



CiViTAS
Cleaner and better transport in cities

ÚSTÍ NAD LABEM
.....

Ústí nad Labem

T50.1 – Mobility Improvements to Promote Road Safety in Ústí nad Labem

June 2011



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Content

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.....	6
4	Mobility Improvements to Promote Road Safety in Usti nad Labem	7
4.1	Preparatory Activities.....	8
4.2	Description of the Web Portal.....	9
4.2.1	General information	9
4.2.2	Control features	13
4.2.3	Web site functions	13
4.3	Support	18
4.4	Mobility Survey.....	21
4.5	Conclusion.....	22
5	Annex – Results of the Mobility Survey	23

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);
- 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 km². The city is also home to the Jan Evangelista Purkyně University with eight faculties and large student population. The city used to be a base for a large range of heavy industry, causing damage to the natural environment. This is now a major focus for improvement and care.

The Transport Master Plan, 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

The city of Ústí nad Labem has a goal to improve conditions for handicapped and vulnerable road users and to introduce mobility services promoting road safety. Within the official city website an integrated transport portal is being developed with all comprehensive transport information from the city available from one site to provide its citizens with improved transport services. The aim is to support use of sustainable urban transport modes, increase safety of transport in the city and improve accessibility for all city residents, including residents with mobility restrictions.

3.1 Summary Description of the Task

Ústí nad Labem is currently developing a web portal to provide its citizens with improved mobility opportunities. The website application is primarily aimed at providing access routes for citizens with mobility disabilities, including handicapped residents, mothers with strollers and other vulnerable route users. It provides information about local access routes presented in interactive maps with videos from each route recorded in a user's point of view from a height of a wheelchair person.

Web portal visitors can view each desired route from its source (PT stations, parking lots) to its destination (offices, social services, healthcare facilities in the city) with all detailed information including detailed description of all barriers on the route, of all pedestrian

crossings, ramps and stairs, safety warnings on the route, videos and photo gallery from the route, and other user related information. The web portal is currently available as a trial version on <http://bezbari.usti.cds.w.cz/imapa.aspx>.

The web portal allows citizens to plan and review their walking trips and presents complex information to them from in a single location on all access data both visually and practically to get them acquainted with local mobility possibilities according to their personal needs or restrictions.

4 Mobility Improvements to Promote Road Safety in Ústí nad Labem

In order to fulfil the mobility requirements of citizens with limited mobility, the construction and modification of buildings and public spaces must satisfy legal standards and technical regulations. These standards determine the detail of the technical solutions to be applied. The required modification are realised either during the construction works or subsequently on the finished construction.

Ústí nad Labem aims to provide improved mobility services to citizens with limited mobility. What kind of information is required by disabled people was established through the use of surveys among city residents. This information was gathered and processed for the web portal. The barrier free routes were identified to be suitable for carers with strollers, elderly people, people with reduced mobility and other road users subject to reduced mobility and deemed to be vulnerable.

The objective of the task was to;

- provide citizens with access routes,
- provide information on security issues and the quality characteristics of each route, and
- provide alternatives for city mobility.

The deficits on access routes identified during the field survey were submitted to the relevant office authorities (City Municipality, City District authorities, Directorate of Roads and Motorways and Regional Authority of the Ústí region) for corrections with priorities of their need of implementation, especially concerning the pedestrian crossings in the city centre.

Figure 1 – Pedestrian crossing on the access route to the House of Culture in Ústí nad Labem



Routes described on the web portal enable access to the major destinations in the city – public offices, social services, healthcare facilities and other public buildings. The routes are initiated from all the nearest PT stations and parking lots reserved for disabled people. Routes will be further extended to other important points of interest in the city, such as cultural destinations and free time facilities in the city. Map of all the routes will be accessible on: <http://bezbari.usti.cds.w.cz/imapa.aspx>.

Information on this web portal is accessible for a wide range of public and it presents an innovative approach in the Czech Republic with big potential for practical use.

