CiViTAS
Cleaner and better transport in cities

ÚSTÍ NAD LABEM

Ústí nad Labem

T60.1 – Cycle Transport Improvements in Ústí nad Labem

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Contents

1 Introduction 4
1.1 Background CIVITAS 4
1.2 Background ARCHIMEDES 5
1.3 Participant Cities 5
1.3.1 Leading City Innovation Areas 5
2 Ústí nad Labem 6
3 Background to the Deliverable 6
3.1 Summary Description of the Task 9
4 Web Portal for Cyclists in the Ústí Region 9
4.1 Preparatory Actions 9
4.2 Web Site Features 10
4.3 Support 14
4.4 Mobility Survey 16
4.5 Issues 17
4.6 Future Actions 18
4.7 Conclusion 20

1 Introduction

1.1 Background CIVITAS

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

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

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

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

Objectives:

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

Horizontal projects support the CIVITAS demonstration projects & cities by:

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

Key elements of CIVITAS:

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

1.2 Background ARCHIMEDES

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

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

1.3 Participant Cities

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

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

1.3.1 Leading City Innovation Areas

The four Leading cities in the ARCHIMEDES project are:

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

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

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

2 Ústí nad Labem

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

Ústí nad Labem is an important industrial centre of north-west Bohemia. The city's population is 93 859 living in an area of 93.95 km^2. The city is also home to the Jan Evangelista Purkyně University with eight faculties and large student population. The city used to be a base for a large range of heavy industry, causing damage to the natural environment. This is now a major focus for improvement and care.

The Transport Master Plan, initiated in 2007, will be the basic transport document for the development of a new urban plan in 2011. This document will characterise the development of transport in the city for the next 15 years. Therefore, the opportunity to integrate Sustainable Urban Transport Planning best practices into the Master Plan of Ústí nad Labem within the project represents an ideal match between city policy framework and the ARCHIMEDES project.

The project's main objective is to propose transport organisation of the city, depending on the urban form, transport intensity, development of public transport, and access needs.

3 Background to the Deliverable

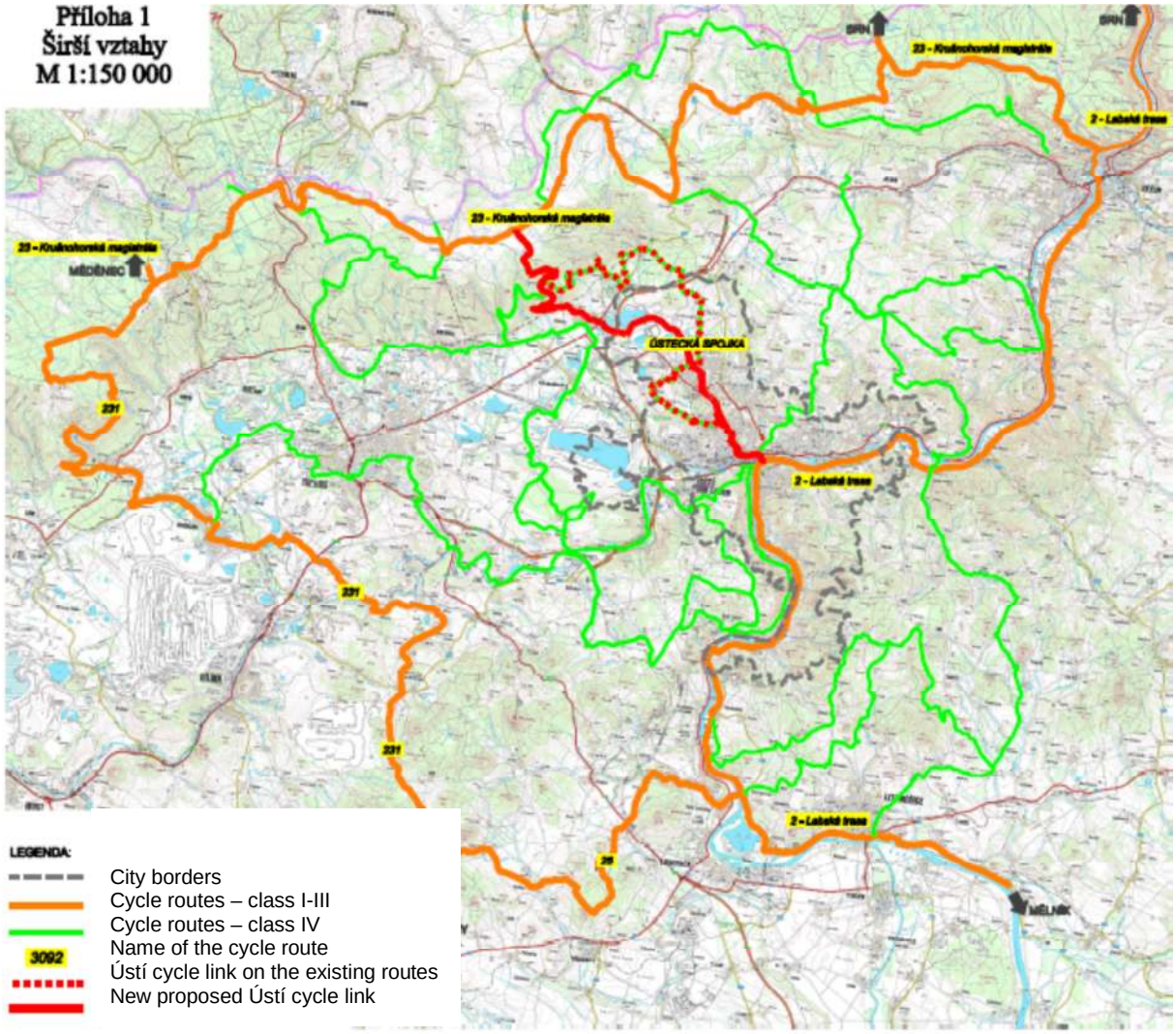
Ústí nad Labem has a target to improve conditions for cyclists in the city and the surrounding areas and to create suitable facilities for them. This is delivered in two parts:

- Improving information about cycle transport opportunities in the area, the main output of which is implementation of a web portal for cyclists in Ústí nad Labem.
- Linking the existing cycling infrastructure into the more complex cycle network to increase the number of cyclists in the area.

During 2010, a BYPAD audit[1] was performed in the city within the CIVITAS ARCHIMEDES task 11.6.6. The audit concluded that, although the elevation profile of the city is very hilly and rather challenging for cyclists, and the cycling infrastructure has not been incorporated into the city's transport system, Ústí nad Labem presents considerable potential for the development of cycle transport. The Ústí region offers numerous points of interest for cyclists, the city is surrounded by nature trails and cycle routes and it is located between the two major cycle routes of international importance - the Elbe route and the Ore mountains route (please see the Figure 1 – Cycle routes in the Ústí region).

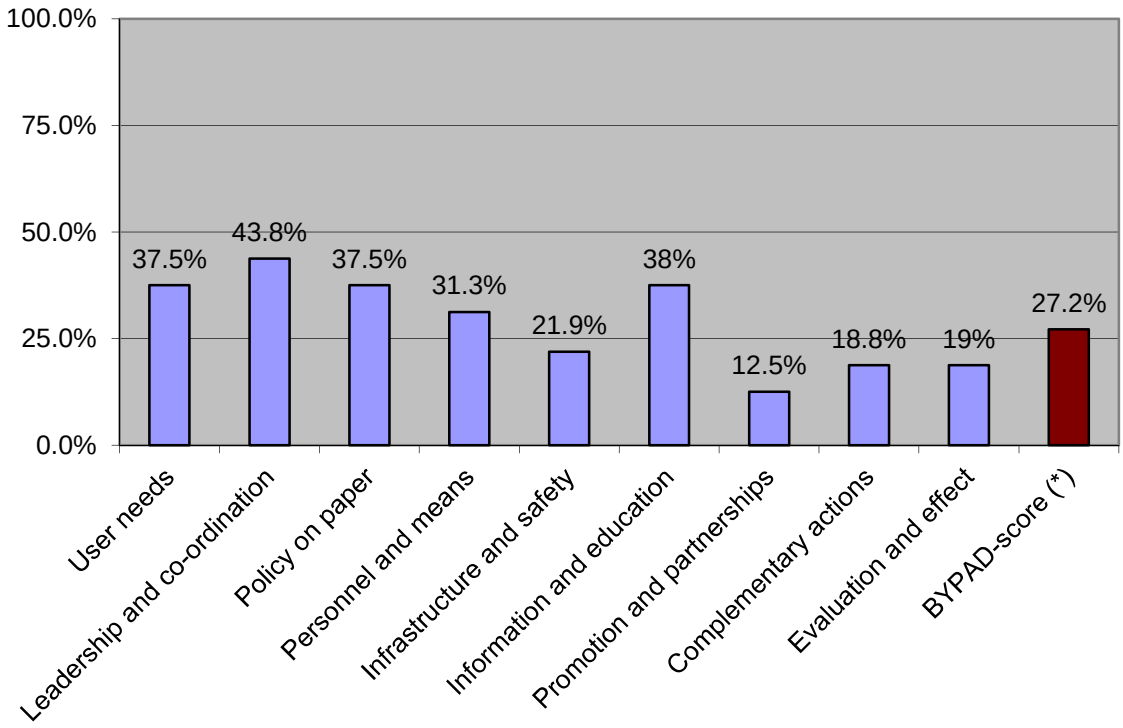
[1] The aim of a BYPAD audit is to develop a quality management tool which indicates the quality level of cycling policy in cities/towns or regions and prepares a quality plan/action plan for this cycling policy. The BYPAD audits carried out in the CIVITAS ARCHIMEDES cities are the subject of a detailed review in ARCHIMEDES Deliverable 11.7.

