops’ are installed in the city.
- In addition, the measure was able to fund a further 200 key fobs, which are used to operate the system, in order to allow a larger number of residents to gain access to the information and improve their confidence whilst travelling alone.
- The fob alerts users when they are near a talking bus stop. By pressing the fob the bus stop ‘talks’ to them, giving them details of which services are due, and where they are going to and when they are due to arrive, meaning they no longer need to rely on fellow passengers for help.

Where can take place the Exploitation / Detail why

In the city/region: On-going exploitation include: the distribution of the project evaluation report to interested parties.

- The project has been promoted through a number of press releases and through the Brighton & Hove City Council’s website and travel information website www.journeyon.co.uk.
 - The council produced a leaflet which has been widely distributed across the city.
- 25.
- Further promotion took place at European Mobility week in September 2010 and at various other transport related events.
 - The first CIVITAS Talking Bus Stop was launched at the CIVITAS Consortium event in Brighton & Hove in October 2010.
 - **In the region/country:** Brighton & Hove City Council has (and continue to) promote Talking Bus Stop at regional/national transport conferences. BHCC has been awarded with several national awards for the innovative

26. Talking Bus Stop systems.

- **In other cities:** Brighton & Hove City Council produced a film showing the city-wide CIVITAS measures implemented over the course of the project. 'Talking Bus Stops' were shown in the film. The film was submitted as part of our 2012 'CIVITAS City of Year' award entry, shown at the CIVITAS Forum 2012 in Vitoria and at the CIVINET Conference in Edinburgh this year.

Who will be the exploitant(s) / key players for exploitation?

Audience:

- Blind and partially sighted people
- Organisations in the technology industry
- Organisations in the transport industry
- Organisations for blind or partially sighted residents in the city.
- Other local authorities, locally, nationally and European-wide.

Key Players for Exploitation:

Brighton & Hove City Council carried out / promoted the project.

What activities could be undertaken to ensure this is happening?

- **During the project:** Please read the 'Where Exploitation has taken place' section for details.
- **After the project:** Brighton & Hove City Council continue to install upgraded 'Talking Bus Stop' systems in the city, as part of the 4 year Local Sustainable Transport Fund (LSTF) project.

Donostia – San Sebastian

Measure n°4 / Biofuels and Clean Vehicles in Donostia-San Sebastián

Within this measure biodiesel at high blends has been tested by CTSS, the urban public transport company of Donostia-San Sebastián. As a first step in the development of the measure, a mixing/filling station was purchased and implemented at the CTSS headquarters. Once in operation, a testing pattern with increased blends has been deployed. At the end of the demonstration period 95 out of 120 buses are running on a B-30 blend, 15 buses with B-50 and 6 buses with B-100.

Also within the measure, part of the bus fleet was replaced by new EEV vehicles. This further lowered local emission levels. Now there are 31 EEV buses fully operational on the urban routes, including 1 fully operative hybrid bus.

As a complementary action to the introduction of biodiesel in the city bus fleet the municipality started using biofuel in its municipal fleet. 82 municipal vehicles are powered by biofuel blends. Also the municipality has introduced 13 hybrid cars and 7 electric vehicles among the Municipal Police, the Mobility Department and the Town Hall services, as well as 4 electric bicycles, as part of the ARCHIMEDES demonstration project.

Exploitation Component

- *Methodology:*
 1. Use of independent underground storage tanks for Biodiesel and Diesel.
 2. Deep cleaning of the underground fuel tanks (both) prior to Biodiesel first use.
 3. Selection of the appropriate pumping station and filter systems (one for Diesel and another one for Biodiesel).
 4. Control and flexibility of the blend used in each bus. Periodical analysis of samples taken.
 5. Continuous communication with the Biodiesel/Diesel supplier.
 6. Continuous communication with the vehicle supplier for ensuring the correct maintenance program if needed.
 7. Step-by-Step evolution, with previous testing periods in the whole range of vehicle technologies (Euro 1,2,3,4, EEV) prior to massive applying to all the vehicles.
- *Tool/Software:* Biofuel “in line” Mixing Station,
- *Technology / Process:* Biofuel “in line” Mixing Station, the first serial produced Lions City Hybrid Bus of MAN.
- *Process:* Training for drivers and maintenance teams. Campaign for using recycled oils.
- *Result:* Total control of the results. No filter plugging problems, no mayor mechanical problems detected.

Where can take place the Exploitation / Detail why

In the city: Other local fleets can change to Biodiesel. The private petrol Stations can purchase the mixing equipment to offer any blend.

In the region: petrol stations

In the country: other public transport operators (members of the national association, ATUC)

In other cities: other public bus companies

In other sectors: private bus companies

Who will be the exploitant(s) / key players for exploitation?

The target groups can be other public or private bus companies. These would be the most similar cases so copying the experience would be relatively easy.

For other municipal fleets, the Municipality itself should be the main actor, encouraging the use of biodiesel.

For private fleets, on the one hand, the vehicle suppliers must allow the use of good quality biodiesel, while on the other hand biodiesel producers must ensure the quality of their product. The decisive factor is the price: There should be economical advantage for using Biodiesel instead of Diesel, encouraging this is a task of local/national governments through their tax policies.

What activities could be undertaken to ensure this is happening?

(Selection of) Actions already carried out

- Organisation of international conference Clean fuels, Clean Vehicles, Cleaner Cities in co-operation with BIOSIRE and CIVITAS VANGUARD. With additional programme for ATUC members (Spanish national association of public transport companies) 15-16 June 2011
- Workshops in Dbus facilities discussing the experience with local stakeholders (September 2011).
- Articles in local press, Dbus newsletter
- 2 rounds of Used oil recycling promotion campaign in September 2011
- New item about the 30% energy savings of the MAN Hybrid bus on the CIVITAS website
- Flyers for each bus line with promotion of use of biodiesel
- Update of the CIVITAS ARCHIMEDES movie on public transport measures, including hybrid bus
- Dissemination of evaluation results of the measure through news item
- (May) Participation in Hybrid User Forum Bus Section workshop #2 in Rotterdam and Utrecht to share experiences on the implementation of the hybrid bus
- *Technical Visits to DBUS facilities (biodiesel filling station):*
 - Neighbour associations: Bera Bera (August 2011) + 2011-2012
 - Children groups (300 kids)
 - AMA Puerto Rico
 - Autobuses La Estrella (Mexico)
 - SEMITAN Nantes
 - EMTUSA Gijon
 - MoveAveiro
 - Merseytravel Liverpool
 - NTA Dublin

- CUISA Mexico DF
- TUVISA Vitoria
- CHATHMAN Savannah-Georgia (USA)

Planned actions for future, after ARCHIMEDES

- More hosting of site visits foreseen (e.g. Brighton Bus Company, Autobuses Lleida, TCC Pamplona)

Measure 16 High Quality Public Transport Corridors in Donostia-San Sebastian

Within this measure two High Quality Bus Corridors have been implemented. These corridors combine dedicated platforms (5km of additional bus lanes) and other priority measures (80 reprogrammed UTCs in crossroads to ensure PT priority) with all dimensions of quality in public transport according to the UNE EN-13816 quality standard:

- Offered service: the offered service may guarantee that occupancy ratios would not exceed 3 passengers per square metre
- Accessibility: all buses must be adapted to handicapped people
- Information: updated and reliable information regarding service provision and incidences must be provided in all bus stops
- Waiting time and service frequency: waiting time must not exceed in more than 25% the programmed scheduling. Expeditions must not accumulate more than 5 minutes delay or arrive 1 minute before scheduled time.
- Customer attention: a Customer Attention Plan should be in place and a Customer Attention protocol followed by staff. Complains should be answered within 20 days.
- Comfort and cleanliness: there should be an inspection and cleaning protocol to guarantee optimal conditions in terms of comfort and cleanliness
- Security: a Safety and Security Plan should be issued and put in practice
- Environmental impact: low emission vehicles should be operate the service

Exploitation Component

- *Methodology:* The methodology adopted is based on standard phases of project management. First of all, it is necessary to do a technical study with economical analysis. The second step is the decision to implement the measure. The third step is the planning of the different phases and tasks, and finally the implementations of the different tasks.
- *Tool/Software:* The tools and software used are innovative in the transport sector: urban BRT concepts, surveillance camera system, quality standard UNE-EN 13816.
- *Technology / Process:* The technologies used are also innovative: GPS location system, GPRS, HDSPA-3G and WIFI communication systems, surveillance camera system with 10 images per second resolution, and traffic light priority system integrated into the PS location system
- *Results:* The measure has resulted in an increase of public transport use, due to an improvement of quality of service, security, punctuality and reliability. The evaluation results indeed show increased user satisfaction and a growing number of passengers.

Where can take place the Exploitation / Detail why

In the city: Not possible. Only CTSS-DBUS gives service in Donostia-San Sebastian.

In the region: In the intercity buses. Currently, they are implementing the same GPS location system and the surveillance camera system as the ones implemented in CTSS-DBUS

In the country:
This measure can be implemented in cities from across the country, especially in cities with more than 20.000 inhabitants.

In other cities:

Cities such as Pamplona, Gijón, Vitoria, Barcelona, Madrid, Valencia, Málaga, Santander, Lleida, Granada, Bilbao and Palma de Mallorca have shown an interest in the measures that have been implemented in CTSS-DBUS to analyse the possibility of exploiting this measure in their bus services .

In other sectors:

The surveillance camera system can also be implemented in taxis and police vehicles.

Who will be the exploitant(s) / key players for exploitation?

The target groups must be public administration and public transport operators. They are the ones in charge in applying this kind of measures.

The main actor to carrying out of the exploitation must be the public transport operator, but it is necessary a great involve of the local administration.

Exploitation can also be made through the ATUC (association of public transport operators)

What activities could be undertaken to ensure this is happening ?

(Selection of) actions already carried out

Presentations at Conferences:

- Urban BRT in Donostia-San Sebastian (CATALIST CONFERENCE, Treviso, 29th March 2011)
- Surveillance camera system in DBUS (ATUC, Málaga 4th June 2011)
- Intelligent Transport System in Donostia-San Sebastian (IRIZAR & Queretaro Government, 20th July 2011)
- Bus Light Priority in Donostia-San Sebastian (Funchal, CIVITAS Forum 19th October 2011)
- SITE Project Consortium Meeting in San Sebastian (18-19 June 2012)
- Vitoria CIVITAS FORUM (25th September 2012)
- QUEST Project (27th November 2012)
- ATUC New Technologies Commission (28th November 2012)

Technical Visits to DBUS facilities (bus control centre):

- Neighbour associations: Bera Bera (August 2011) + 2011-2012
- Children groups (300 kids)
- AMA Puerto Rico
- Autobuses La Estrella (Mexico)
- SEMITAN Nantes
- EMTUSA Gijon
- MoveAveiro
- Merseytravel Liverpool
- NTA Dublin
- CUISA Mexico DF
- TUVISA Vitoria
- CHATHMAN Savannah-Georgia (USA)

Publications:

- Update of the CIVITAS ARCHIMEDES movie on public transport measures, including hybrid bus
- DBUS Berri (quarterly)
- Website: www.dbus.es
- Dissemination of evaluation results of the measure through news item

Planned actions for future, after ARCHIMEDES

- More hosting of site visits foreseen (e.g. Brighton Bus Company, Autobuses Lleida, TCC Pamplona)

Measure - 17 Business District Shuttle Bus in Donostia-San Sebastian

This measure entails the introduction of new bus services for commuters that connect four peri-urban business districts with the ARCHIMEDES high quality public transport corridors and mayor public transport nodes in the city.

Changes in the infrastructure and the bus stops in order to improve public transport operations in the business districts have been undertaken. In particular, priority measures such as dedicated lanes and priority at traffic lights were implemented (4 out the additional 5 km of bus lanes implemented within CIVITAS affect routes connecting with business districts, while all 80 priority measures in traffic lights affect those lines). In addition, waiting facilities at bus stops were improved.

The new bus services introduced are operated, as the rest of bus lines, using bio-diesel buses to maximise the environmental benefits of commuters choosing to use these services instead of their own car.

Exploitation Component

The implementation of business district bus services can perfectly be exploited if there is both a political and a company managers' commitment for the use of the public transport instead of the car.

- *Tool/Software:* The tools used are surveys to commuters in the different business districts of the city and a participative process with the involved companies.
- *Technology / Process:* The technologies used are innovative. All the bus services to the business districts have a GPS location system, GPRS, HDSPA-3G and WIFI communication systems, surveillance camera system, and traffic light priority system integrated to GPS location system.
- *Result:* It has been demonstrated in the city of San Sebastian that commuters prefer to travel in one step from their homes to their jobs, than in two steps implementing shuttle buses only in the surroundings of the business districts.

The measure implementation has resulted in an increase of public transport use due to an improvement of quality of service, security, punctuality and reliability.

Where can take place the Exploitation / Detail why

In the city: Not possible. Only CTSS-DBUS gives service in Donostia-San Sebastian

In the region: In the intercity buses. Currently, we are working together in a project to improve the business district bus services from other cities outside Donostia – San Sebastian. In other cities with the same pattern of economic areas without PT good service.

In the country:

This measure could be implemented at the national level, especially on cities with more than 20.000 citizens. This would require the collaboration of ATUC (national association of PT operators in Spain, where Donostia-San Sebastian has an important role)

In other cities:

Cities such as Pamplona, Gijón and Vitoria, have shown an interest to know what kind of bus services we offer to the business districts, to analyse the possibility of exploiting this measure in each city.

In other sectors:
Not possible.

Who will be the exploitant(s) / key players for exploitation?

The target groups must be public administration, companies and public transport operators. They are the ones in charge in applying this kind of measures.

The main actor to carrying out of the exploitation must be the business districts companies' managers, but also a great involvement of all the employees of these industrial areas is necessary.

What activities could be undertaken to ensure this is happening?

- Surveys at the different business districts, taken by Mobility Department or Business Districts Managers to determine the overall trips of the commuters and their disposal to use public transport.
- Implementation of direct bus lines from most districts to the business districts, so that commuters can travel in only one step. This action should be taken by public transport operator with the support of the Local Authority.
- Further implementation of shuttle buses services to business districts completing the overall bus services and connecting to other modes of transport such as trains. In this point is very important the involvement of the Business districts managers and all the employees.

(Selection of) actions already carried out

- Presentation of mobility management plans for 5 business districts within measure 33
- Shuttle bus operating in Miramon since 2nd May 2012 on labour days from 8:00-10:30 and from 16:30-19:30
- Dissemination of results through news items

Planned actions for future, after ARCHIMEDES

Measure 18 / Advanced Park & Ride Network in San Sebastián

Within this measure, the municipality of Donostia–San Sebastian has developed a comprehensive plan to set up a Park & Ride network, considering the high level of traffic entering the city every day (51.343 vehicles entering the city along the CIVITAS corridors).

Four car park locations were selected to provide P&R services due to their good connection to the main public transport lines, as well as its location nearby the main arterial corridors entering the city, thus providing an alternative to as much commuters arriving to Donostia-San Sebastián as possible.

The measure was also intended to implement a new management scheme for these parking facilities, in line with the P&R concept, and ensure a better integration between car and public transport. But several factors have delayed the implementation of this measure, being the main one the introduction of a generalized regulation for all four parking facilities, which would no longer be available for free.

The idea was to start charging a fee for parking in all four P&R locations, while providing discounted rates to those users connecting with public transport. Soon after the regulation scheme was implemented in one of the selected parking facilities (Lautximieta car park) strong public and political opposition emerged against the new regulation scheme and decision makers postponed its implementation until more solid grounds for its political support and public acceptance are achieved.