4.1 Preparatory Activities

Promotion of the CIVITAS measure 50 Mobility Improvements was realised through a number of media outlets: online using the city website, on Facebook, on local radio and city newspaper. Implementation of the web portal dedicated to improve mobility in Ústí nad Labem was carried out through the following steps:

- Field surveys were conducted to gather background data for the website database, which included mapping of the major access routes, recording of GPS location, collecting photos of the route and of points of interest and videos from each route, gathering data about all barriers on these routes, such as height of a barrier, safety hazards, accessibility of destinations, etc. Field surveys were carried out by researchers driving an electric scooter. A camera was fitted such that photos could be taken from eye height of a wheelchair mobile person.(see Figure 2)

- Data were processed for the web portal, setting the interface for data recall, implementing web application from source code and graphical interface, which is common with the web portal for cyclists in Ústí region realised within the CIVITAS measure 60 Cycle Transport Improvements.
- Implementing the interactive maps for the web portal.
- Integrating relevant information on routes, barriers, points of interest and other data gathered via field surveys and requested by disabled residents.
- Debugging web application features.
- Providing the trail version online and processing the feedback to improve the features and make the web site more user-friendly.

Figure 2 – Electric scooter utilised for shooting of videos from the wheelchair person's point of view.



4.2 Description of the Web Portal

4.2.1 General information

The web portal contains information of four major types – origins and destinations, access routes, videos and barriers.

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. Please see Figures 3-7 for screen shots to illustrate this.

Figure 3 - Default page of the web portal on access routes in Ústí nad Labem



Figure 4 – Street maps on the web portal

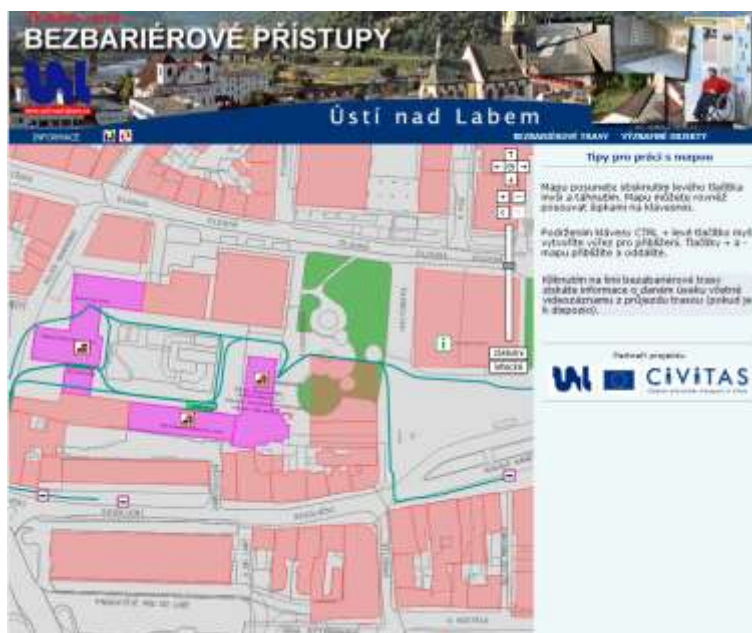


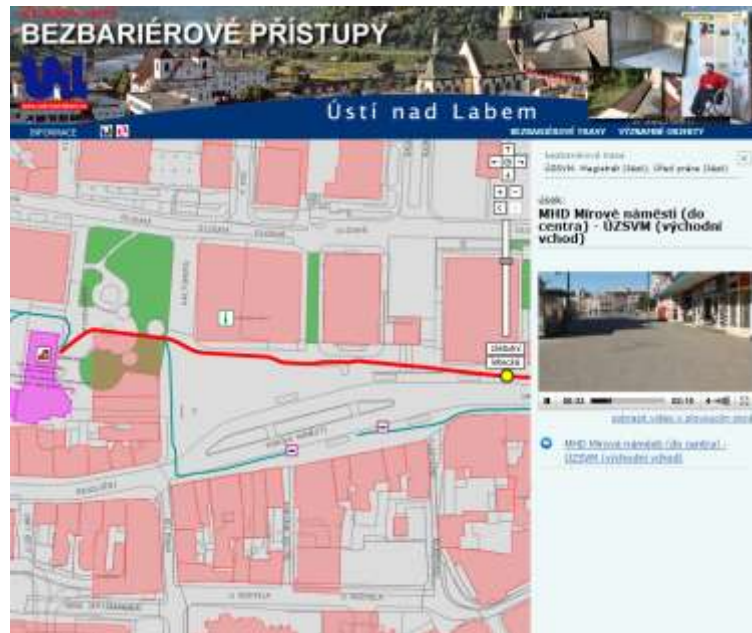
Figure 5 – Orthographic maps on the web portal