Figure 1 – Cycle routes in the Ústí region



According to the BYPAD audit, cycle transport improvements in the city demand large efforts and financial resources if they are to be realised. It is therefore necessary to prioritise cycling actions in the city. However, some measures can be implemented without high personal and financial requirements and can be realised within the ordinary operation of the city government.

Figure 2 - Results of the BYPAD audit in Ústí nad Labem (BYPAD Score)[2]



It was determined, that the general cycling policy of the city should:

- Enhance security and safety of cyclists and their surroundings when riding a bicycle;
- Facilitate development of mass cycle transport use on a daily basis;
- Create space to build a dense network of cycle routes throughout the city area, linked to the surrounding towns and cities, with the help of SFDI (State Fund for Transport Infrastructure, www.sfdi.cz), regional and city budget and the European Union;
- Provide citizens with sufficient opportunities to change their lifestyle contributing to their health;
- Contribute to lifestyle improvements and disease prevention by supporting daily cycling;
- Help to improve the environment in the city by reducing pollutant emissions from personal mobility;
- Provide additional training to citizens, including additional information on free choice of transport mode, environmental protection, sustainable development, healthy lifestyle and new business opportunities related to cycling in the city;
- Contribute to the development of tourism in the area;

[2] For further details see ARCHIMEDES Deliverable 11.7. Note that because BYPAD is conceived as a progressive quality management system an ongoing improvement in score is as important, if not more so, than the actual score at any one point in time.

- Provide the public with the opportunity to participate actively in the implementation and updating of cycling policy and to develop information and services in the city.

The highest priority is given to appointing a local coordinator of cycling activities in the city, who would be responsible for implementing action plans, and cycling related measures to fulfil the city's cycling policy.

Other priorities are to ensure:

- Sufficient finance is available to cover the necessary staff and investment costs
- Construction of the cycle infrastructure
- Safety of cyclists
- Realisation of measures towards cycle transport improvements (primarily construction of basic cycle infrastructure and related facilities, organisation of cycling activities in the Ústí region, to provide complex information about local cycle transport, promote cycling and involve citizens in cycling activities)
- Complementary actions within the broader mobility policy and SUTP for Ústí nad Labem
- Evaluation of the results

The local cycle transport improvements will be supported by a centralised cycle web portal, which will provide a range of information about cycling opportunities and about progress of improving cycling conditions in the city and the surrounding area..

3.1 Summary Description of the Task

The work described in this deliverable is the output of the Civitas Archimedes task 6.10. Cycle Transport Improvements. The aim is to promote and support cycling in the area by increasing awareness about cycling opportunities.

Within the task, Ústí nad Labem developed an autonomous Web portal for cyclists in the Ústí region, which is currently available as a trial version at: http://cyklomapa.usti-nl.cdsw.cz/. Citizens have been asked to send their comments and feedback to determine where improvements can be made.