Nevertheless, some steps ahead to strengthen the P&R concept have been taken. In particular, P&R facilities have been identified as such and vertical signing allocated along the main corridors entering the city aiming to encourage commuters to use them and easily guide them to these facilities. Also, sign post indicating location and walking distance to public transport connections have been implemented in all P&R facilities. Finally, a share of available parking spots in each parking facility will be reserved for P&R users, guaranteeing its availability for such users. The citizen card will be used to ensure that the occupant of the parking spot is connecting with public transport after he or she has parked.

<p>Exploitation Component</p>
<ul style="list-style-type: none"> • The method for defining the best location for the Park and Ride sites, taking into account the main entrances of car traffic in the city. • The signage system.
<p>Where can take place the Exploitation / Detail why</p>
<p>In medium sized and large cities. More particularly those where traffic congestion starts to be a problem in the city center and need to have in control some specific and repetitive traffic flows created for instance by commuters or schools/university.</p> <p>The city needs to have a sufficient size for the P&R sites to have an added value to the more centrally located parking facilities.</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p>
<p>Both public and private operators of parking facilities could use the method. It is however the local authority that needs to take the lead.</p>

What activities could be undertaken to ensure this is happening?

The best way to get to know the measure would be a site visit. Due to the limitations in the final implementation of the measure (as compared to the initial plan) no site visits regarding this specific measure have occurred. It could be an option to include the experiences of the measure in a site visit with a larger scope.

(Selection of) actions already carried out

- Presentation of the new signing system towards the Pak & Ride sites (March 2012)

Planned actions for future, after ARCHIMEDES

- Municipal bylaw update to establish a new road signing reserves in P&R sites and introduction of P&R registration machines.
- Launch of the service in agreed P&R sites.

Measure 23 / Changing Parking Behaviour in Donostia- San Sebastián

In 2010, Donostia-San Sebastian completed a study on the new parking regulations and the extension of paid parking in the city centre. The growing demand for parking in the western part of the city mainly due to increased commercial activity revealed the need to extend the restricted parking scheme to this area. Consequently the paid parking scheme was implemented in the neighbourhoods of Antiguo, Benta Berri and Errotaburu. In addition to the extension of the parking management scheme, a new pricing policy has been designed and introduced in order to reduce the number of car trips to the centre of the city. The policy integrates both on-street and underground parking. Parking fares (both on-street and underground) have been increased and differentiated according to an improved zoning structure.

Four Pricing Zones have been defined, following a radial criterion, fixing more deterrent, higher to lower rates depending on parking demand in each zone.

- *Special Zone: This applies to areas where parking demand is higher. It is the most expensive pricing zone and it is associated with the shortest Maximum Lengths of Stay.*
- *Red Zone: Also intended for high parking demand areas where parking charges are, however, somewhat cheaper than those of the Special zones.*
- *Blue Zone: This targets “peripheral” areas with short and medium-term parking demand.*
- *Green Zone: Meant for the “outlying” areas, in order to avoid the border effect and to provide long-term parking facility in those areas. Prices are more affordable and Maximum Length of Stay is the longest.*

The system establishes Maximum Lengths of Stay based on the type and level of demand that needs to be met in each zone. These conditions are combined with three tariff bands that are defined according to the type of user. As part of the measure, the parking regulation bylaw has been modified to reflect the changes in the parking policy. The measure also included the implementation of preferential and reserved areas for high occupancy vehicles (HOV) as a mean to promote car-pooling, considered as powerful tool to reduce congestion. An information campaign explained the changes in the parking policy to the citizens of the respective neighbourhoods.

Exploitation Component

Methodology: How to design a paid parking area, where the policy (pricing and length of stay) for each street is determined by the desired use of the street.

A further exploitable element is the introduction of a system that allows high occupancy vehicles (more than 2 passengers) to reserve an on-street parking spot as well as the related enforcement method.

Finally, the evaluation results will be potentially interesting for other cities. The evaluation of the extension of paid parking areas might reveal potential design errors of the method. The separate task of business parking charges has encountered several implementation barriers among which a large protest of workers in the target areas during a municipal election period. The process evaluation of this task will be of interest for other cities that want to implement paid parking in business districts or industrial estates.

Where can take place the Exploitation / Detail why

In other cities: Cities that experience problems with on-street parking and need to regulate traffic flows around the city to overcome problems, such as, congestion or pollution in any

specific zone/s or in overall

Who will be the exploitant(s) / key players for exploitation?

Local authorities and private and public managers of business districts and technology parks.

What activities could be undertaken to ensure this is happening?

(Selection of) actions already carried out

- A news item on the CIVITAS website about the incentives for high occupancy cars at University campus has been produced.
- Dissemination of the evaluation results through press release and news items.

Planned actions for future, after ARCHIMEDES

- On-going monitoring and regulating process to have the system updated in relation to current traffic needs.
- HOV parking service expansion.

Measure 24- Extension of infrastructure for cycling and walking in Donostia – San Sebastian

This measure addresses a number of pre-requisites for cycling and walking to play an important role in urban mobility in DSS. The main action is that road space dedicated to these modes have been increased. In fact, the city has extended the pedestrian zone by 4 kilometres. Also the cycle network has been completed with 22 kilometres of additional cycling lanes since the ARCHIMEDES start, summing more than 50km in total and making relevant connections between the former network and the new extensions. An interesting action has been the reuse of two obsolete rail tunnels as long cycle lanes connecting San Sebastian and its metropolitan area, important neighbourhoods or the Anoeta Stadium, avoiding hilly itineraries and bridging highways. Three new axes have been built. The new itineraries allow a direct and quick cycle direct connection between the University, diverse neighbourhoods, other cities of the metropolitan area of Donostia and the city centre.

In addition, 60 new bicycle parking facilities (providing parking space for 600 bicycles) have been installed. Furthermore, underground bicycle parking facilities are being installed in the city centre in order to stimulate the use of the bicycle. In particular, indoor bicycle parking inside underground car parking lots in the city centre is being offered to cyclists, providing financial incentives to the residents of these areas to use the service.

Exploitation Component

- *Methodology:* Definition of design and construction criteria for different types of cycling lanes. The classification of the types of cycling lanes also makes it easier for users to know which characteristics to expect from a specific bike-lane.

In some cases, we had the opportunity to include the cycling or walking infrastructure in bigger developments. In these case close co-ordination with other departments was need to make this possible.

Recycling of obsolete existing infrastructures (abandoned train tunnels) for completing he Cycling network with important connection in difficult topography.

The concept of Walking and Cycling, meaning the common strategy for reinforcing active modes and quality of public space within the city is an input firstly developed in Donostia, at least in the Spanish mobility scene. The last developments in San Sebastian (Antiguo, Universidad, Benta Berri have got a balanced share of public space really interesting as a model for other cities, in a sort of super-blocks similar to those planned for Vitoria-Gasteiz, completely implemented).

- *Tool/Software:* Currently testing a mechanical cyclist counting system to be used in the evaluation of the measure.
- *Result:* 33% increase in the number of urban cyclists. Maintenance of a high number of pedestrians as main users of the public space.

Where can take place the Exploitation / Detail why

In the city: The cycling lane network and the walking network will continuously be extended further in San Sebastian, and implementing a better connectivity and accessibility to the whole city.

In the region: The construction and extension of the cycling network can be done in the region, a first regional plan is written, but the structural cycling lanes might be developed. The walking network is an urban action.

In other cities: the measure can be adopted in other cities.

In other sectors: Private developers could construct cycling lanes in private areas, making use of the design and construction criteria in their development plans.

Who will be the exploitant(s) / key players for exploitation?

In this case the main actor in carrying out the exploitation of this measure would be the public administration. The mobility of the cities, regions and countries are managed by different governments. These governments are the most important groups to make possible the implementation of this measure on the way to reduce the use of private cars and analyse all the process.

What activities could be undertaken to ensure this is happening ?

(Selection of) actions already carried out

- An information campaign to the cyclist about the rules to cycle in the city was done by the police. It started the 28th of February and finished the 25th of September of 2011. This campaign is of relevance for future extensions of the local network.
- A learning history workshop about the cycling network, vertical transport and city bike scheme was held on the 15th of September 2011 in San Sebastian into the European mobility week. This workshop was aimed to local technical experts and Mobility Advisory Board partners.
- An overview document of design and construction guidelines ready by the end of 2011.
- New updated leaflets of the cycling lanes printed in 2012 including vertical transport connections.
- In previous years the city has hosted several site visits on cycling and walking for professionals from other cities.
- Publication of monitoring data on cycling on the website of the Cycling Observatory (April 2012)
- Updated version of the map of cycling lanes in the city (April 2012)
- Organise site visit on cycling and walking during the ARCHIMEDES consortium meeting (May 2012)
- Presentation at the “Webinar - Provisions for cyclists” (June 2012)
- Presentation of combined cycling measures at CIVITAS Forum (September 2012)
- European Mobility Week 2012: Walking activities (September 2012)
- Produce news item on monitoring/evaluation results for CIVITAS website

Planned actions for future, after ARCHIMEDES

- Example, the role of bicycles in the European Cultural Capital 2016 in Donostia-San Sebastian.
- Underground parking provision for bicycles
- Intermodality once that the new intermodal bus-station is implemented (construction should start in May 2013).

- New regional cycle connections
- New cycling lanes in residential developments.

Measure 33/Travel Plans. Workplace travel Plans in Donostia – San Sebastian

The municipality of Donostia – San Sebastián (ADS) has developed five Commuter Travel Plans for five employment/business areas at the peri-urban fringe of the CIVITAS Plus corridor (Zuatzu, Miramón, Igara, Poligono 27 and Belartza). Based on a comprehensive research phase aimed at the understanding of travel behaviour in each business area, particularly the high incidence of car use and the reasons behind such car dependency levels, Commuter Travel Plans identify actions to reduce car use, the promotion of cycling and walking and the introduction of programmes for car-pooling and car-sharing, together with an effective monitoring and evaluation plan.

It was planned that the implementation of the foreseen actions would started right after the presentation of the Action Plans in each industrial and business are. Unfortunately, while all of these Action Plans have been presented and discussed with stakeholders, the current financial crisis has delayed the implementation of most of the initiatives which require any kind of investment. Most of the activities carried out so far lies under the strategic line “Interaction, information and awareness”, which do not require large resources and are essential to establish the grounds for the success of future developments.

Exploitation Component

Bearing in mind the group for which this measure is intended (Business Areas, Industrial estates...) the measure is perfectly capable of being exploited in any kind of mentioned areas. Its **methodology** is very clear and the main stages could be summarised in the following ones:

- Research and Data collection
- Diagnosis
- Action programs
- Travel plans implementation
- Evaluation

Some minor adjustments will be needed depending on the properties of the place to analyse in terms of mobility aspects (road access, PT, parking offer...etc.) but the development of the measure can follow the same methodology as shown above.

About **Tool/Software**, the research of related documentation is the key to know how to carry out each stage properly. All documentation can be obtained referring to the place of study will be useful in preparing action programs.

Data mining from the fieldwork will require databases to encode the information collected, prior to its exploitation through statistical analysis techniques.

For spatial analysis of commuting patterns some type of Geographic information system (GIS) will be required.

In action programs definition and implementation, a specific staff with skills in data exploitation will be needed and especially in the process of implementing the plans, the support of all stakeholders related to the mobility centre will be required.

It is important to promote the project. It is recommended to start early with information provision, either through press conferences or publications in the media available in the area. In turn, during the project it is necessary to maintain contact with all actors involved through

regular meetings in order to show project progress and to encourage their participation. Depending on the duration of each phase, it is recommended that these meetings are not too much dispersed in time. Monthly or two month meetings would be appropriate.

Action programs will also generate a need for information that may provided through public events and by distributing brochures. These public events should be organised in the area itself to strengthen the implementation.

Where can take place the Exploitation / Detail why

The measure could be (partly) replicated in other mayor work centres like business districts or industrial estates. It is preferable that the study area is not extremely large, since that could mean a large amount of information complicating the process. At the same time, the greater the range of action, the more agents will be needed to be involved in the process, which may delay the implementation of the measures.

Who will be the exploitant(s) / key players for exploitation?

It is necessary that the exploiting body has the authority to take decisions at municipal and regional level and to involve relevant actors, both public and private due to the nature of the actions that can be carried out. Because of this local authorities are the main actors.

What activities could be undertaken to ensure this is happening ?

(Selection of) actions already carried out

- Workshops with businesses and neighbourhood associations of the five business districts to present the action plans (April 2012)
- Presentation of specific leaflets tailored to each business area informing about mobility options (August 2012)
- News items/press releases about evaluation results (August 2012)

Planned actions for future, after ARCHIMEDES

- Permanent contact with all business areas to future mobility developments.
- Research of Bike sharing scheme implementation

Measure n°33: School Travel Plans

This measure has developed and up-scaled a pilot School Mobility project already implemented in one Donostia-San Sebastian district before the ARCHIMEDES project started. Its goal was to raise awareness among children and their parents, as well as teachers, about the benefits of sustainable mobility aiming to promote a behavioural change, under the premises of a quality and safety improvement for children and their families on their trips to school.

In particular, this measure aimed at increasing walking and cycling levels, as well as public transport use, in school-based mobility, therefore promoting a modal shift away from car in trips to and from school.

The intervention strategy to achieve the measure goals comprised the development of two fundamental streams of work:

- *Infrastructure improvements to promote changes in mobility behaviour in the family environment (and the educational community at large: students, teachers and parents).*
- *Work together with teachers and parents associations to raise awareness of the need to promote a behavioural change in school-based mobility.*

Exploitation Component

Almost all elements of this measure can be replicated. It is however very important to adjust the measure to the local context of the other city.

Methodology:

- Information about priorities and criteria of local mobility policy.
- Training of people who will carry out/lead the measures
- Define and identify the main actors for carrying out the measures
- Coordination and collaboration with the other stakeholders
- Identify potential risks both in infrastructure and traffic behaviour in the direct surroundings of the school
- Take corrective measures to counteract the dangerous traffic situations.

Tool/Software:

Tools for awareness raising, presentations/speeches, group dynamics, seminars and small-group work.

Design of actions to improve the security in school area.

Process:

- Inclusion of the whole educational community in its widest sense for solving the city's mobility problems.
- Gradual transformation of city areas around the schools.
- Close cooperation with other project managers within the mobility department and with the city administration as a whole.

Where can take place the Exploitation / Detail why

In the city: The final goal is to reach all schools of the city, step by step. This will be a gradual process and with different levels of activity and co-operation for each of the schools. Reaching all schools will take time. Ideally the way to school programme would grow in number of project manager and become a regular service provided by city hall.

This type of measure is important because along the range of measures for sustainable mobility it is the one that entails the closest contact with the citizens on the street and within their communities. This way we are able to work on the fundamental issues of mobility attitudes and daily travel behaviour, although the results might be harder to evaluate on the short term. However, this measure permits us to form groups of persons that under the banner of improving the safety of their children, is involved in improving mobility of their neighbourhood and starts to question the prevailing dominance of the private car. The groups of people are very heterogeneous in all cases and their discussions are very interesting. Many times the groups come up with high impact and highly visible measures. It is also important that the measure permits to mobilize an endogenous resource of ideas and energy which take the schools as their epicentres.

In the region: Since Donostia is the capital of the province, it has a leading/example role for the smaller towns of the province. During the last years, some smaller towns of the province have been replicating the Way-to-School experience of San Sebastian, also causing further impacts on sustainable mobility measures. .

In other cities: The export of all Way-to-School model is possible to city with a similar urban structure: a compact city with clear geographical reference points that can bind together the citizens on a neighbourhood level.