Figure 6 – Detailed information on the selected point of interest



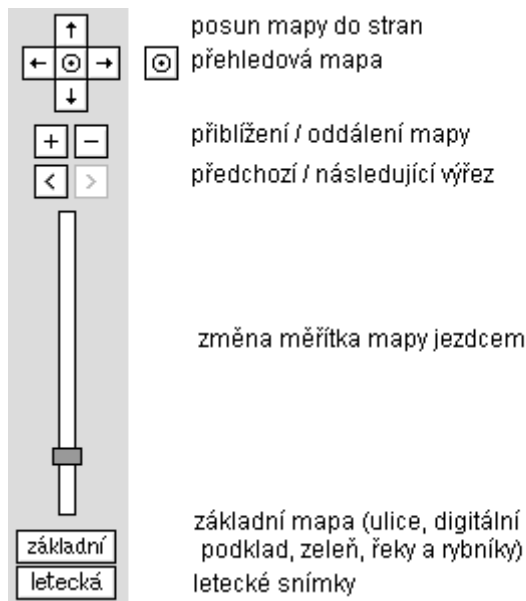
Figure 7 – Details of the selected access route



4.2.2 Control features

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 8 – Control panel



4.2.3 Web site functions

The web portal includes the following features:

- Continuous viewing of maps in various scales.
- Identification of selected pedestrian routes from its source (PT station or parking lot) to its destination (currently offices, social services and medical facilities, other public buildings are in progress).
- Information about barriers on the route – edges, stairs, ramps, etc.
- Videos of each route showing the position on the interactive map.
- Detailed information on points of interest in the city.
- Downloadable application for a cell phone.