It provides information about cycling opportunities, cycle services and areas of interest for tourists in the Ústí region.

Data for the cycle website is still being gathered and the information provided will be gradually improved and further updated as the environment for cycling in the city changes.

4 Web Portal for Cyclists in the Ústí Region

4.1 Preparatory Actions

Implementation of the web application was carried out in several steps:

1) A field survey was carried out to obtain data required for the map database. It was conducted on all cycle routes in the region utilising GPS recording devices on a bike, small motorbike or by walking. Furthermore, photo-documentation was gathered about local cycle routes, points of interest, cycling facilities and other issues for cyclists in the area.
2) Data were processed into the information database for the web portal by an application that required coding of web sources and implementation of the graphical interface, editing of maps and uploading information on leading of individual cycle routes, its characteristics, pictures and videos, related points of interest, etc.
3) Debugging of the website and its features.
4) Public testing in the form of a trial version, collecting feedback and improving the functions of the interactive web portal. More detail about functions of the web portal are presented in section 4.2.
5) Updating information about local cycle transport, its possibilities, goals for improvements and the corresponding progress.

4.2 Web Site Features

The application has a standard user interface corresponding with the city web page www.usti-nad-labem.cz. There are two basic concepts of map schemes – street maps and photo-orthographic maps.

Figure 3 – Street maps on the Cycle web portal

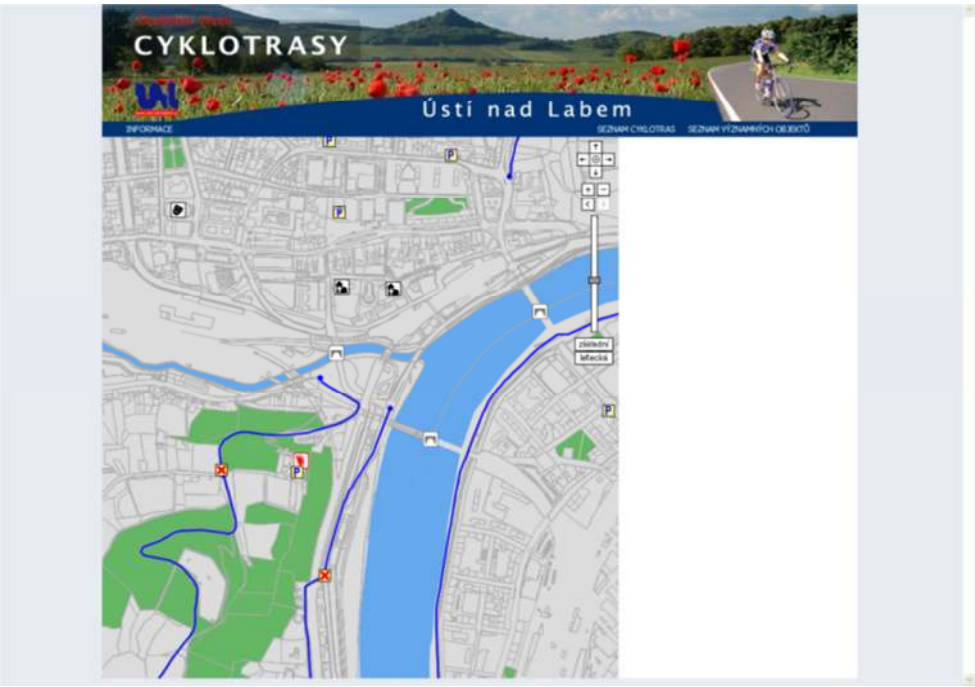
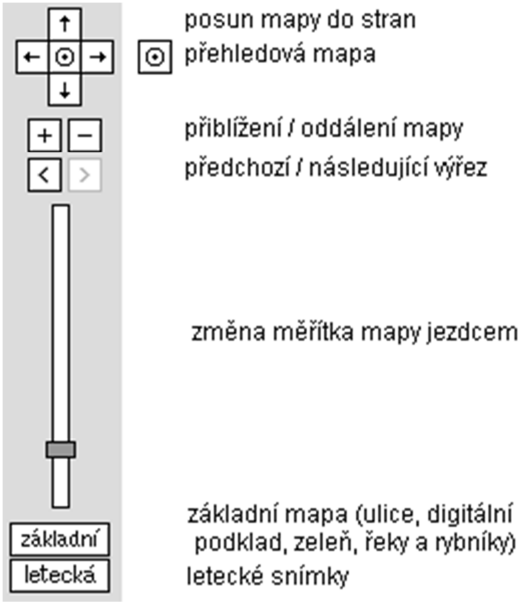


Figure 4 - Orthographic maps on the Cycle web portal with characteristics of the selected point of interest

Maps can be operated by display controls, by mouse and by keyboard. After clicking on individual cycle routes, detailed information is available including pictures and videos from the route.