Who will be the exploitant(s) / key players for exploitation?

The key players would be first the leaders of the original measure who have the practical knowledge and valuable information about do's and don'ts as well as about how to tailor the measure to the reality of different neighbourhoods/schools of the city.

The receivers would be mobility professionals of a local authority, as well as education specialists, for example on environmental education, citizen participation or traffic safety.

What activities could be undertaken to ensure this is happening ?

Dissemination en various media contributes to the visibility on different scales: local, regional, and national. It also helps to measure in reaching different sectors of society like education, environment, transport and mobility.

Another way is the organisation of visits, seminars, conferences etc. that offers the possibility for persons to exchange ideas.

(Selection of) actions already carried out

- Written Media in the education sector: BAIKARA, EHIGE, ...
- Written Media in the mobility sector: Publication on traffic safety by DGT (national transport ministry)
- Local Media: Local papers, radio and television, webs specialised in the environment.
- Conferences, seminars:
- DGT on line,
- Seminar about way-to-school during the European mobility week.
- Presentation about the measure during the ARCHIMEDES consortium meeting in San Sebastian (2011)

- Joint publication with the Spanish Ministry of the Environment about the 4th National Seminar on Way-to-School projects
- Participation in Technical working session with practitioners in the Basque country about Soft measures for Traffic Safety (Hirisegur)
- Extensive article about evaluation results from the way-to-school measures in the regional newspaper.
- Present results from Way-to-School project at national conference in Madrid about Autonomy of children in cities

Planned actions for future, after ARCHIMEDES

New developments involving school travel plans, launching new campaigns to foster the use of bicycle and public transport among teenagers.

Measure n°/ Title 34. Personalised travel plans in Donostia – San Sebastian

A Personalised Travel Plan (PTP) is a well-established method for encouraging citizens to use more sustainable forms of public transport. The main objective of the Personalised Travel Plans (PTP) is to achieve a reduction in the use of cars and an increase in walking, cycling and the use of public transport. This is done by means of initial data collection, providing the citizens with information on their best option for use of other sustainable means of transport as an alternative to private vehicles and combining this action with incentives such as public transport vouchers or gifts.

Within this measure, the Municipality of Donostia- San Sebastián has developed over 200 PTPs in the main housing districts of the CIVITAS corridor. To do so, the city has undertaken a programme of over 300 house-visits to households in the main housing districts of the CIVITAS Plus corridor, to provide targeted information on sustainable travel modes. The aim was to explore the possibilities that Public Transport offers for their specific trips and what the difference in costs and travel time would be compared to the current situation.

The households whose members declared interest in exploring the alternative were offered a free Public Transport pass for 3 months to try out the service (the pass also included free access to the public bike scheme).

Exploitation Component

The high degree of long term behavioural change revealed by the measure evaluation, the measure can be considered as having a high exploitation potential.

The measure plan carried out has been the following one:

- Preparation of documentation
- Initial data collection
- Diagnosis of Mobility and proposals
- Submission of mobility proposals
- Mobility survey after incentive period
- Mobility survey after non-incentive period

Although the first 4 stages are typical of this type of study is important to define the type of incentive that is going to offer the participant and will depend on where the study is done and available resources.

Taking into account the duration of the study (in our case, 10 months) it is important that the incentive is attractive to attract participants with the aim of assuring their participation in such a long period.

Because an important aspect of the study is the information given to the participant, a necessary **tool** is to have as much as information possible related to ways of transport within the area.

About software requirements it will be necessary a database to process all data gathered in surveys, and a geographic information system will be useful to analyse alternatives to participants' mobility habits.

Because during the project several surveying campaigns are conducted, it will be necessary

to have a telephone service to have the possibility to perform them by phone and it will also be needed to have sufficient staff to conduct the surveys to participants' homes.

Where can take place the Exploitation / Detail why

The limit of available resources will be what limits the range of action. Keep in mind that when the wider the scope, more different types of modes of transport types can be found and study of alternatives will be complicate proportionally because the greater the supply the combinations of different modes of transport will increase.

Who will be the exploitant(s) / key players for exploitation?

The operator may be both public and private, but it is preferred to be public because when presenting the project to potential participants, presenting it in an official way, can encourage their participation.

It will also be necessary that the operator has contact with the agents of transport for the information must be required from them at different stages of the measure.

What activities could be undertaken to ensure this is happening ?

Due to the nature of the measure, which is mainly limited to research and analysis and contact with participants, the best way to publicize the project is through periodic publications about project development.

Depending on exploiting authority (public /private) some project presentation can also be planned through press release or public statement.

(Selection of) actions already carried out

- News item on CIVITAS website about evaluation results (March 2012)
- In-depth article on evaluation results to publish in specialised Maganize/journal (April 2012)
- Case/study news item for ELTIS and or EPOMM websites (May 2012)
- Fifth round of surveys among participants (May 2012 - one year after the trial)

Planned actions for future, after ARCHIMEDES

Continue on-line survey campaign about mobility habits in the city with the aim to have a background BD for future developments in other city neighbourhoods.

Measure 46-47 Safe districts and 30km zones in Donostia-San Sebastián - Road Safety Measures in Donostia-San Sebastián

Aiming to promote new driving patterns among car users through design elements and increase road safety by means of a reduction in the average speed of motorised vehicles and providing safe crossing points for pedestrians and cyclists, 30-km-zones have been implemented in three populated neighbourhoods in the city centre of Donostia – San Sebastian. In addition to a new layout for public space in these areas, interventions at 50 crossings to increase safety for cyclists and pedestrians have been undertaken.

Aiming to make effective that speed limitations are observed by drivers, radar systems have been introduced in three locations along a main arterial road in the city.

New driving patterns are expected to influence non-motorized mobility, reducing the perceived risk, especially by cyclists who share the road with motorized traffic, thus promoting its use.

These actions have been accompanied by awareness rising and promotional campaigns.

<p>Exploitation Component</p> <p>All actions taken within these measures can perfectly be exploited without problems</p> <ul style="list-style-type: none"> • Process: Involvement of local stakeholders through Mobility Advisory Board and Citizen’s road safety pact. • Result. Evaluation shows a desired impact on speed reduction and lower number of accidents.
<p>Where can take place the Exploitation / Detail why</p> <p><i>In the city:</i> Radar systems can be transferred to other arterial roads in the city.</p> <p><i>In the city:</i> new 30-km-zones could be implemented in other neighbourhoods in the city.</p> <p><i>In other cities:</i> These measures can be adopted in other cities. Although 30km areas cannot be implemented in any area and these must be carefully chosen. A distinction between residential/local access streets (where the 30-km-zone approach is suitable) and collector/arterial streets (where higher speeds makes it difficult to implement 30-km-zones at a first stage) should be made.</p> <p>Regarding radar systems, the fining system must be efficient. Otherwise the goals of the measure will not be achieved.</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p>The target group must be public administrations. They are the institutions in charge of applying this kind of measures. The data needed to adopt these measures can be measured and taken by these administrations. The main actor to carrying out of the exploitation must be the institution that has been responsible for the actions taken. People who have been involved in the projects are the person who will better explain what has been done, and how it has been developed.</p>

What activities could be undertaken to ensure this is happening?

(Selection of) actions already carried out

- Promotion campaign: leaflets, merchandising, information in bus stops, street information in the three districts where have been implemented the 30-km-zones.
- Presentation at VANGUARD Results Workshop on 13 September 2011 in Brussels
- News item for CIVITAS website on evaluation results of both measures

Planned actions for future, after ARCHIMEDES

- Disseminate measure results by attending seminars and workshops
- The speed cameras will have a probable future spread in different points of the city, where speed problems can be found.
- Also there is a plan to introduce new 30-km-zones in the Gros and Amara districts

Measure 56 - Car Sharing in Donostia - San Sebastián

Within this measure the municipality of Donostia – San Sebastián has put in operation an electric car-sharing system in the city. In its beginning stage, the car-sharing scheme accounts for 6 cars (4 electric and 2 plug-in hybrid) available for subscribers to the service in 3 locations (Elias Salaberría, Bermingham and Hernani streets).

The system, which is operated by Ibilek car sharing (www.ibilek.es/en/), started operating in October 2012.

Exploitation Component

Interesting elements for exploitation:

- How to organize a tender for a publicly (co-)funded car sharing system
- The organisation of the car sharing system
- The use of electric vehicles (visibility on the streets, possibility for citizens to try an electric vehicle)

Where can take place the Exploitation / Detail why

In the city: In case of success the car sharing system could be expanded in the city

In the region: There is already a co-operation within the Basque country for car-sharing projects combined in the three basque capitals. In case of success, it can be extended to other medium cities, as the territory is really accessible and the travels between cities are common.

In the country: The system is one of the few in Spain. There is a large field in other cities for this experience in medium cities. Only Barcelona and Madrid have implemented such services.

In other cities: This is for sure interesting for other cities with similar characteristics in Europe.

In other sectors: Can be used by the electric car industry to introduce and promote their vehicles. Also is a way to test the EVE, both for industry and possible users.

Who will be the exploitant(s) / key players for exploitation?

The private operator that won the tender could operate similar systems in other cities.

Also the city mobility department can share their experience in developing the tender and the citizens' reaction towards the scheme.

Manufacturers of electric cars could also use the experience to demonstrate and explain electric car operation and driving, like the driving range or the on board unit operation.

What activities could be undertaken to ensure this is happening?

(Selection of) actions already carried out

- Launch event
- Press releases
- New items
- *Publicity in TV in the buses*
- *4 signaged buses*
- *Posters in bus stops*

Planned actions for future, after ARCHIMEDES

Research customers' profiles in order to develop tailored awareness and promotion activities to attract more users to the system

Measure n°/ Title 57 - Vertical Transport in Donostia - San Sebastián

In a city like Donostia-San Sebastián, surrounded by mountains and with half of the population living in hilly neighbourhoods, vertical transport systems can be very important elements of the transportation system, assisting pedestrians and cyclists over steep terrain and improving accessibility conditions to these neighbourhoods, thus favouring a non-motorized mobility culture in the city.

Aware of it, the Municipality of Donostia-San Sebastian (ADS) initiated in 2007 the development of a vertical transport network. Proven the effectiveness of the systems, within the CIVITAS project the city of Donostia-San Sebastián has expanded the existing vertical transport network by implementing 7 additional elevators and 6 new escalators/ramps to support cycling and walking inside and towards the city centre.

The measure is considered a step forward in the development of the non-motorized network since it has not only improved the access to existing walking and cycling infrastructures but also interconnect them through the creation of new routes.

Exploitation Component

- *Methodology:* An analysis of the existing vertical transport and of new possible locations for lifts and ramps/escalators was done.

To define these new possible locations different criteria were taken into account:

- A. Population served and demographic characteristics.
- B. Travels to and from the district concerned (modal split).
- C. Pedestrian and cycle connectivity.
- D. Public transport alternatives.
- E. Topographic features and their relation to the buildings and activities.

To define the type of element to use in the new possible location these criteria were used:

- Slopes where installed:
- Height difference overcome
 - Carrying capacity
 - Accessibility
 - Installation cost
 - Attractiveness for user

- Maintenance costs:
- Energy consumption

- *Tool/Software:* Software that allows to manage the different elements of the vertical transport system: ramps and escalators.
- *Technology / Process:* Special technology on the construction of the lifts and ramps/escalators taking into account the vandalism, perception of security of people and that these elements are outdoors.

- *Result: It is important to know the characteristics of the users like gender, age and the modal split.*

The number and characteristics of users has been obtained with manual counting near to the new vertical transport system.

Where can take place the Exploitation / Detail why

In other cities: the measure can be adopted in other cities with sustainable mobility strategy and similar hilly conditions.

In other sectors: There is not chance to apply these measures in other sectors. Public bodies manage the mobility of people. Collaboration with private organisations could be possible.

Who will be the exploitant(s) / key players for exploitation?

The main actor in carrying out the exploitation of this measure would be the public administration. Public administration is the most important target group to make possible the implementation of this measure.

What activities could be undertaken to ensure this is happening ?

(Selection of) actions already carried out

New map and information brochure about vertical transport systems (May 2012).

Planned actions for future, after ARCHIMEDES

Measure n°/ Title 58.- City Bike Scheme in Donostia - San Sebastián

After a pilot test with 5 dispatch points, the municipality of Donostia-San Sebastián has permanently implemented and enlarged the City Bike scheme initiated in 2008 to 9 dispatch points throughout the CIVITAS corridor and introduced 150 new public bicycles.

The system requires registration, after which the user receives a magnetic card that allows making use of the bicycles at the dispatching points. This way, the system can track the usage of the bicycles, including the name of the user, remaining responsible if it is stolen, vandalised or damaged in any way, in which cases the users would be charged a penalty fee. During the first hour the service is free. The user pays 1 € for the next second hour and 3 € for the third and fourth hour, being the use of the system limited to a maximum of 4 hours. Penalty fees and service restrictions are foreseen for delayed users. The public bike-sharing service is available between 7:30 am and 9:00 pm everyday of the week, 52 weeks a year, with only 3 days per year in which the service is not working. The system is also open for tourists' use.

The goal of this measure is to increase the cycling culture by providing those who doesn't own a bicycle the opportunity to use this mode on any or part of their daily trips. In particular, it is expected that non cyclist use the bike scheme for occasional unplanned trips and/or as access mode to other transport services (intermodal trips).

Exploitation Component

The complete concept of the city bike can be exploited in other cities. In continuation we present different elements of the San Sebastian experience with city bikes.

Methodology:

To define this new possible location for the extension of dispatch points, different criteria where taken into account:

During the planning phase, areas in the city surrounding the CIVITAS Corridors that could host a dispatch point based on the next criterion were examined:

- Areas with dense population.
- Areas with good cycling infrastructures.
- Flat areas of the city.
- Central areas of the city
- Areas that are close to the city centre.
- Areas where transport systems interlink.
- Busy areas like for example university or office quarters.

In the implementation phase, specific locations for the dispatch points were selected.

1. Maximum walking distance from any point of the selected neighbourhoods to the dispatch point: 500 m.
2. Interlink with public transport. Train stations and bus stations.
3. Busy areas: University, Commercial areas, Sport facilities.

Tool/Software:

The tools and software utilised in the bicycle-lending scheme in Donostia-San Sebastian, incorporates electronic and telecommunication technologies to prevent robbery and to make the service more user friendly. To pick up a bike from a bicycle stand the user will need to swipe their card through the reader, which will record their order and details. A computer

registers the details and order of each user.

Technology / Process

1. Bicycles:

The bicycles are strong vehicles designed specifically for a long lasting life despite being used by many different users.

The bicycles, comparing to conventional commercial models, are fitted with an anti-theft system on which each part, wheels, saddle, handle, etc. is incompatible with any other bike and therefore parts are easily recognisable if re-used or re-sold.

2. Bicycle stands

The “Derbis” or bicycle stands are small pillars specifically designed to:

- Identify the user when a card is swiped through the machine.
- To hold and lock each of the bikes when not in use.
- To articulate the locking and unlocking mechanism when a user is identified.

3. Tracking and data control systems

The bicycle-lending scheme in Donostia-San Sebastian incorporates electronic and telecommunication technologies to prevent robbery and to make the service more user friendly. To pick up a bike from a bicycle stand the user will need to swipe their card on the reader, which records their order and details.

After a phase during which the system was only accessible to inhabitants of San Sebastián, the system started offering 1-day, 3 day and weekly passes for visitors and tourists.