Figure 9 - A list of significant objects

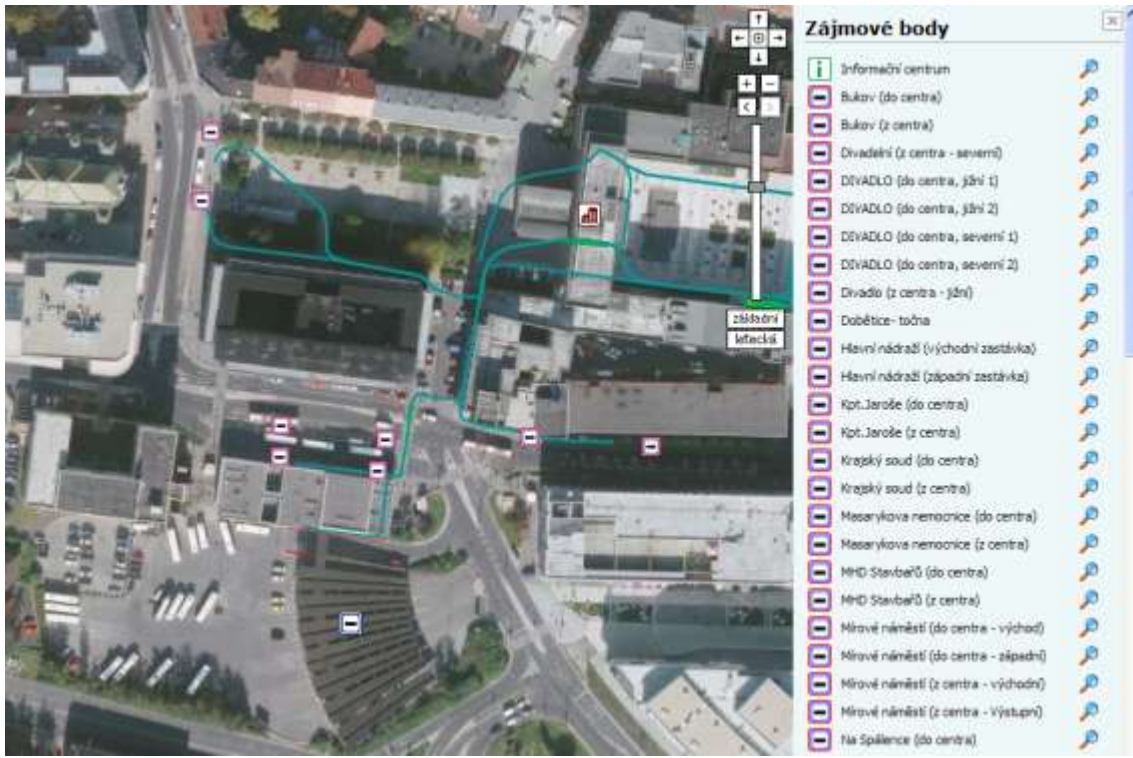


Figure 10 – Sources and destinations on the interactive map

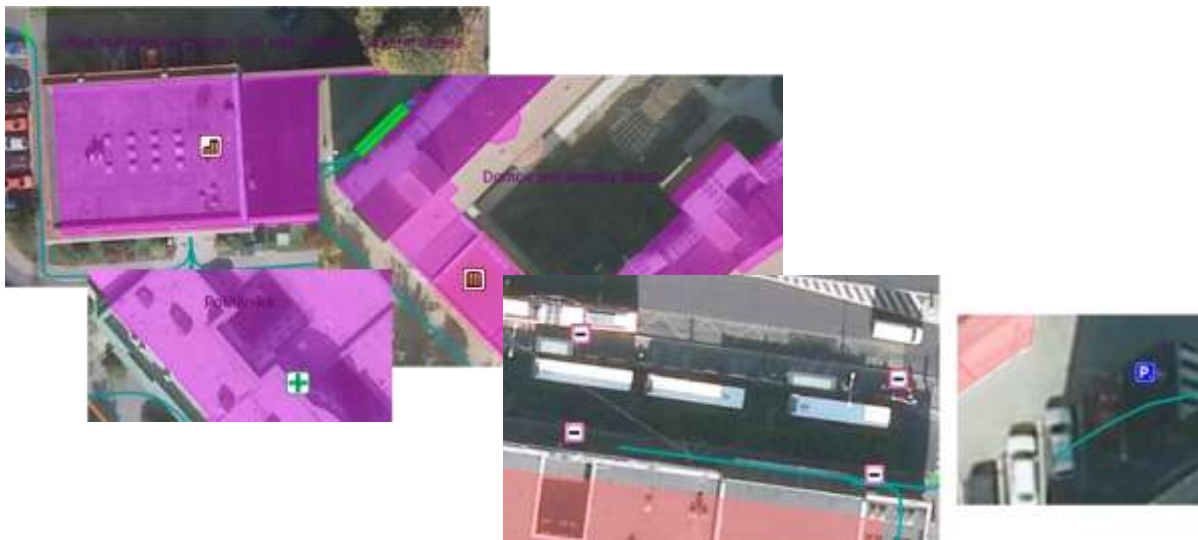


Figure 11 - Videos from individual access routes



Barriers on the access routes are differentiated by colours according to their level of seriousness (according to the Czech standards applicable on barrier-free routes, see the legend for barriers), which is determined by the height of an obstacle. Description of each obstacle is accompanied by photos and other related data, such as presence of blind-signalling, or views from the wheelchair point of view to a road, etc.

Legend for barriers:

Green – height of the obstacle is under 2 cm (fulfils the Czech standards as a barrier free route)

Orange – height of the obstacle is between 2 – 4 cm – can be surpassed by a person with mobility restrictions with certain difficulties.

Red – height of the obstacle is above 4 cm – serious obstacle not acceptable on the access route, proposed for improvement.

Figure 12 - Height of barriers marked on a pedestrian crossing



Figure 13 – Example of a picture from a photo gallery for each barrier



Figure 14 – Documented ramps



Figure 15 – Documented obstacles



To provide information to citizens in the most accessible and convenient way and to improve mobility opportunities all round, access routes can be downloaded to a cell phone and viewed directly on the move in real-time sequences. The barriers on each access route are presented with both visual and audio warnings. Data for the cell-phone application are currently in progress. The trial version can be downloaded at http://www.videopasport.cz/cyklo/Videa_Bezbari.html.