Figure 5 - Display controls of the web



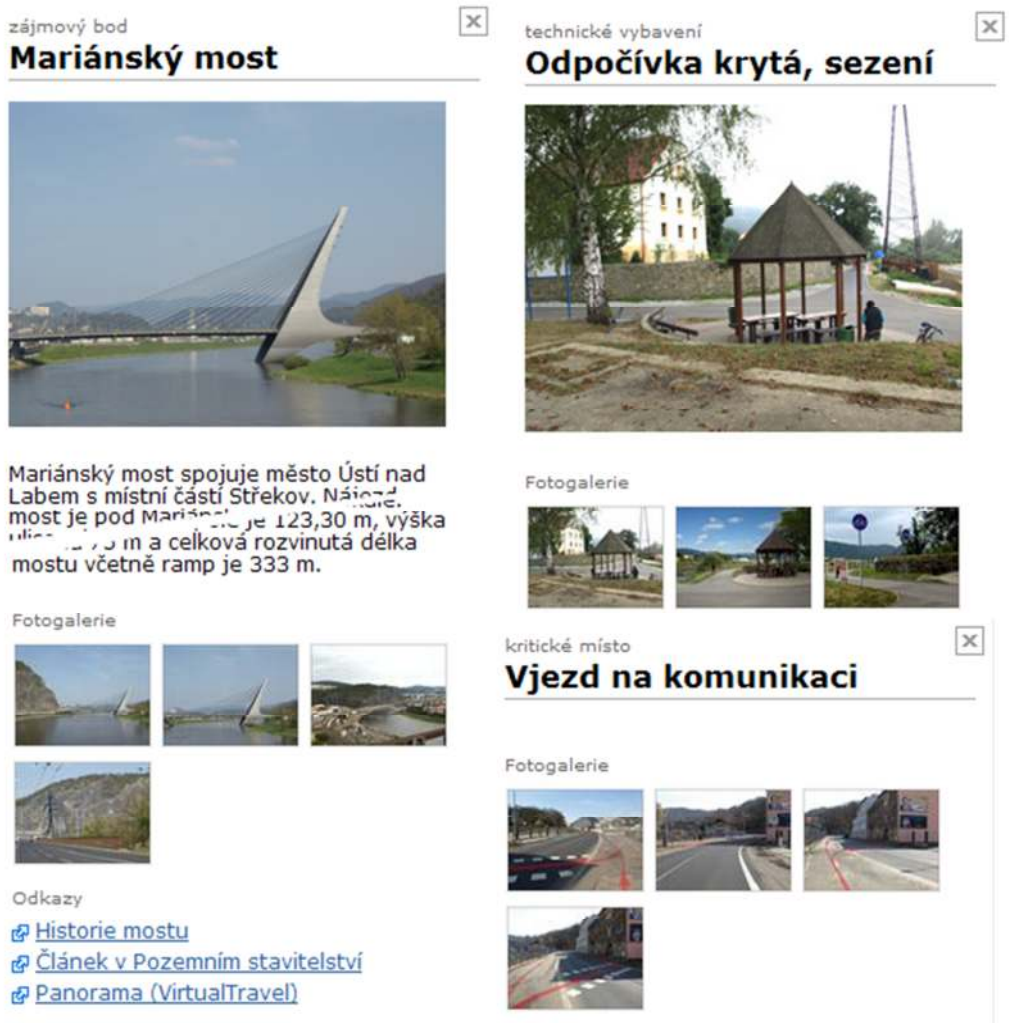
The web portal includes the following features:

- Detailed characteristics of individual cycle routes.
- Safety issues in terms of traffic on the route, description of its surface, warning about narrow sections, steep hills and other safety risks - shown by warning marks on the map, critical points are presented with comments and pictures.
- Quality of the cycling network according to suitability for in-line skating, road bikes, track bikes, mountain bikes or leading the bike on foot (over obstructions etc.) are shown in various colours on the map.
- Videos from each section of the cycle route are shown in both directions. They are recorded by a camera attached to a bike which allows users to view the actual route. Videos are presented in a separate floating window, while the mark on the map indicates the current position on the corresponding cycle route. It is possible to choose the direction the route takes.
- Technical equipment, such as cycle stands, rest areas and services with a corresponding photo gallery.
- Interesting locations in the area - presented with a description text and pictures from the locality.
- Links to other web sites.

Figure 6 - Videos from selected cycle route

The interactive maps are supplemented by icons that activate a vertical bar showing additional information, such as detailed description of individual points of interest, its photos, links to relevant web sites, etc.

Figure 7 - Detailed descriptions



A preview of pictures in the photo gallery can be switched to the original sized photos in a separate window.

Figure 8 - Photo gallery view

Figure 9 – List of local cycle routes

A list of available cycle routes in the side bar is interactive. After clicking on each route, a column appears presenting specific information about the route and the icon showing its positions on the map.

The interactive map can be further modified to suit personal user needs by switching to a mode, which presents the cycle routes in different colours according to their quality of surface and their relative difficulty. Route sections are identified by following colour scale:

- Flat surface suitable also for skating
- Flat surface suitable for road bikes
- Slightly rough surface suitable for track bikes
- Rough surface suitable for mountain bikes
- Surface suitable for walking

Some features of the cycle route are marked in the map by signs:

- Safe cycle route
- Traffic of motor vehicles
- Difficult surface
- Narrow section
- Steep hill
- Safety warning!

4.3 Support

The Web portal for cyclists in the Ústí region is accessed from the official city website in the section dedicated to CIVITAS ARCHIMEDES on www.usti-nad-labem.cz/civitas. Under the heading 'Cycling', the website presents additional information for cyclists in the Ústí divided into the following topics:

- Cycle routes in Ústí nad Labem and the surroundings
- Safety guidelines
- Legislation for cyclists including traffic laws, road signs and signals

- Compulsory cycling equipment
- Cycling network
- Additional information, such as conclusions and updates on the BYPAD audit, cycle buses in the Ústí region, cycling facilities

The Ústí nad Labem CIVITAS ARCHIMEDES web-page, as well as the cycle web portal, is currently being updated to a new design, which will be more user-friendly and attractive for visitors.

Figure 10 - Cycling on the Ústí nad Labem Civitas web page

Another dissemination support is provided on the social network Facebook, where Civitas Archimedes promotes its activities in Ústí nad Labem and discusses related topics with citizens on the web page: http://www.facebook.com/civitas.ul.

Figure 11 – Civitas in Ústí nad Labem on Facebook

4.4 Mobility Survey

Within the CIVITAS ARCHIMEDES activities, the city conducted a mobility survey of its citizens from July to November 2010. People were incentivised to participate in the survey by the chance to win prizes. The survey was distributed online on the city website and promoted via local media. The results of this survey will be utilised for mobility improvements, including improvements of the cycle transport in the city and its surroundings.

From the total of 22 questions, 10 were related to cycling:

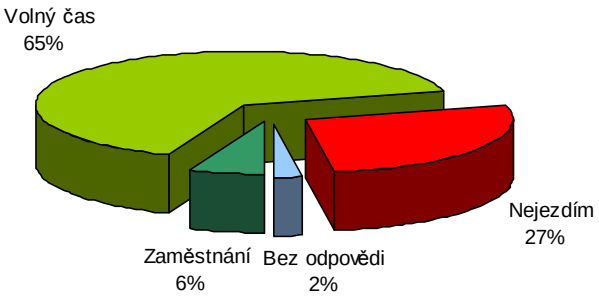
- On what occasion do you cycle?
- What would be the impulse for you to ride a bike more?
- Do you feel confident to ride a bike in the road traffic?
- Are you familiar with the cycle routes in the vicinity of Ústí nad Labem?
- Are you aware of the BYPAD audit recently conducted in the city?