Result

The technology used for managing the system, automatically collects data of the service. Periodically a report is produced including the following information:

- 1) Number of people in the service
- 2) Percentage of users by male/female sex/year
- 3) Percentage of users by age and year
- 4) Number of uses of the service by year
- 5) Number of uses per month
- 6) Number of uses depending on time use

Where can take place the Exploitation / Detail why

In the city: the measure has been taken at city level. The possibility to expand to other areas of the city is currently under analysis.

In other cities: the measure can be adopted in other cities.

In other sectors: There is not chance to apply these measures in other sectors. The mobility of people is managed by public authorities. The management of the system is done by a private company.

Who will be the exploitant(s) / key players for exploitation?

The main actor in carrying out the exploitation of this measure would be the municipality of San Sebastian. The management of the local service is carried out by a private company called CEMUSA.

Other municipalities form the most important target group for the exploitation activities.

What activities could be undertaken to ensure this is happening ?

(Selection) of actions already carried out

- A workshop about city bike scheme, Cycling lanes network and vertical transport held in September 2011 in San Sebastian as part of the programme of the European mobility week.
- Presentation during the Conference on Public Bike Systems organized by the Spanish network Cities for Cycling, in Santander on 13-14 October.
- Include the city bike system in site visits on cycling. Dates of site visits depend on requests from interested cities.
- Presentation on cycling in San Sebastian at the CIVITAS Forum (September 2012).
- New tender for the selection of a renewed exploitation model to ensure the continuation of the service in the future (November 2012)

Planned actions for future, after ARCHIMEDES

- Implementation of the new bike sharing scheme.
- Research of dispatch points in business areas.

Measure 65 Energy Efficient Freight Logistics in Donostia-San Sebastian

Within this measure, a goods distribution model that adjusts better to the urban reality of the city has been developed, reducing the number of freight vehicle kilometres and increase loading rates of freight vehicles in the city centre, contributing to decrease fuel consumption and reduce vehicle emission.

Following the recommendations of a feasibility study, an implementation plan was developed including the creation of a freight consolidation centre for the last mile distribution of goods, the use of clean vehicles for last mile distribution (electric cargo bicycles), regulatory options to improve loading behaviour (renewed loading/unloading bays and time scheme, new traffic flow distribution, access control, etc.), increased control in the use of loading bays (more mobility agents), and the design of a night distribution protocol.

Exploitation Component

- *Methodology:* The preparation of the measure in co-operation with local stakeholders. The need for a diagnostics study that also includes opinions and ideas of the stakeholders. Start the implementation with a pilot measure. Combine new services and new regulations with improved enforcement (with video cameras). Combine implementation with mayor communication campaign.
- *Tool:* The vehicle: Txita Cargobike, adapted for pedestrian-friendly and 30km/h areas. The centre for Distribution in urban centre.
- *Technology:* Videocameras to enforce the time windows for loading and unloading.
- *Process:* The txita cargobike service operated by the company Txitrans (www.txita.com) from a consolidation warehouse.

Where can take place the Exploitation / Detail why

In the city: Within the city itself there is another area in which this measure might be implemented. In fact the city is seeking funding for the creation of the second warehouse from which the Txitas would provide the distribution service.

In the region: In the Basque Country there are several cities that have already implemented this city distribution system with Cargobikes: Bilbao, Vitoria and Elgoibar.

In the country: Other cities around the country can also adopt the Txitas approach to urban goods distribution (like in Barcelona wher they have started making use of the Txitas).

There are many cities that are interested in the project.

Who will be the exploitant(s) / key players for exploitation?

The main exploitant is the Txita company. The company is providing training and consultancy to other cities.

The measure leader IVL is a regional network for logistics and is therefore the perfect organisation to spread the concept of the measure to other cities and companies in the Basque country and Spanish cities and regions.

The target groups are both private distribution companies and municipalities that want to work on freight/city distribution.

What activities could be undertaken to ensure this is happening ?

(Selection of) actions already carried out

The Txita company has already “exported” the service to various other Spanish cities (e.g. Barcelona: VanaPedal, <http://www.vanapedal.es>).

The complete measure has been presented by IVL and the city at several national and international conferences:

- The measure first results were presented at the CIVITAS FORUM in Malmö in 2010.
- 23rd of March 2011, Presentation at the II CONGRESO NACIONAL DE MOVILIDAD Y DISTRIBUCION URBANA SOSTENIBLE, title of presentation: "Nuevos Modelos DUM en San Sebastián".
- 7th of April 2011, presentation at ‘Jornadas sobre Avances del Transporte de Carga en Área Urbana’ in Santander.
- 18 October 2011, Barcelona. Presentation of the CIVITAS measure 65 at the AECOC Conference. The AECOC forum is the largest association in the sector in Spain with 250.000 members.
- Txitrans has presented its experience in a meeting of the IEE project Cycle Logistics.
- Presentation of measure results at Master course on Logistics (July 2012)
- Information campaign about the demonstration programme in the old town including New leaflet on measures in the old town (9000 copies) distributed in October 2012.
- Presentation of the DSS experience at the “CIVITAS workshop: CO2 free city logistics Rotterdam, the Netherlands, 12 October 2012”
- International Seminar to present the results of the measure in November 2012, with more than 100 assistants from diverse cities.
- News items about results of the measure
- Provide evaluation results to several Phd students and EU projects who have asked for information

Actions planned after ARCHIMEDES

- Seek for funding for the creation of the second warehouse from which the Txitas would provide the distribution service.
- Carry-on disseminating the results of the measure by participating in seminars and conferences.
- Provide assistance to other municipalities interested in implementing a similar concept of urban goods distribution in their territories

Measure 73-Bus Traveller Information in Donostia-San Sebastian

Within this measure, a more efficient information system is put in operation in order to provide current and potential public transport users with the ability to better plan their trips and optimise their travel times, mostly by reducing waiting times at stops and favouring a reliable connection with other routes and services.

A new travel information system was implemented, providing real time information such as arriving bus line, waiting times, connections, eventual incidents in the service, through the following means:

- Real time information system on-board announcing next stop and connections
- Provision of bus arrival times by SMS messages.
- Provision of bus arrival times via Bluetooth.
- Electronic information panels at bus stops providing information on arriving busses, waiting times and eventual disruptions or re-directions of the services.
- Renewed web site including real time information at bus stop level and a route planner.

The onboard and web information systems have been adapted to visually impaired people.

Exploitation Component

All actions taken in these measures can perfectly be exploited if there is a political commitment to implement the various tasks involved.

- *Tool/Software:* The tools and software used are innovative in the transport sector: GPS location system is imperative to have real time information at bus stops (through electronic boards), on mobile phones and in the website.

In year 2011, CTSS-DBUS has implement 6 new electronic boards at bus stops, and has also substitute the TFT old boards by a new TFT boards that have better visualisation.

Besides, CTSS-DBUS has also implement an alternative solution for mobile phones based on the Bluetooth system, on 20 bus stops, some of them inside business districts.

- *Technology / Process:* The technologies used are also innovative: communications by GPRS, HSDPA-3G and WIFI is needed to give a huge information system to travellers.
- *Result:* Once the actions are implemented, we expect an increase of public transport use, due to an improvement on the information system, essential to increase the confidence of travellers on public transport.

Where can take place the Exploitation / Detail why

In the city: Not possible. Only CTSS-DBUS gives service in Donostia-San Sebastian.

In the region: In the intercity buses. Currently, they are implementing the same GPS location system and information system (mobiles solution and electronic message signs at stops) as

the ones implemented in CTSS-DBUS.

In the country:

This measure can be implemented in all the country, specially in cities with more than 20.000 citizens, with the support of ATUC (Association of PT operators in Spain) in the measure dissemination.

In other cities:

Cities such as Pamplona, Gijón, Vitoria, Barcelona, Madrid, Valencia, Málaga, Santander, Lleida, Granada, Bilbao and Palma de Mallorca have shown an interest to know what measures have been implemented in CTSS-DBUS to analyse the possibility of exploiting this measure in each city.

In other sectors:

The electronic boards could also be used in the tourist buses if they implement a GPS location system.

Who will be the exploitant(s) / key players for exploitation?

The target groups must be public administration and public transport operators. They are the ones in charge in applying this kind of measures.

The main actor to carrying out of the exploitation must be the public transport operator, but it is also necessary a great involvement of the local administration (they must approve the installation of electronic boards at bus stops).

What activities could be undertaken to ensure this is happening?

All kind of information systems implemented can easily be exploited, but is essential to have previously a GPS location system.

(Selection of) actions already carried out

- Combined PT measures to be presented at CIVITAS forum in Vitoria (September 2012)

Actions planned after ARCHIMEDES

Implement electronic boards with bus arrival information at 10 additional bus stops, to achieve 100 stops (20% of the total stops)

Measure 74-Bus Management System in Donostia-San Sebastian

Currently DBUS operates a fleet of 120 buses over 27 regular routes (plus night and special services). A permanent staffs of 346 drivers is required for that (with additional driving staff required often). In this context, planning and management are key elements for an efficient service provision.

Within the CIVITAS project, CTSS-DBUS has introduced a new expert planning and fleet management system that makes use of HSDPA-3G communication technology for the data exchange between the buses and the central information system.

The new expert planning and fleet management system enables the company to respond adequately to the mobility needs of the users by optimizing the number of buses and drivers required in each case, while providing optimal working conditions for drivers.

The measure is aimed at making a more efficient use of the available resources of the public transport company of Donostia-San Sebastian, mainly driver's productive hours. In this regard, an improvement in the ratio between the total amount of working hours of the driving staff as compared to the productive hours (i.e. without considering time loses, mainly due to staff shifts) is pursued.

Exploitation Component

All actions taken in these measures can perfectly be exploited if there is a political commitment to implement the various tasks involved.

- *Tool/Software:* The tools and software used are innovative in the transport sector: GPS location system is a great system to take decisions and an expert planning system in the way to optimize resources to give the most services with the less costs.

In year 2011, CTSS-DBUS has implemented a WIFI free Internet access to all the bus stops of line 28 (the most used bus line of the company).

- *Technology / Process:* The technologies used are also innovative: communications by GPRS, HDSPA-3G and WIFI is used and dedicated software for public transport operator has been implemented.
- *Result:* Once the actions are implemented, we expect an increase of public transport use, due to an improvement of the service, on the information to travellers and also on the information and labour quality for drivers.

Where can take place the Exploitation / Detail why

In the city: Not possible. Only CTSS-DBUS gives service in Donostia-San Sebastian.

In the region: In the intercity buses. They have implemented the same GPS location system as the one implemented in CTSS-DBUS, and they are also looking forward to implementing expert planning systems.

In the country:

This measure can be implemented in all the country, specially on cities with more than 20.000 citizens.

In other cities:

Cities such as Pamplona, Gijón, Vitoria, Barcelona, Madrid, Valencia, Málaga, Santander, Lleida, and Palma de Mallorca have shown an interest to know what measures have been implemented in CTSS-DBUS to analyse the possibility of exploiting this measure in each city.

In other sectors:

The expert planning system can also be used for planning employee's timetables in all kind of companies such as Airlines, Local Administration, Schools and Manufacture companies.

Who will be the exploitant(s) / key players for exploitation?

The target groups are public transport operators. They are the ones in charge in applying this kind of measures.

The main actor to carrying out of the exploitation must be the public transport operator, but it is also necessary a great involvement of all the employees, specially the drivers and the inspectors.

What activities could be undertaken to ensure this is happening ?

Both communication systems, GPS location systems and expert planning systems can be exploited to other companies if operator is greatly involved with an enthusiastic involvement of employees.

(Selection of) actions already carried out

- Combined PT measures to be presented at CIVITAS forum in Vitoria (September 2012)

Actions planned after ARCHIMEDES

- Hosting visits from interested PT companies (Autobuses de Mérida, Autobuses Lleida, TCC Pamplona)
- Improve the AVL system providing drivers better and easier to understand information to achieve higher quality services and fuel consumption reductions.

Measure 75 / Park & Ride Parking Guidance System in Donostia-San Sebastián

The search for an available parking space could be considered as an additional factor in traffic generation, particularly at times of peak demand when finding an available space is difficult. For this reason, it is clear that the mobility generation by the search for parking also needs to be controlled.

Parking Guidance Systems (PGS) are designed to contribute to ease congestion resulting from vehicles travelling to a city's parking facilities by directing vehicles to the nearest available parking space, at the same time that they promote energy savings by means of shorter journeys.

In this context, the municipality of Donostia – San Sebastian has seen the need to reform, improve and complete the existing parking information system. An integrated parking guidance system to help drivers in their search for parking has been implemented in the city, providing information through the use of Variable Message Signs (VMS) about the location and occupancy rates of both inner-city underground parking facilities and Park & Ride (P&R) facilities. The goal is to reduce on-street parking and more particularly increase the use of Park & Ride facilities (to which drivers are preferably directed), while reducing car circulation in search for an on-street parking spot.

<p>Exploitation Component</p> <ul style="list-style-type: none"> • <i>Tool/Software:</i> The exploitation, communication and data management software has been specifically designed for this measure. <p>It is based on the software DyniPark of a company called Dinycom Sistemas and is a flexible software that can be expanded and adapted easily to other places and situations.</p>
<p>Where can take place the Exploitation / Detail why</p> <p><i>In other cities: Especially in medium cities as Donostia-San Sebastian.</i></p> <p><i>In other sectors:</i> The tool can be used by any project or at any location where the goal is to communicate data, warnings and advice to citizens.</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p>The tool can be interesting for both the public and private sector.</p> <p>The main actor for carrying out the exploitation is Dinycom Sistemas.</p>
<p>What activities could be undertaken to ensure this is happening ?</p> <p>(Selection of) Actions already carried out:</p> <ul style="list-style-type: none"> • The company Dinycom Sistemas uses the application in San Sebastian for the promotion of the DyniPark software on its website: http://www.dinycon.com/proyectos-realizados.html • Public presentation of the new parking guidance system (April 2012)

Planned actions for future, after ARCHIMEDES

Measure n°/ Title 83 Mobility management at University Campus

A Mobility Management Plan has been defined for the university campus of Ibaeta, including measures under the following strategic lines:

- Line 1: Create the adequate structural conditions to guarantee the viability of the actions.
- Line 2: Information and awareness programs for all the students and staff.
- Line 3: Active participation in decisional structures and institutional bodies to promote a deep change and effectiveness in mobility matters.
- Line 4: Actions to promote the use of public transport among the university community.
- Line 5: Bicycle scheme promotion in the campus.
- Line 6: Pedestrian scheme promotion in the campus.
- Line 7: Car sharing and car pooling promotion in the campus.
- Line 8: Inclusion of “sustainable mobility” in every university’s learning processes.

In the framework of this Plan, UPV/EHU has organised awareness raising campaigns for the University community to communicate the definition of the plan in general and some other specific measures.

Another important achievement of the measure is the setting up of an Observatory for Mobility Management, providing a framework for common work and exchanges of experience, as well as for monitoring mobility management measures.

Also, the sustainable mobility concept has been included throughout the university educational and curricular system through trunk and elective subjects in different degrees.

Exploitation Component

- Tools: Training and university courses on sustainable mobility and eco-driving

A new course under development that is meant to be taken up in the curriculum of the first year of several studies at the University. The title of this new course will be: “Growth and Sustainable Mobility. Security and road safety training”.
- Software for car pooling.
- Process: The process of promoting sustainable mobility among the population of a University Campus

Information campaign at the time of the introduction of paid parking at the University Campus

Where can take place the Exploitation / Detail why

At the University: Introducing the course of Development and Sustainable Mobility in the curriculum of different studies of the UPV/EHU.