Figure 16 – Videos as an application for a cell phone



4.3 Support

The web portal is available on the official city website in the section dedicated to CIVITAS ARCHIMEDES on www.usti-nad-labem.cz/civitas. Under the heading "Pedestrians", the website presents additional information for safe and convenient mobility of pedestrians in Ústí nad Labem. The related information is divided into the following topics:

- Why to walk in the city?
- Pedestrians in the city traffic.
- Safety of pedestrians.
- Interactive access routes in the city.

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>.

The measure is discussed with representatives of residents of Ústí nad Labem with walking difficulties to improve the usefulness of the web portal for this target group.

Figure 17 – Mobility of pedestrians on the Ústí nad Labem Civitas web page



Statutární město Ústí nad Labem
Oficiální stránky

Široká nabídka Vnější správa Podnikatelské Turistika Odkazy Aktuality Kontakty

PROČ CHODIT PĚŠKY

Home > **Vězeňská správa** > Magistrát > Odbory a oddělení > odbor dopravy > **Civitas Archimedes** > **PĚŠÍ DOPRAVA** > Proč chodit pěšky

Proč chodit pěšky?

Chůze je nejstarší způsob překonávání vzdáleností a v současnosti i budoucnosti je její úloha nezastupitelná. Vždy je potřebovat alespoň dojít k od domu k zaparkovanému vozidlu, či na zastávku veřejné dopravy. Přitom je jistou výhodou nejzranitelnějším článkem dopravního procesu, není chráněný konstrukcí automobilů a proto jeho pohyb vyžaduje zvláštní pozornost.

"I jako chodci se musíme chovat zodpovědně a dodržovat pravidla provozu - vzájemná ohleduplnost řidičů, chodců a cyklistů je základní předpoklad bezpečného pohybu ve městě."

Samozřejmě by mělo být, aby turistické trasy, či trasy pro chodce atraktivní byly co nejvíce oddělené od motorové dopravy a křižení pěších i motoristických tras bylo vyřešeno přehledně a „čitelně“, tedy bezpečně. Samozřejmě že i chování chodců se musí řídit určitými pravidly, což je nejlépe dosažitelné u dětí, které mnohdy v zápalu her nevěnují pozornost okolní dopravě.

Pěší pohyb je též velmi zdravý, pomáhá krevnímu oběhu, tvaruje postavu a prospívá i psychice (pokud se zrovna nesnažíte doběhnout autobus přijíždějící do zastávky). Samozřejmě musí probíhat na čerstvém vzduchu a v pěkném okolí. Proto je velice žádáno chovat se ekologicky a racionálně i při volbě dopravního prostředku.

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Figure 18 – Measure promotion on Facebook



The screenshot shows the Facebook profile page for CIVITAS ARCHIMEDES Ústí nad Labem. The page header includes the Facebook logo and a navigation bar with options for 'Přihlášení' (Login) and 'Přihlásit se' (Log in). Below the header, there is a section for 'Zed' (Zed) with a list of categories: Informace, Fotky, Diskuze, Učebnice, and Poji. The main content area displays several posts:

- Post 1:** A photo album titled 'CIVITAS ARCHIMEDES Ústí nad Labem' with the caption 'Propagační akce "Bezpečná doprava ve městě" - od 26.5. - 28.5. 2011'. It features a photo of a poster for the campaign.
- Post 2:** A text post by 'Gustav Frits' regarding the registration for 'THE conference of the year: "Clean Fuels, Clean Vehicles, Cleaner Cities" and simply CCC' in San Sebastian, Spain, from June 15th to 16th.
- Post 3:** A text post by 'CIVITAS ARCHIMEDES Ústí nad Labem' titled 'KAMPAŇ "Bezpečná doprava ve městě"' (Campaign "Safe transport in the city"), dated 26. květen 2011, held at OC Forum, Ústí nad Labem.
- Post 4:** A text post by 'CIVITAS ARCHIMEDES Ústí nad Labem' titled 'Bezpečná doprava ve městě' (Safe transport in the city), dated 02. květen 2011, mentioning a campaign in Ústí nad Labem.
- Post 5:** A text post by 'CIVITAS ARCHIMEDES Ústí nad Labem' titled 'Přijďte si zazářit na kole do obce Roudný k jezeru MILADA - 29.5.2011' (Come shine on a bicycle in the village of Roudný by Lake MILADA - 29.5.2011), dated 02. květen 2011.