- Do you utilise cycle equipment in the city, such as bicycle stands?
- Do you prefer bike trails outside the road network?
- Do you support extending bike lanes on sidewalks?
- Do you prefer extending bike lanes on roads?

Data from the mobility survey have been processed and the results are available for public on the Ústí nad Labem CIVITAS web site in the electronic PDF format in the section surveys (http://www.usti-nl.cz/cz/verejna-sprava/magistrat/odbory-a-oddeleni/odbor-dopravy/civitas/ankety/vysledky-z-losovani-bezpecne-a-pohodlne-po-ul.html).

Figure 12 – Example of statistics gathered from the survey of cycling among Ústí citizens

On what occasion do you cycle?



	No. of answers	Share (%)
To work/school	8	6
In my free time	89	65
Do not cycle	37	27
Other occasion	3	2
Total	137	

4.5 Issues

There are several major issues, facing Ústí nad Labem in relation to achieving cycle transport improvements in the city and to increase number of cyclists. These are outlined below:

Motor vehicle drivers not respecting cyclists on roads

Dense traffic in the city does not support cycling. Moreover, drivers do not regard cyclists as road users of equivalent status and current legislation prioritises drivers, even where officially marked cycle routes crossing a road.

Cyclists, as vulnerable road users, lack the opportunity to fully utilise local infrastructure that has been primarily designed for behalf of motor transport. Change in this situation is required, but this will inevitably be a long term process.

Inadequate infrastructure for cyclists

There is a lack of routes dedicated exclusively to cycle transport, which results in cyclists being forced to ride within the main traffic stream. Dedicated lanes for cyclists or at least sufficiently wide roadsides with a security strip are required. In the current situation, less experienced cyclists do not utilise the existing infrastructure and the level of risk for cyclists is high.

Furthermore, the cycle routes that already exist in the city and the surroundings are not linked into any complex cycling infrastructure. The first step towards continuous expansion is the planned Ústí cycle link proposed by CIVITAS ARCHIMEDES to connect the two major cycle routes of international importance with the city.

Difficult landscape

Ústí nad Labem is located in a hilly terrain on the base of the Bohemian highlands. The city elevation profile is demanding for occasional cyclists. Despite this fact, gradually improved cycling conditions would clearly help overcome these limitations.

4.6 Future Actions

Currently, a new web portal for transport in Ústí nad Labem is being developed, where CIVITAS activities will be easily accessible and visibly promoted, including actions towards cycle transport improvements, practical updated information on local cycling and the cycle web portal.

Figure 13 - Proposal for the new Transport web portal for the city

Implementation of new sections of cycling infrastructure is planned, as well as their interconnection with the existing network. Emphasis is also placed on traffic education for cycle transport, which is currently realised at all primary schools in Ústí nad Labem and will be further targeted on motor vehicle drivers to lower the safety hazard for cyclists as much as possible. It is necessary to gain stable political support to reach defined objectives and financial resources from the city budget, the state and from other funds.

4.7 Conclusion

The application Ústí nad Labem Cycle web portal is currently available as a trial version. It is gradually being improved based on the experience from its operation with the features described above. The web portal is supported by the city website promoting CIVITAS ARCHIMEDES and providing additional information for cyclists. Both websites will be fully integrated with the city's newly designed Transport web portal to contain a wide range of information about local cycle transport.

Although Ústí nad Labem has a difficult landscape for cyclists discouraging occasional cyclists, the city is able to significantly increase number of local cyclists by improving conditions of the cycle transport network in the Ústí region.

There are plans to link the existing major cycle routes in the vicinity of Ústí nad Labem d into the coherent cycling infrastructure. A range of practical information about cycling in the area will be provided by an integrated web portal. The city focuses on cycle transport education primarily at schools and gradually for local drivers to increase safety of cyclists.

There are other measures proposed as part of the future transport plans within the city that will to improve cycling conditions, although this may not be the primary objective. These include implementation of designated lanes, calm zones, speed restricted (30km/h) zones and one way roads available for cyclists in both directions. The cycling infrastructure is intended for extension and interconnection to provide a coherent network. Realisation of cycling facilities and equipment is required.

The potential for the development of cycle transport in the city and its surroundings is relatively high. The goal of improvements is to establish cycling not only as a free time recreational activity, but also as an alternative, sustainable means of transport suitable for the city.