At other Universities: They can introduce both the mobility management and the training elements.

In other sectors: The car pooling software can be used by other large organisations.

Who will be the exploitant(s) / key players for exploitation?

The internal target group are the coordinators of the different studies at the UPV/EHU that decide on the curriculum.

Other important target group are Mobility Managers or Dean's Office of other Universities (mainly in Spain).

What activities could be undertaken to ensure this is happening ?

(Selection of) actions already carried out

(Poster) presentation at a national conference on road safety

Courses for students

Seminar for mobility managers from other Universities

Article about measure in the Batubide newsletter on sustainable mobility.

Summer course in 2012 directed at Mobility Managers of Spanish Universities.

Seminar on mobility management at University at Cristinea Enea conference centre

Planned actions for future, after ARCHIMEDES

- Scientific article or small publication at the end of the project.

Iasi

Measure n°5 / Biofuels in Iasi

This measure contains three tasks, and their objectives are: to implement 30 buses transformation to work on LPG and to install LPG distribution station, to realize the promotion campaign of biofuels and to analyze the emission levels of vehicles through measurements performed on Civitas Corridor.

Exploitation Component

Reliability of LPG system installed on 30 buses.

- **Methodology:** First, we contacted a specialized company that had the technology to change diesel buses into LPG buses. Then, the specialists of the company and PTI worked together to adapt this technology to 30 buses.
- **Technology / Process:**
 1. Parts of the bus engine have been modified to allow the usage of the new fuel type.
 2. Bus fuel system has been replaced to fulfill the requirements of LPG fuel.
- **Result:** These transformations lead to a reduce number of maintenance operations, making the system more reliable.

Where can take place the Exploitation / Detail why

In the city: The entire fleet can be modified to use LPG, widening the the distribution of LPG to more private petrol stations

In the region: private&public petrol stations

In the country: other public transport operators, members of the national association

In other cities: public bus companies

In other sectors: private bus companies

Who will be the exploitant(s) / key players for exploitation?

Public and private buses companies are the target group, as well as the other public operators members of the national association.

What activities could be undertaken to ensure this is happening?

During the project

Presentations through ARCHIMEDES publications and news.

After the project

Using LPG instead of Diesel leads to an efficient use of buses fleets in any important city of Romania. Sharing the experience with other private and public companies can design a template for improving existent buses fleets. The PT Company is able to contact other

operators and organize with them best practice visits for demonstrating the details of this operation.

Measure n° 11 / New school bus link in Iasi

The purpose of the school bus link is to provide a safe mode for the children of the Romany community and to encourage the people of the community to use public transport, thereby increasing social inclusion and the opportunities for education. It consist of the creation of the bus line 41b, which links the Ciurea village to the centre of the city.

Exploitation Component

Offering qualitative public transport services to the people from Iasi Metropolitan Areas.

- *Methodology:*

1. *Identifying the Metropolitan areas with high-density population that needs a big capacity public transport vehicles.*
2. *Discussions with the Local Authority from the Metropolitan areas.*

- *Tool/Software:*

Through surveys, it can be identify the transport needs of the citizens (capacity, routes, and schedule)

- *Result*

1. *Social impact by offering qualitative public transport services*
2. *PTI will gain new passengers*

Where can take place the Exploitation / Detail why

In the city: In the future, when the city will develop a metropolitan area, it will be recommended to establish this type of transport links to other communities which will not have other connection possibilities.

In the region: it is possible only if there is a rural community nearby an urban community

In the country: it is available for urban communities that gather an important population of students and workers from the metropolitan areas.

In other cities: in cities with metropolitan areas

In other sectors: the Departmental Inspectorate for Education can use it for its pupils transport service.

Who will be the exploitant(s) / key players for exploitation?

The target group must be the public administration of cities with metropolitan areas, widening their services to their new commuters.

What activities could be undertaken to ensure this is happening?

During the project

Surveys showing the level of interest for this type of services have been conducted before starting the operation, as well as analyses on the use of other models of daily transport. ARCHIMEDES publications and news.

After the project

Extend the application of the measure, by creating new such links.

Measure n°12 / Improved Ticketing in Iasi

The modern possibility to purchase travel tickets at any time increases the passenger comfort and can change the travel behavior, especially among students and pupils. Our proposal was to install 10 Ticket Vending Machines (TVM) on the CIVITAS Corridor.

Exploitation Component

Demonstrate the improving of the ticketing system in Iasi by installing 10 Vending Ticket Machines in the CIVITAS Corridor.

- Methodology: We have signed a contract with a specialized company that provided and installed the VTMs.
- Technology / Process: The installation of these systems represents an innovative technology at Regional level.
- Result: The modern possibility to purchase travel tickets at any time increases the passenger comfort and changes the travel behavior, increases the number of students and pupils using public transport

Where can take place the Exploitation / Detail why

In the city: the system can be implemented in the entire city

In the region: the exploitation is possible only in the metropolitan area, where the local PT company have its services

In the country: it is possible, in other cities of the country

In other cities: it is possible, in other cities

In other sectors: other sectors of transport (rail)

Who will be the exploitant(s) / key players for exploitation?

Public administration and public transport operators are the target groups for this operation.

What activities could be undertaken to ensure this is happening?

During the project

Surveys showing the level of interest for this type of services have been conducted before starting the operation and analyses of the use and benefits of these systems have been realized after their implementation. ARCHIMEDES publications and news.

After the project

There is the possibility to extend this measure to the entire city.

Measure n°13 / Video Surveillance System

The motivation for including this measure consist in the introduction of this system will help to identify the travel fraud and crimes that take place inside public transport vehicles, thus contributing to reduce these problems and increase safety of passengers. The objective of the measure was to purchase 400 video cameras and 100 video management and storage systems and will install them on the public transport vehicles.

Exploitation Component

Demonstrate the improving of safety and security level by installing video surveillance systems in 100 public transport vehicles in the city.

- Methodology: We have signed a contract with a specialized company that provided and installed the video surveillance systems in the public transport vehicles
- Technology / Process: The installation of these systems represents an innovative technology at Regional level.
- Result: The introduction of this system will help to identify the travel fraud and delicts that take place inside public transport vehicles, thus contributing to reduce these problems and increase safety of passengers.

Where can take place the Exploitation / Detail why

In the city: the system can be extended in the entire city

In the region: the exploitation is possible only in the metropolitan area, where the local PT company have its services

In the country: it is possible, in other cities of the country

In other cities: it is possible, in other cities

In other sectors: other sectors of transport (rail), other sectors of services

Who will be the exploitant(s) / key players for exploitation?

Public administration and public transport operators are the target groups for this operation.

What activities could be undertaken to ensure this is happening?

During the project

Analyses showing the efficacy and benefits of this type of systems have been conducted before starting the operation and after the implementation of these systems. ARCHIMEDES publications and news.

After the project

There is the possibility to extend this measure to the entire city.

Measure n° 14 / Bus priority measures in Iasi

The measure is intended to contribute to increase the quality of PT in Iasi by addressing problems of travel time and reliability thereby making it more attractive. The objective was to fit 15 crossroads with traffic management equipment (54 radar detectors and 15 automatic traffic lights and a server which provides the optimal sequence of traffic lights). A separate roadway was also assigned to public transit on a segment of the Civitas corridor in order to decrease the travelling time for the public transport users.

Exploitation Component

Obtaining a more fluent traffic along PT routes.

- *Methodology:* Identifying the areas with high density of traffic and what are the possibilities to obtain a more fluent traffic.

- *Tool/Software:*

1. Installing the traffic light priority system that adapts the cycle timings according to the traffic flow. Successively testing of step-by-step improved mathematical model led to an optimal green timing of traffic lights.

2. Creation special traffic lanes dedicated for public transport (buses, minibuses, taxis), marked accordingly to international standards, separated from the other lanes.”

- *Technology / Process:* This green light priority system represents an innovative technology at Regional level.

- *Result*

1. Obtaining a low congestion level
2. Decreasing the number of PT vehicles’ delays

Where can take place the Exploitation / Detail why

In the city: it is not possible. Only RATP (local PT Company) deliver services in Iasi

In the region: it will be possible when the national traffic network in the region will develop these services to regional buses private companies.

In the country: it can be implemented in cities and towns with an important public transport network

In other cities: only if they are facing traffic problems on their networks

In other sectors: can be used also for the police, ambulance and firemen services

Who will be the exploitant(s) / key players for exploitation?

Public administration and public transport operators are the target groups for this operation.

What activities could be undertaken to ensure this is happening?

During the project

Detailed analyse of sections of the traffic network which can receive these services have been done before the design and implementation. ARCHIMEDES publications and news.

After the project

A new project follows to install a traffic management system for the entire city.

Measure n° 15 / District shuttle bus services in Iasi

The measure is intended to contribute to increase the quality of PT in Iasi by addressing problems of travel time and reliability thereby making it more attractive. The result of this measure is a shuttle bus to serve commuters in the business district within the CIVITAS corridor. PTI buses transport employees daily to match the shift in operation.

Exploitation Component

The aspect that can be exploited is the use of public transport instead of personal cars by creating district shuttle bus services.

- *Methodology:*

1. Identifying potential beneficiary companies and presented them the transport offer.
2. Identifying the company's transport needs (number of employees, optimal transport routes, schedules, etc.)
3. Establishing district shuttle services.

- *Tool/Software:* The surveys among the commuters in the different business districts of the city can be used as tools.

- *Result*

1. A more comfortable transport services for commuters.
2. Reduce the number of personal cars means a more fluent traffic.

Where can take place the Exploitation / Detail why

In the city: it is possible while the metropolitan area will develop new industries locations

In the region: implementation in rural area is hard to believe will become efficient

In the country: the model started to be use in different regions, by private or public transport, but it depends on economic structure and development of each region

In other cities: it is possible, especially for the 7 big cities of the country (including Iasi), without Bucharest, established by the European Union as Urban Growth Poles for Romanian NUTS2 regions

In other sectors: different private companies started to implement this type of services for their employees, and the model can be exploited together with the M5 exploitation model

Who will be the exploitant(s) / key players for exploitation?

Target public can be shared by the public administration and the private or public companies located in the metropolitan areas.

What activities could be undertaken to ensure this is happening ?

During the project

ARCHIMEDES publications and news.

After the project

No activities planned for this measure.

Measure n° 22 / Access to Iasi historic center

The objectives of the measure are to ensure a safe environment for pedestrians and cyclists, to reduce the number of casualties as a result of roadside accidents, to increase the accessibility of public transport and the quality of urban space. The result is an Access Control Scheme to Historic Center in Iasi.

Exploitation Component

The exploitable aspect is the control scheme, which restricts vehicle access to historical centre of the city.

- Methodology:

1. The survey conducted in the historic center, by the National Association of Students of Administrative Sciences, concluded that cars must be forbidden to pass through the historical center in order to reduce pollution due to exhaust gases and noise and to increase the attractiveness of the area for tourists and to passers-by.

2. Negotiations were conducted with the post office and businesses based or active in the area in order to make a time-based scheme of the supply activities.

- Tool/Software:

1. Establishment of an Access Restriction Scheme.
2. Installing the appropriate road signs for access and speed restrictions.

- Result:

1. Reducing vibrations, noise and emissions, which are very harmful for the environment, citizens and for the old architecture of buildings within this area.

2. Increasing the attractiveness of the historical center among pedestrians, cyclists and the tourists.

Where can take place the Exploitation / Detail why

In the city: it is possible, focusing the opportunity to extend this service to a larger area (covering other historical buildings and monuments), by another European project implemented in the city

In the region: it is possible only in a historical area, adapting the service to its conditions

In the country: it is possible only in a historical area, adapting the service to its conditions

In other cities: it is possible, but only in cities with concentrated historical buildings – buildings and monuments spread in different areas make it not possible

In other sectors: low conditions for exploitation because of the specificity of this operation

Who will be the exploitant(s) / key players for exploitation?

The public administration, goods and services distributors, together with cultural institutions represent the target group.

What activities could be undertaken to ensure this is happening ?

During the project

Specific conditions – relied on the economic structure, the type of services and goods distributed, the area access schema, and connections to the local PT services – must be applied to ensure the efficiency of the exploitation. ARCHIMEDES publications and news. Presentation at CIVITAS Forum 2012.

After the project

Use the experience for extend the measure application to other zones of the city.

Measure n° 35 / Education and promotion programme

The objectives of the measure are to educate people on the benefits of sustainable transport and encourage them to think about their transport habits, to travel in a more sustainable manner and to be aware of the alternatives to the private car.

The promotion campaign consist of distribution of promotional materials, audio and video promotion materials, creation of a web page for the promotion campaign, advertising in the written press.

Exploitation Component

People awareness on the benefits of sustainable transport and encourage them to think about their transport habits.

- Methodology: Organization of promotion campaigns to educate people to use public and soft transport modes as an alternative to the private cars.
- Tool/Software:
 1. Promotion campaign structured around four important public events: World Environment Day, European Mobility Week, Iasi Celebration, World Town Planning Day.
 2. Distribution of promotional materials meaning: flyers, note-books, school time tables, green maps, pens, radio / TV spots, newspaper promotional layouts.
- Result: Education of citizens to use soft modes as a mean of transportation with a direct impact on the environment.

Where can take place the Exploitation / Detail why

In the city: it is possible, because the main message of the programme – “We move the future” – cover the needs for modernize the local PT services in medium-term

In the region: low possibility for exploitation, because the PT service has not the same level of development in the region as the city

In the country: cities all over Romania need to improve their PT services by the people awareness on the use of public transport, and the city of Iasi offered, by the Romanian Association of Municipalities, the possibility to share its experience

In other cities: it is possible, cities from Central and Eastern Europe can use this model to change the classic transport habits of their citizens

In other sectors: at the national level, an education and promotion programme for the emergency number 112 is ongoing, and that shows the applicability of this exploitation

Who will be the exploitant(s) / key players for exploitation?

Target public gather the public administration and non-governmental organizations that are achieving activities in this field.

What activities could be undertaken to ensure this is happening ?

During the project

The main aspect for this type of operation comprised the focus of the message and activities on the young population of the community. ARCHIMEDES publications and news. Presentation at CIVITAS Forum 2011.

After the project

Continuing education and promotion activities in order to encourage the public transport use.

Measure n° 36 / Public Transport User Forum

The measure consist of the creation of a web-based public transport forum brought up to date. By obtaining feedback from users, the transport company can have an efficient way to get information from clients. In ensure also the establishment of a communication channel between passengers and transport companies from Iasi.

Exploitation Component

Improving the quality of public transport services making it in this way more attractive for citizens.

- *Methodology:*
 1. Opening a new direct way for communication with passengers.
 2. Collecting feedback information from users.
- *Tool/Software:* A forum on the PTI website was created as a communication path between passengers and public transport company.
- *Result:* Keeping a continuous relation with passengers to satisfy, as possible, their demands improving in this way the quality of public transport service.

Where can take place the Exploitation / Detail why

In the city: it is not possible, a forum like this cannot be linked to other type of services

In the region: low possibility of exploitation, because of the low interest for internet services – exploitation is possible only in 3 other towns of the region

In the country: it is possible, by adapting to specific conditions

In other cities: it is possible, by adapting to specific conditions

In other sectors: medium possibility of exploitation, depending on the compatibility between the activity and the offered service

Who will be the exploitant(s) / key players for exploitation?

The PT operators are the target public for this exploitation.

What activities could be undertaken to ensure this is happening ?

During the project

ARCHIMEDES publications and news.

After the project

The service must be improved, by offering possibilities to be reached by any new communication technology.

Measure n° 37 / School Travel Plans

The objectives of the measure are to educate children on the benefits of sustainable transport and to encourage them to think about their transport habits and influence their parents. In this order, 3 types of plans for pupils and students have been prepared, according to their age groups.

Exploitation Component

People awareness on the benefits of sustainable transport and encourage them to think about their transport habits.

- *Methodology:* Identifying the transport needs of pupils and students.

- *Tool/Software:*

1. For a better understanding of pupils / students' travel behavior and preferences regarding transport from home to educational institute, a survey was carried out aiming at identifying actual transport means used by them to travel from home to school (and back) and the transport means they would prefer if they had the options of choosing between several variants.

2. Based on the results of the survey, travel plans were developed for students and pupils, depending on which group they belonged to.

- *Result:* Encouraging people to use PT or soft modes, they will use less and less personal cars for travel and this has a direct impact on the environment and on the road traffic.

Where can take place the Exploitation / Detail why

In the city: it is possible, by an extension to other area in the city, with concentrated school services

In the region: it is possible, by adapting to the specific conditions of the rural area

In the country: is possible, but specific conditions are included

In other cities: it is possible, because cities and towns in Romania have problems with traffic jam nearby schools and universities

In other sectors: not possible, because of its specific conditions

Who will be the exploitant(s) / key players for exploitation?

The public administration, the parents, together with schools and universities managers form the target public.

What activities could be undertaken to ensure this is happening ?

During the project

Establishing a travel plan was a long process of negotiation, involving many stakeholders that

have a range variety of opinions. A better way for negotiation is to begin with the possibilities of using traffic services (one-way streets, parking places, PT stops etc.) close to the area of implementation. ARCHIMEDES publications and news.

After the project

Continuing the educational activities of pupils and students.

Measure n° 38 / Travel information Telephone Service

The objective of this measure is to provide information and promote the travel plan measures and to increase the quality of service to all citizens. For that, a travel information telephone service is useful.

Exploitation Component

Improving the quality of public transport services making it in this way more attractive for citizens.

- *Methodology:*
 1. Opening a new direct way for communication with passengers.
 2. Collecting feedback information from users.
- *Tool/Software:* A toll-free line was created as a communication path between passengers and public transport company.
- *Result:* Keeping a continuous relation with passengers to satisfy, as possible, their demands improving in this way the quality of public transport service.

Where can take place the Exploitation / Detail why

In the city: it is possible, by developing in the near future a call centre.

In the region: exploitation is possible in the metropolitan area, where the local PT company have its services

In the country: it is possible, especially in cities and towns wishing to improve their PT services

In other cities: it is possible, especially in cities and towns wishing to improve their PT services

In other sectors: in Romania, the green number is a service used by many sectors, from banks and communication companies, to the public services

Who will be the exploitant(s) / key players for exploitation?

PT operators are the main target group.

What activities could be undertaken to ensure this is happening ?

During the project
ARCHIMEDES publications and news.

After the project
No activities planned for this measure.

Measure n° 48 / Provisions for disabled persons in Iasi

The objective of this measure is to assure safety for a particularly vulnerable group of road users. For that, it was planned to install 40 Audio Warning Devices for the Visually Impaired people, to modify 50 stations to allow easier access for disabled persons and to transform 10 minibuses for an easier access for disabled persons.

Exploitation Component

Enabling access to transport services to all categories of persons.

- *Methodology:*

1. Identifying the category of persons that have limited accessibility / mobility because of the improper infrastructure.
2. Finding the solutions to facilitate the access to public transport services.

- *Technology / Process*

1. Installing Audio Warning Devices on several main signalized intersections.
2. Modernizing PT stations and stops by mounting coverings and building access ramps.
3. Installing within minibuses lifting platforms to allow access to public transport services for people with physically disabilities.

- *Result:* Improving the accessibility to PT services for disabled persons for their daily trips.

Where can take place the Exploitation / Detail why

In the city: these services will be extended when the local PT company will improve its fleet with bus equipped with modern provisions for persons with disabilities

In the region: the exploitation is possible only in the metropolitan area, where the local PT company have its services

In the country: it is possible, comprising services in urban area and rural area, as well

In other cities: it is possible, especially for the 7 big cities of the country (including Iasi), without Bucharest, established by the European Union as Urban Growth Poles for Romanian NUTS2 regions

In other sectors: in specific conditions, provisions for persons with disabilities can be provide in other public spaces – parks, public gardens, cycling lanes etc.

Who will be the exploitant(s) / key players for exploitation?

The public administration and PT operators are the target group.

What activities could be undertaken to ensure this is happening ?

During the project

As they will proceed to use modern provisions for persons with disabilities, the employees of PT operators will need technical and social training for using the provisions and for establishing a dedicated professional behaviour. Dissemination of the results by

ARCHIMEDES publications and news was necessary.

After the project

No activity planned for this measure.

Measure n° 59 / City Cycle Routes in Iasi

The objectives of this measure are to increase cycling in the CIVITAS corridor and to minimise the risk of more cycling accidents.

For that, it was planned to build 10 km-long bicycle lane and to realize a cycling promotion campaign.

<p>Exploitation Component</p> <p>Creating a sustainable urban transport system.</p> <ul style="list-style-type: none"> • Methodology: Creating new facilities for people to use soft modes of transport. • <i>Technology / Process</i> <ol style="list-style-type: none"> 1. Constructing dedicated cycling lanes and special colored street markings to indicate the bicycle route. 2. These new facilities are promoted to encourage the inhabitants of Iasi to practice cycling. • <i>Result</i>: Developing and encouraging people to use other soft mode of transport.
<p>Where can take place the Exploitation / Detail why</p> <p><i>In the city</i>: a very big interest for exploitation – the city decided to extend the network, by several European projects, from 10,5 km to more than 50 km</p> <p><i>In the region</i>: low possibility of exploitation, because the roads don't allow this type of services</p> <p><i>In the country</i>: big interest for exploitation, because of a new generation, in urban area, who discovered the use of bike in many ways (fun, entertainment, competitions, urban use, mountain bike)</p> <p><i>In other cities</i>: Bucharest implemented a network of cycling lanes, and other big cities of Romania started to create networks of lanes for cycling</p> <p><i>In other sectors</i>: not possible because of its specific deliveries</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p>The target group is represented by local authorities and non-governmental organizations with activities in this field.</p>
<p>What activities could be undertaken to ensure this is happening ?</p> <p>During the project</p> <p>The PT operators must be prepared to design special places for bicycles in metros, buses and trams, and to make connections between interested points for cyclers and local PT stops. Dissemination realised by ARCHIMEDES publications and news, presentation at the CIVITAS Forum 2012.</p> <p>After the project</p>

Cleaner and better transport in cities



Other projects provide the extension of the cycling infrastructure in the city.

Measure n° 66 / Efficient Goods Distribution in Iasi

The objectives of this measure are:

- *To increase efficiency in goods distribution traffic*
- *To optimize the flow of HGV in narrow business streets by improving loading and unloading behaviour and facilities*
- *To increase use of clean vehicles in goods distribution traffic*
- *To build a strong partnership with stakeholders*

The goods distribution strategy must be based on a study of the efficient goods distribution.

Exploitation Component

Establishing a time-based scheme for distribution of goods.

- *Methodology:* Debates organized to discuss the goods distribution plan, taking into account all the factors that can influence the plan (beneficiaries' behavior, economic crisis, companies' placement etc.).
- *Technology / Process:* Establishing a goods distribution plan through which economic operators will perform their supplying activities within certain time schedules.
- *Result:* A reduced number of freight vehicles on day light leads to a diminished level of pollutant emissions and a better traffic flow.

Where can take place the Exploitation / Detail why

In the city: the measure can be extended in the other neighborhoods of the city

In the region: it is possible, but only in connections with the main roads of the region

In the country: cities and towns all over Romania have problems in managing traffic jams created by the goods distribution during the day-light; a scheduled plan according to beneficiaries needs is a solution for decongestion and less pollution

In other cities: cities and towns all over Romania have problems in managing traffic jams created by the goods distribution during the day-light; a scheduled plan according to beneficiaries needs is a solution for decongestion and less pollution

In other sectors: it is not possible, because of its specific conditions

Who will be the exploitant(s) / key players for exploitation?

Public administration and managers from industry and services companies, private or public, form the target public.

What activities could be undertaken to ensure this is happening ?

During the project

Dissemination through ARCHIMEDES publications and news.

After the project

An extension to the big commercial areas is recommended to complete the efficiency of the exploitation for the entire community.

Measure n° 76 / Bus Management System in Iasi

This measure contains three tasks:

- *GPS Monitoring System*
- *Maintenance Facility Centre*
- *Modules for Management of Incidents and Specific Equipment*

The motivation for including the measure in the project consists of the fact that these systems will make it possible to monitor and plan PT services. In addition, it will increase the level of information offered to users of these services. Improving public transport services through the implementation of these systems will lead to a change in the perception of users on it and consequently to an increase in the number of users, reducing waiting times in stations and a reduction in the number of incidents where these vehicles are involved.

Exploitation Component

Demonstrate the benefits of monitoring of fleet public transport vehicles by installing GPS systems for traffic management, an incident management system related to local public transport, which works together to achieve a maintenance centre for operations and a maintenance management system.

- *Methodology:* We have signed a contract with a specialized company that provided and installed the equipment in the public transport vehicles.
- *Technology / Process:* The installation of these systems represents an innovative technology at Regional level.
- *Result:* These systems will make it possible to monitor and plan PT services, and it will increase the level of information offered to users of these services. Improving public transport services through the implementation of these systems will lead to a change in the perception of users on it and consequently to an increase in the number of users, reducing waiting times in stations and a reduction in the number of incidents where these vehicles are involved.

Where can take place the Exploitation / Detail why

In the city: the measure can be extended to the entire public transport system

In the region: the exploitation is possible only in the metropolitan area, where the local PT company have its services

In the country: it is possible, in other cities of the country

In other cities: it is possible, in other cities

In other sectors: other sectors of transport (rail), other sectors of services

Who will be the exploitant(s) / key players for exploitation?

Public administration and public transport operators are the target groups for this operation.

What activities could be undertaken to ensure this is happening?

During the project

Analyses showing the efficacy and benefits of this type of systems have been conducted before starting the operation and after the implementation of these systems. ARCHIMEDES publications and news.

After the project

A new project provides the implementation of a traffic management system for the entire city.

Measure n° 77 / Public Transport Planner in Iasi

The main objective of this measure is to create a tool for PT journey planning as a support instrument to the measures improving the quality and reliability of PT services, by easier access to the information, related public transport thereby increasing the number of passengers. A web-based public transport planner is the necessary tool for that.

Exploitation Component

Promoting a high quality, high efficient and more attractive public transport.

- *Methodology:*
 1. Establishing a new way to inform citizens about PT services.
 2. Offering a common web platform where all transport modes within the city are presented.
- *Tool / Software:* Development of a website where people can plan a journey, in advance from point A to a point B (where A and B are the existing bus and tram stops). Another facility of this website is that it offers information about the routes and the hours for departures and arrivals for the followings: tram, bus, train, coach, airport, taxis and how to rent a car and also the contact information of the above public transport modes.
- *Result*
 1. Enable the possibility to plan in advance a desired journey.
 2. Enhance the access to information about all transport modes within the city.

Where can take place the Exploitation / Detail why

In the city: a very low possibility of exploitation, because the current field of addressing covers the main groups of interests.

In the region: it is possible, because the exploitation need to reach the commuters from the metropolitan area

In the country: it is possible, but only in big cities and towns, which have an important internet network

In other cities: it is possible, but only in big cities and towns, which have an important internet network

In other sectors: low possibility of exploitation, because of its specific deliveries

Who will be the exploitant(s) / key players for exploitation?

PT operators are the target group for this exploitation.

What activities could be undertaken to ensure this is happening ?

During the project

The results have been disseminated through ARCHIMEDES publications and news.

After the project

The service must be improved, by offering possibilities to be reached by any new communication technology (mobile communication, for example).

Monza

Measure n°7 / Hybrid Bus

In January 2011, a hybrid bus was purchased and started running as an experimentation in May 2011 on the “historical” bus line of Monza, Z206, one of the longest and most used. The main objectives of the measure were to gain best practice examples from other cities which have implemented a hybrid bus, to develop a technical specification for the delivery of a hybrid bus and test the possibility to reduce the environmental impact of the public transport fleet in the city.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** the selection of the line where to experiment the first hybrid bus in the city (i.e. a long and “historical” line, named “Civitas Corridor”, crossing many mobility attractors, and where other measures are being implemented. This line was chosen to give the bus more visibility, and because testing it on a long route and on a crowded line allows the collection of relevant data necessary to evaluate its performance on the long run.
- **Tool/Software:** X
- **Technology / Process:** the vehicle model (i.e. IVECO Citelis Hybrid bus, whose technical characteristics are suitable for a middle size city like Monza)
- **Result:** Not yet, but maybe by December 2012 results could be exploitable (i.e. the reduction of emissions foreseen is up to 25% with respect to classic diesel powered buses)

Where can take place the Exploitation / Detail why

In the city: after the experimentation all the buses of the Public Transport fleet in Monza could turn to hybrid or alternative fuels solutions.

In the region: other middle size cities of Monza and Brianza Province and Lombardy region could follow the examples of Monza, especially considering the fact that the province of Monza has recently launched “Moving Better” a strategic mobility plan to foster more sustainable mobility pattern (e.g. cycling, electric vehicles and integration of private and public buses)

In the country: other middle size cities of Italy to follow the examples of Monza

In other cities: X

In other sectors: Firms and organizations (e.g. airport, long-distance transport companies) which have their own buses to transport their workers or customers.

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. **Public/private** local bodies responsible for transport: depending on who is responsible for the adoption of hybrid buses in urban areas
2. **Research:** for technical innovation, through the results of the performance of

<p>this bus in this special context</p> <p>3. Industry: for the investment in the sector</p>
<p><i>What activities could be undertaken to ensure this is happening?</i></p> <p><i>Describe any idea you have to enhance the exploitation of this measure</i></p> <p><u>Please detail which project actors would be in charge and time planning predictable as specifically as possible</u></p> <p>Site Manager - Evaluation of the results achieved and dissemination of the results to create more awareness on clean vehicles solutions among public and private sectors in Monza as well as among citizens in order to encourage them to use public transport (a final seminar will be held in spring – summer 2012).</p> <p>The measure has been given broad visibility on the website of ARCHIMEDES in Monza and on the Municipality website, as well as on the local and national press. A video will be also realized so that other cities willing to exploit this experience can contact the Municipality or ATM/NET (public transport society in charge of the technical aspects of the measure) to ask for standards' compatibility and vehicle's performances.</p> <p>There has been Research activity for this measure and no R&D activities are therefore planned in the future.</p>

<p>Measure n° 19 / Demand Responsive Public Transport Connections</p> <p>The Municipality of Monza and the local public transport operator NET planned to experiment a demand responsive service within the city to transport passengers from poorly served areas to areas connected to main line public transport services. The idea was that the service could operate during off-peak periods to make public transport services more energy-efficient in periods of low demand, but during ARCHIMEDES it has been experimented only to serve one specific peripheral district (San Fruttuoso) in some situations (i.e. at big events such as concerts, sport events, summer shopping evenings, events for the Monza Patron Saint Fair and initiatives for the Grand Prix in September).</p>

<p>Exploitation Component</p> <p><i>What is exploitable in the measure design, planning, implementation and evaluation (detail how):</i></p> <ul style="list-style-type: none"> - Methodology: Experimentation of the demand responsive public transport service focusing especially on poor served areas and during special events happening in the city (i.e. events that attract people from outside Monza as well: GranPrix, Festival of Cinema, Women's European Volleyball Championship, etc.) - Tool/Software: Phone booking. Number of passengers requested to provide the service: minimum 5-8 people. - Technology / Process: X - Result: The measure has been implemented in a reduced way, due to administrative difficulties with the Province of Monza and Brianza which is in charge
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of the PT contract. For the Fireworks of the Patron Saint Fair two buses have been activated to transport 82 people, and about 30 people for the European Volley Championship. No people were transported for the Cinema Festival.

Where can take place the Exploitation / Detail why

In the city: experimentation and implementation of more buses to serve other poor served areas of Monza, but a needs analysis is necessary, first, in order to see if the service could be useful or not only during special events or also more regularly (e.g. Saturday night)

In the region: other middle size cities

In the country: other middle size cities

In other cities: other middle size cities

In other sectors: development of specific software and/or website that can facilitate the management of the demands and the routes served.

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. Public/private providers of transport services
2. Software developers

What activities could be undertaken to ensure this is happening?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

For the experimentation the Municipality based the service offer according to previous knowledge of these areas and also considered the discomfort citizens of this area (S. Fruttuoso) are facing because of some street works in the neighbourhood.

The measure has been given visibility on: the website of ARCHIMEDES in Monza, the Municipality website and its Facebook page and on the local press. The staff of the Mobility office was in charge of all the bookings, but to fully develop the service it would be useful to have first a detailed needs analysis in the poor served areas where the experimentation will take place (spring 2012), as well as to fully implement the offer another person would have to be recruited or a specific tool has to be used to manage the bookings.

The measure is not particularly innovative in the Italian context, and other cities all over Italy have already experimented it more successfully. Moreover, it had to be downsized from its original planning due to economical constraints.

There has been Research activity for this measure and R&D activities in the future will be planned in case a complete DRTS is implemented in order to define the most suitable service to respond to citizens' needs.

Measure n° 41 / Title School Travel Plans

Design workshops were held in primary schools within the CIVITAS corridor to raise awareness among students, parents and teachers about the benefits of sustainable school travel methods. The main aims were to activate the Walking bus routes designed by pupils (10 lines and more than 140 pupils currently going to school in this way) in order to reduce CO₂ emissions from private transport and increase in the number of children walking to school.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** Participatory design workshops held in primary schools to raise awareness among students, parents and teachers
- **Tool/Software:** X
- **Technology / Process:** X
- **Result:** CO₂ emissions' reduction, social and health benefits

...

Where can take place the Exploitation / Detail why

- In the city:** Development of other walking bus lines in other schools of Monza
- In the region:** Development of walking bus in other middle size cities
- In the country:** Development of walking bus in other little and middle size cities
- In other cities:** Development of walking bus in other little and middle size cities
- In other sectors:** X

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. Public administration
2. Association/Organization of environmental education
3. School administration
4. Families

What activities could be undertaken to ensure this is happening ?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

School administration - Walking bus open days: a day in which students which are not registered yet can experiment the Walking bus and decide if they want to register or not. The first edition was held on October 10th- 14th 2011.

Public and School administration – More frequent “Walk to school” events in order to raise awareness among other children and their families, e.g. during National/International event: We are all pedestrians or the European Mobility Week, etc. during National/International event: We are all pedestrians or the European Mobility Week, etc.

Association/Organization of environmental education – conduction of Participatory design workshops in other schools of Monza organized by the Municipality together with CREDA (Environmental education association already contracted for the implementation of the measure during ARCHIMEDES project in Monza).

To further exploit the measure, a communication campaign in the city and in primary schools will be run supported by a video and a leaflet (2.000 copies) that describes “the good recipe to start a Walking Bus”. It will be distributed for free to primary schools in Monza in order to show the experience to other schools which could test the walking bus.

Moreover, at the end of the project an interactive application on the ARCHIMEDES measures in Monza will be realized (i.e. a DVD-Rom with some videos, where one will be specifically on the Walking Bus) and sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).

The video and the leaflet will also be uploaded on ARCHIMEDES local website and on the municipality website, so to allow other cities and citizens to learn from Monza’s experience.

There has been R&D activity for this measure and no R&D activities are therefore planned in the future.

Measure n°61 / Car sharing scheme improvements

Monza introduced a car sharing scheme in April 2007. At the moment there are three cars available for around 150 private subscriptions. The aims of this measure within ARCHIMEDES were to increase understanding of barriers to the use of car sharing and then to enact a marketing strategy study to show advantages of car sharing in order to increase car sharing subscriptions.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** the conduction of focus groups and interviews for the needs analysis and users' satisfaction analysis

- **Tool/Software:** X

- **Technology / Process:** X

- **Result:** From 2009 (65 subscribers) and 2010 (84 subscribers – plus 29%) to the end of 2011 we have achieved 114 subscriptions (plus 36%)

...

Where can take place the Exploitation / Detail why

In the city: peripheral and poor served areas / Firms, companies and public administration located in the city

In the region: other middle size cities, especially those that do not have good transport connections

In the country: other middle size cities, especially those that do not have good transport connections

In other cities: X

In other sectors: X

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. Big firms and organizations (private and public) located in the city/Province
2. Car-sharing service providers

What activities could be undertaken to ensure this is happening?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

The Municipality fostered the Car-sharing provider (Guidami) to promote special offers and subscriptions for big organizations/firms in Monza and Brianza province. Firms could then be contacted by the car-sharing provider and the report on car-sharing evaluation could be sent to them.

Moreover, at the end of the project an interactive application (a DVD-Rom with videos) on the ARCHIMEDES measures in Monza will be realized and then the DVD will be sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).

There has been R&D activity for this measure and no R&D activities are therefore planned in the future.



Measure n° 62 / Cycle Transport improvements

Monza has invested in the last years in creating a network for cyclists. This network is not yet fully interconnected, but the number of cyclists has been increasing, leading to greater transport efficiency and increasing public health.

This measure objectives are to: encourage the use of the bicycle as a form of transport; raise the visibility of cycling, its infrastructure, convenience and use within the city; implement improvements to cycle facilities.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** A study has been developed in the RTD stage of the measure and it showed the feasibility of a bike sharing scheme in the city. A project has been presented to Regione Lombardia and a grant has been obtained, even though the scheme will be activated after ARCHIMEDES. The project can be extended to other cities near Monza to develop a connected net of bike sharing in the whole area.
- **Tool/Software:** The City Government has approved the Bike Plan for the City of Monza and a document containing constructing criteria for cycling route which will serve as guidelines for every intervention about cycling in the city
- **Technology / Process:** Bicycle parking facilities and related services (surveillance cameras, etc.) especially at key interchange nodes
- **Result:** Extension of 800 of a cycling route, revamp of a cycling walkway and two connections between already existing cycling routes
- ...

Where can take place the Exploitation / Detail why

In the city: Bicycle parking facilities and related services extended to all the city
In the region: Bicycle parking facilities and related services extended to all the regional key interchange nodes (train station, bus station, ...). Approval of bike plans
In the country: Bicycle parking facilities and related services extended to all the national key interchange nodes Approval of bike plans

In other cities: Approval of bike plans
 X

In other sectors: X

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. Public administration

2. Railways and bus companies

What activities could be undertaken to ensure this is happening ?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

Mobility officers, railways and bus companies managers elected politicians will be informed through the local newsletter, the local ARCHIMEDES website as well as other more interactive tools (such as the Municipality Facebook page) about all these improvements.

Moreover, at the end of the project an interactive application (an interactive DVD-Rom with videos) on the ARCHIMEDES measures in Monza will be realized and sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).

In the last years there has been Research activity for this measure (BYPAD Audit, study about the Bike Plan and about constructing criteria for cycling routes and bike-sharing feasibility study) and no R&D activities are therefore planned in the next future.

Measure n° 78 / Bus Management system

A system has been set up which allows the urban public transport operator to monitor its service in real-time. It has been decided to substitute the previous bus management system of Monza in order to allow its integration with other technological solutions and their related measures, specifically the implementation of the AVL/ AVM system and the interface of it with UTC and bus priority.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** data concerning the progress of buses of the Public Transport fleet are quickly made available to know their exact position as well as the offset with respect to their timetable.

This task has been integrated with other relevant technical measures (i.e. 79- 'Improved Traveller Information' and 82- 'Public Transport Priority system')

- **Tool/Software:** software implemented by our technological partner, i.e. Project Automation (PA), to interface to access the AVL/AVM system; this has been accomplished through a WebService whose design allows to exploit localisation and monitoring data for future purpose.

- **Technology / Process:** One of the processes that in the future can benefit of the availability in real time of this data is "Traffic Monitoring". The buses of the Public Transport fleet running across the city can act as probe to assess the travel time at a given moment. This use could be very important for the Municipality to manage Mobility.

- **Result:** Buses of the Public Transport fleet are currently monitored; this is the first time this feature is available in the city of Monza.

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<p>Where can take place the Exploitation / Detail why</p> <p>In the city: Data concerning localisation and monitoring of the Public Transport fleet stored in the database will be analysed to identify typical travel time on important carriageways of the city as well as critical traffic situations. Some Public Transport routes are affected by congestions in peak hours and the analysis of this data may help at finding alternative routes.</p> <p>In the region: integration of the relevant technical measures to favour public transport (i.e. 78, 79 and 82) extended to other big and middle size cities in the Region</p> <p>In the country: integration of the relevant technical measures to favour public transport (i.e. 78, 79 and 82) extended to other big and middle size Italian cities</p> <p>In other cities: X</p> <p>In other sectors: X</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p><i>Describe the target groups (private /public? Research, administration, industry and Services?)</i></p> <ol style="list-style-type: none"> 1. Public and private providers and managers of public transport services 2. Software developers (private companies)
<p>What activities could be undertaken to ensure this is happening?</p> <p><i>Describe any idea you have to enhance the exploitation of this measure</i></p> <p><u>Please detail which project actors would be in charge and time planning predictable as specifically as possible</u></p> <p>Coordination meetings among site manager, mobility technicians, software developers from Project Automation and public transport societies (in charge of equipping the PT with AVL/AVM system) in order to fully adapt the AVL/AVM software to the Public Transport Priority System - measure 82 - technical needs). Moreover, at the end of the project an interactive application (an interactive DVD-Rom with videos) on the ARCHIMEDES measures in Monza will be realized and sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).</p> <p>There has been R&D activity for this measure and no R&D activities are therefore planned in the future.</p>

<p>Measure n° 79 / Improved Traveller Information</p> <p>This measure aimed to set up a real-time information system for urban public transport users, based on a bus traveller information study, specifically improving traveller information to passengers at 30 key stops and at "Porta Castello" (the key interchange in the city) and users' perception of services (e.g. waiting time, new information displays, etc.).</p>
<p>Exploitation Component</p> <p><i>What is exploitable in the measure design, planning, implementation and evaluation (detail how):</i></p> <p>- Methodology:X</p>

<p>- Tool/Software: X</p> <p>- Technology / Process: <i>Interactive Totems and electronic bus stops</i> which combine real-time passenger information with touch-screen functionality located in some city's key stops</p> <p>- Result: X</p>
<p>Where can take place the Exploitation / Detail why</p> <p><i>In the city:</i> <i>Interactive totems and electronic bus stops can be installed in other important bus stops in the city X</i></p> <p><i>In the region:</i> <i>Interactive Totems and electronic bus stops combining real-time passenger information with touch-screen functionality located in other interchange cities in the Region</i></p> <p><i>In the country:</i> <i>Interactive Totems and electronic bus stops combining real-time passenger information with touch-screen functionality located in other interchange cities in Italy</i></p> <p><i>In other cities:</i> <i>Cities where this measure has not been implemented yet can exploit Monza experience to test this technology along their PT routesX</i></p> <p><i>In other sectors:</i> X</p>
<p>Who will be the exploitant(s) / key players for exploitation?</p> <p><i>Describe the target groups (private /public? Research, administration, industry and Services?)</i></p> <ol style="list-style-type: none"> 1. Software and hardware (e.g. totem) developers 2. Public and private providers and managers of public transport services
<p><i>What activities could be undertaken to ensure this is happening ?</i></p> <p><i>Describe any idea you have to enhance the exploitation of this measure</i></p> <p><u>Please detail which project actors would be in charge and time planning predictable as specifically as possible</u></p> <p>Mobility officers and technicians, elected politicians and citizens will be informed through the local newsletter, the local ARCHIMEDES website as well as other more interactive tools (such as the Municipality Facebook page) about this new service in order to report technical or content improvements and to foster suggestions by users and citizens to raise the totems utility and usability.</p> <p>There has been R&D activity for this measure and no R&D activities are therefore planned in the future.</p>

<p>Measure n° 80 / Park & Ride Parking Guidance System</p> <p>The aim of this measure was to design and implement a real-time parking guidance system that would inform drivers about the occupancy rates of the most relevant parking lots in the city of Monza, in order to reduce congestion, parasitic shifts of drivers looking for free parking places and to improve users' perception of mobility services.</p>
<p>Exploitation Component</p> <p><i>What is exploitable in the measure design, planning, implementation and evaluation (detail how):</i></p>

- **Methodology:** X
- **Tool/Software:** X
- **Technology / Process:** real time parking guidance system informing drivers about the occupancy rates of the most important parkings within the city centre.
- **Result:** The system will permit to “decongestionate” central areas of the city

Where can take place the Exploitation / Detail why

In the city: new built parkings will be compelled to install panels connected to the existing infoparking schemeX

In the region: parkings in other cities in the Region

In the country: parkings in other cities in Italy

In other cities: Cities where this measure has not been implemented yet can exploit Monza experience to test this technology for their parkings

In other sectors: X

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. Public administration
2. Parkings owners
3. GPS producers
4. Smartphone producers
5. Web applications developers

What activities could be undertaken to ensure this is happening?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

Mobility officers and technicians, elected politicians and citizens will be informed through the local newsletter, the local ARCHIMEDES website as well as other more interactive tools (such as the Municipality Facebook page) about this new service and related opportunities.

Moreover, at the end of the project an interactive application (a DVD-Rom with videos) on the ARCHIMEDES measures in Monza will be realized and sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).

There has been R&D activity for this measure and no R&D activities are therefore planned in the future.

Measure n° 81 / UTC system

The aim of the measure was to design and implement an urban traffic control (UTC) system that contributes at optimising the flow of traffic through the city of Monza and to reducing congestion.

Other related aims were to allow, through the implementation of UTC, the application of several traffic policies through the application of Intelligent Transportation System, facing the evolution of traffic and its profile along working days and week-ends, and to set up a baseline to apply Priority Schemes for Public Transport.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** sound approach to design traffic control in congested areas considering traffic lights as key elements to achieve precise mobility objectives (fluidification, which carriageways to prefer and which to penalise, according to several scenarios, such as peak and off-peak...).
- **Tool/Software:** Application of an integrated system to define strategies, to apply them and to interface traffic light controllers managing the traffic lights
- **Technology / Process:** The process applied in the Municipality concerning the use of traffic lights as fundamental leverage to drive traffic across the city will benefit of the process carried out in Archimedes. After Archimedes, the experts of the Municipality can assess the role of every single intersection equipped with traffic light deciding which traffic light plans are the most suitable to face daily traffic problems.
- **Result:** X

Where can take place the Exploitation / Detail why

- In the city:** extension of the UTC system to manage other groups of traffic lights in the city
- In the region:** implementation of the UTC system in other cities which need to maximize their traffic flows, especially if they are relevant for regional transport connections
- In the country:** implementation of the UTC system in other Italian cities which need to maximize their traffic flows
- In other cities:**X
- In other sectors:**X

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public? Research, administration, industry and Services?)

1. Public administration (at city and Province level)
2. System integrators (private companies)

What activities could be undertaken to ensure this is happening?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

At the city level, activities and decisions to extend the application of the UTC system are in charge to the Municipality, which will evaluate the feasibility to extent the UTC system to other areas of Monza, and especially to areas which have relevant connections (to get in and out of Monza).

At a wider level, site manager, mobility experts of the Municipality of Monza and the private Company supporting the Municipality as system integrator can show the results achieved through specific workshops; a meeting involving other cities was

held on Feb 16th, 2011: even if focused on dissemination, also exploitation objectives were fulfilled.

To this regard, also the technicians of the Province in charge of the strategic plan for mobility “Moving Better” will be contacted, In fact, for its fully implementation the strategy raises a crucial technical issue: which traffic light plans have to be set in order not to penalize traffic in the other directions?

Moreover, at the end of the project an interactive application on the ARCHIMEDES measures in Monza has been implementing (a DVD-Rom with videos, where one will be dedicated specifically to the most technologically innovative ARCHIMEDES measures in Monza) and it will be sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).

Measure n° 82 / Public Transport Priority system

The aim of this measure was to improve commercial speed of public transport fleet across the city assuring priority at traffic lights.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

- **Methodology:** the conceptual approach developed in this measure concerns the transit of buses at critical intersections where buses travel together with cars;
- **Tool/Software:** bus priority system are interconnected with the Urban Traffic Control System described in Measure no. 81, to enable interventions on traffic light plan to extend green time to the links where buses require priority,
- **Technology / Process:** X
- **Result:** X

...

Where can take place the Exploitation / Detail why

In the city: implementation of the system in other groups of traffic lights at city's intersections interested by PT lines routes

- In the region:** X
- In the country:** X
- In other cities:** X
- In other sectors:** X

Who will be the exploitant(s) / key players for exploitation?

Describe the target groups (private /public ? Research, administration, industry and Services ?)

1. Public administration
2. Public and private providers and managers of public transport services
3. Software developers (private companies)

What activities could be undertaken to ensure this is happening ?

Describe any idea you have to enhance the exploitation of this measure

Please detail which project actors would be in charge and time planning predictable as specifically as possible

Site manager, mobility experts, system integrators, Public Transport companies will have technical meetings, in order to install the system on other intersections. In fact, for its fully implementation the strategy raises a crucial technical issue: to which percentage green light time can be extended to give the priority to PT but without penalize too much private transport?

Moreover, at the end of the project an interactive application on the ARCHIMEDES measures in Monza will be realized (an interactive DVD-Rom with videos, and among those one will be specifically on the most technologically innovative ARCHIMEDES measures in Monza) and it will be sent to other Italian middle size municipalities facing similar problems of congestion (i.e. around 40 cities in Italy have a population of 80.000-200.000 inhabitants).

Usti nad Labem

Measure n°25 / Short Term Parking Scheme in Ústí nad Labem

The measure was aimed at improving conditions for parking in the city with regard to future development, reducing negative impacts of individual transport and improving living environment in the city. Analysis of current conditions of parking in the city was realised and prognosis for future development was conducted. Feasibility of a proposal for a parking scheme in the city centre and in residential areas was assessed.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

Parking policy and generalisation of solutions applicable on other areas.

- Methodology:

Research based methodological strategy for improving parking conditions in the city.

- Result:

P&R system, paid parking zones, P&G system, promotional campaigns, supporting tools

Where can take place the Exploitation / Detail why

In the city: Motor transport development in cities cause high parking demand while the parking capacity, mainly in historical parts of cities, is low.

In the region: Issues of parking cannot be just transferred to city outskirts, need for complex solutions.

In other cities: Parking problems is a common issue in majority of cities in Europe.

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities

Target group: drivers

What activities could be undertaken to ensure this is happening?

During the project: Intensive promotion of the parking scheme is necessary, especially concerning the paid parking zones and other restrictions for parking in the city. Residents must be aware of the reasons and accept the suitable and most efficient solutions.

After the project: Proper monitoring of compliance with the parking scheme is required. Information leaflets and explanation brochures are suitable. It is desirable to further monitor effectiveness of proposed measures with regard to the future development of motorisation in the city.

Measure n°26 / Strategic Traffic Management in Ústí nad Labem

The measure is aimed at optimising traffic management in the city in order to improve traffic flow and road safety, and reduce negative impacts of motor transport on the city environment, such as emission of harmful gases, noise and vibrations. It aims at enabling priority for public transport, development of walking and cycling modes and contributing to better quality and cleaner life in the city. Analysis of the current state of traffic management in the city was realised, including application of intelligent transport systems and transfer of traffic data in the city. Feasibility study of implementing optimised traffic management scheme and ITS development to meet requirements for sustainable urban transport development was elaborated.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

*Management and organisation of transport on local roads.
Traffic information and data transfer.
Organisation of parking, city PT, freight transport,
Monitoring systems and emergency systems.
Payment system.
Maintenance of the infrastructure.*

- Methodology:

Research based methodological strategy for traffic management in the city.

- Result:

Scheme for strategic traffic management.

Where can take place the Exploitation / Detail why

In the city: *Motor transport development in cities increase demand for efficient traffic management in cities.*

In the region: *Strategic traffic management needs to be addressed as a complex solution.*

In the country: *Strategic traffic management needs to be addressed as a complex solution.*

In other cities: *Strategic traffic management is required in any city to optimise local transport as well as transit traffic.*

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities

What activities could be undertaken to ensure this is happening?

During the project: *Incentives and support tools to increase effectiveness of the traffic management, utilisation of new technologies for traffic control systems.*

After the project: *Follow trends in ITS technologies and modern methods of traffic management and data sharing.*

Measure n°27 / City Centre Access Control in Ústí nad Labem

The measure is aimed at lowering traffic intensity in the city centre and thus improving conditions for public transport, walking and cycling. Research study proposing possible options for traffic regulations in the centre of Ústí nad Labem was performed, with the emphasis on describing expected positive impacts, considering risks and consequences, and comparing the results.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how):

Traffic regulations for the city centre

- Methodology:

Research based methodological strategy for improving traffic conditions in the city centre.

- Result:

Access for transport services, restrictions for freight vehicles, restrictions according to emission levels, system of regulated traffic and traffic lights, paid entrance to the city centre, calm zones, parking in the city centre

Where can take place the Exploitation / Detail why

In the city: *City centre is primarily designed for pedestrians and cyclists, traffic is not desirable.*

In other cities: *Intensive traffic in the city centre cumulates negative effects, especially undesirable in historical parts of cities.*

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities

What activities could be undertaken to ensure this is happening?

During the project: *Promotion of restrictions required.*

After the project: *apply PT improvements in the city centre and maintain traffic calming;*

Measure n°28 / Noise Reduction in Ústí nad Labem

The measure developed the noise map of the city from noise generated by the current and predicted traffic. Roads with the highest level of noise were identified and measures reducing traffic noise and impact of noise on the city environment were proposed for the most affected areas. Effectiveness of individual noise reducing scenarios was assessed. Based on the noise map, a research study of traffic noise reduction in the city was elaborated and suitable solutions were recommended.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): Noise reducing solutions applicable on other areas

- Methodology:

Research based methodological strategy for reducing noise emitted by traffic in the city.

- Product:

Noise map of the city

- Tool / Software: The traffic planning software PTV-VISION ® from the company PTV Karlsruhe was used for the development of the traffic model to calculate the traffic load for various scenarios. The software VISEM ® 8.10 is part of PTV-VISION ® and is used for modelling the transport demand.

- Result: Noise emissions and resulting problems, noise reducing model scenarios, organisational and technical solutions

Where can take place the Exploitation / Detail why

In the city: Ústí nad Labem has a target to reduce the proportion of residential areas that are located in areas exposed to traffic noise levels above 65 dB by the year 2012.

In the region: Noise regulations affect traffic in the whole region.

In other cities: Noise emitted by traffic has negative effects on residents in majority of cities.

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities
Target group: residents living by noisy roads

What activities could be undertaken to ensure this is happening?

During the project: The measure should be supported by suitable demand management strategies for individual transport aimed at reducing number of vehicles by shortening the number of parking lots available in the city centre, introducing the paid entrance to the central zones, etc.

After the project: Continue in initiated efforts, transferring traffic from sensitive zones and applying other technical solutions, such as noise barriers, use of innovative materials preventing noise, tunnel solutions, etc.

Measure n°39 / PT Promotion Campaign in Ústí nad Labem

Needs of PT passengers were analysed in order to reveal deficits in current PT services and to design improvements, present benefits of public transportation and encourage greater take-up of urban PT. Research study of behaviour and needs of actual and potential public transport users in the city was elaborated. Based on study results, a public campaign promoting urban public transportation in the city was implemented.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): *Developing and implementing PT promotional public campaign*

- Methodology:

Research based methodological strategy for implementing public campaign promoting PT in the city.

- Result: *Effective public campaign promoting use of PT in the city*

Where can take place the Exploitation / Detail why

In the city: *City public transport is a major sustainable mode of transport in Ústí nad Labem and needs to be supported and promoted.*

In other cities: *Modal split from individual motor transport towards public transport is desirable in other cities.*

Who will be the exploitant(s) / key players for exploitation?

*Traffic operators, Department of Transport at Municipalities, PT operators
Target group: drivers, users and potential users of the city PT*

What activities could be undertaken to ensure this is happening?

During the project: *Apply improvements of PT services, utilise promoting and information brochures and traffic education*

After the project: *Build on campaign results and continue in initiated efforts*

Measure n°40 / Drive Safely Campaign in Ústí nad Labem

The aim of the measure was to influence behaviour of drivers through preventive traffic education, increase awareness on traffic issues, and thus reduce the number of traffic accidents. A public campaign to eliminate dangerous behaviour of drivers and increase awareness about road safety issues in the city was implemented.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): Developing and implementing public campaign promoting safe driving in the city.

- Methodology:

Research based methodological strategy for implementing public campaign promoting safe driving in the city.

- Result: Effective public campaign promoting safe driving in the city.

Where can take place the Exploitation / Detail why

In the city: Ústí nad Labem has a target to reduce the number of injuries and number of traffic accidents in the city.

In the region: Road safety should be addressed regionally.

In the country: Importance of the issue at national level.

In other cities: Spreading awareness on safe driving is important in all cities.

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities;
Target group: drivers and potential drivers

What activities could be undertaken to ensure this is happening?

During the project: Apply traffic calming measures, encourage road safety improvements, realise traffic education

After the project: Build on campaign results and continue in initiated efforts

Measure n°49 / Road Safety Measures in Ústí nad Labem

Ústí nad Labem has a target to reduce the amount of traffic accidents in the city and their consequences through road safety measures. It focuses at reducing number of deaths and injuries caused by traffic and consequently decreasing the number of road accidents. Safety audit was realised in order to reveal safety deficits on the road network in the city. Based on findings of the safety audit, solutions for safety improvements were identified and related action plan describing steps required for implementation was produced. Feasibility of traffic calming in the city was analysed and suitable solutions were recommended. A public campaign to encourage speed reduction and increase road safety in the city was implemented.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): Road safety measures for the city

- Methodology:

Research based methodological strategy for improving road safety in the city.

- Result: Road safety audit and actions, traffic speed reduction

Where can take place the Exploitation / Detail why

In the city: Ústí nad Labem has a target to reduce amount of casualties caused by city traffic and improve safety conditions on local roads.

In the region and in the country: Road safety issue is an important factor for transport at both regional and national level.

In other cities: Motor transport development in cities cause high potential for safety risks for all road users.

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities

Target audience: Drivers, Cyclists, Pedestrians and other road users

What activities could be undertaken to ensure this is happening?

During the project: Trainings, workshops, traffic education, conferences on road safety issues

After the project: continue in initiated efforts for road safety improvements and campaign raising awareness about safety issues, causes and consequences of traffic accidents, periodically repeat safety audits and inspections of frequented road sections, continuously remove safety deficits

Measure n°50 / Mobility Improvements in Ústí nad Labem

The measure was aimed at providing improved mobility services and information about access routes to citizens with limited mobility. Information on safety issues and quality characteristics of main access routes in the city was collected and processed for the website. Mobility barriers on these important access routes were identified and recommended for removal to city authorities.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): *Mobility improvements in the city*

- Product:

Web portal for residents with mobility restrictions.

- Result: *Overview of barrier-free access routes in the city and obstacles on these routes suitable for recovery; easily accessible information useful mainly for disabled people and other road users with limited mobility*

Where can take place the Exploitation / Detail why

In the city: *Ústí nad Labem aims at improving mobility conditions for all residents.*

In other cities: *Allow to map and provide information on barrier-free access routes to vulnerable road users anywhere.*

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities, associations for handicapped people

Target group: *residents with mobility restrictions, mothers with strollers, elderly people*

What activities could be undertaken to ensure this is happening?

During the project: *Mobility survey, improving conditions for pedestrians, increasing number of access routes, removing barriers from access routes to allow safe and comfortable movement of pedestrians.*

After the project: *Encourage removal of identified barriers on access routes, update the website with relevant information, provide complex information about mobility options*

Measure n°60 / Cycle Transport Improvements in Ústí nad Labem

Complex information about cycling opportunities, services and points of interest in the region were collected and processed for the website. Feasibility study of improving cycling infrastructure and providing suitable services was conducted, utilising results of the cycle policy audit (BYPAD) performed in the city. Recommended actions were processed for the action plan. Feasibility study of connecting the two international cycle routes by a new cycle route leading through the city was elaborated.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): *Improving conditions for cycling in the city*

- Methodology:
BYPAD audit

- Product:
Web portal for cyclists in the region.

- Result: *Cycle routes in the region, information and services for cyclists, actions required for improvements.*

Where can take place the Exploitation / Detail why

In the city: *Improving conditions for cycling to increase take up of this sustainable mode transport for both recreational and transfer purposes.*

In the region and in the country: *Cycling should be addressed in the wider area to allow interconnection of cycle routes in the area.*

In other cities: *Promotion and improvement of conditions for cycling is required generally.*

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities, Cycling associations
Target group: *Cyclists and potential cyclists*

What activities could be undertaken to ensure this is happening?

During the project: *Improving cycle services in the city, promoting cycling, organising cycling events, priorities to cyclists, investments in cycling infrastructure*

After the project: *Continue in initiated efforts, update website with relevant information and provide complex information about cycling opportunities and improvements realised and planned*

Measure n°67 / Efficient Goods Distribution in Ústí nad Labem

The measure proposed a goods distribution scheme lowering noise from traffic affecting the city and optimising city logistics in Ústí nad Labem.

Exploitation Component

What is exploitable in the measure design, planning, implementation and evaluation (detail how): Designing efficient organisation for distribution of goods in the city

- Methodology:

Research based methodological strategy for distribution of goods in the city.

- Result: Organisation of freight transport in the city with the aim on noise reduction.

Where can take place the Exploitation / Detail why

In the city: Ústí nad Labem has the target to reduce noise caused by freight vehicles carrying goods, which pass through the city.

In the region: Issues should be addressed regionally to reach the desired effect.

In other cities: Goods vehicles and primarily freight vehicles require management to lower negative effects on the city, with the aim on noise emissions.

Who will be the exploitant(s) / key players for exploitation?

Traffic operators, Department of Transport at Municipalities

Target group: Goods vehicle operators

What activities could be undertaken to ensure this is happening?

During the project: Training and promotion aimed at goods vehicle operators required to avoid disagreement.

After the project: Application of other traffic management and noise reducing measures is suitable.