The page footer includes the CIVITAS ÚSTÍ NAD LABEM logo and the text 'THE CIVITAS INITIATIVE IS CO-FINANCED BY THE EUROPEAN UNION'.

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 the survey were utilised for mobility improvements in the city.

From the total of 22 questions, 6 were related to this task and answered by 137 residents:

- Do you find useful the new pedestrian crossings, separating islands and measures for blind people recently implemented in the city?
- Have you noticed that all newly constructed pedestrian crossings in the city centre are barrier free and are equipped by guiding elements for blind people?
- Within the CIVITAS ARCHIMEDES activities, access routes in the city were surveyed and barriers on the routes were identified for improvements. The access routes will be presented to public via an interactive map portal. Will you utilise the provided services?
- Do you agree with systematic removal of barriers on these access routes in the city?
- How do you feel about accessibility of major public locations in the city?
- Do you prefer barrier-free public transport?

Results of the survey were electronically presented in the PDF format on the city web site dedicated to CIVITAS available for download on the following link:

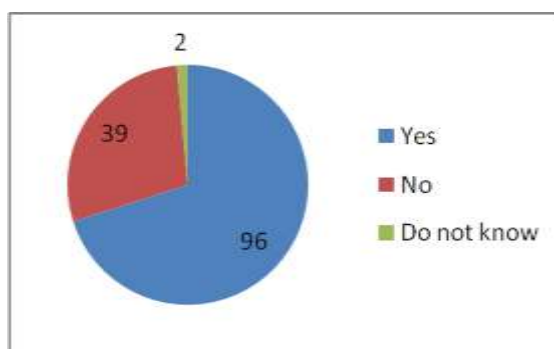
(http://www.usti-nad-labem.cz/files/civitas/vyhodnoceni_anketa_lepsi_pohyb.pdf).

For more details on the Mobility survey, please see the Annex.

Figure 19 – Responses to the public survey

Have you noticed that all newly constructed pedestrian crossings in the city centre are barrier free and are equipped by guiding elements for blind people?

	No. of answers	Percentage
Yes	96	71%
No	39	28%
Do not know	2	1%
Total	137	100%



4.5 Conclusion

Most of the access routes in the city centre are already barrier free, but many citizens deemed to be vulnerable pedestrians are not aware of these alternative options. People with limited mobility are often not able to seek suitable access routes by themselves. The web portal is aimed at improving this situation by providing the access routes online to a much wider public.

It is necessary to continue constructing and improving quality of pedestrian routes and conditions for development of non-motorised transport interlinked with the services of local public transport to help initiate change of the modal split in the city (along with implementation of other measures developed by CIVITAS ARCHIMEDES in Ústí nad Labem).

Activities should include adjustments of public spaces, pedestrian sidewalks and trails, pedestrian crossings and especially all PT stations to fulfil the conditions of barrier free routes, based on the findings of the field survey realised within the CIVITAS ARCHIMEDES tasks 5.12 (Mobility Improvements) and 11.5.3 (Safety Audit). Details on specific solutions are currently being processed into the study Road Safety Audit and Actions within the task 5.10. Furthermore, the issues of access routes in the city are discussed with associations of disabled people in the Ústí region, with local schools and other representatives of the public. The findings are progressively utilised to seek the appropriate solution. New access routes are being added to the web portal along with other related information required by local people deemed to be vulnerable pedestrians, such as data on local cultural and free time activities.

5 Annex – Results of the Mobility Survey

RESULTS OF THE MOBILITY SURVEY

1	Do you find useful the new pedestrian crossings, separating islands and measures for blind people recently implemented in the city?	Answers	No.	Percentage
		Very useful	100	73%
		Useful, but I prefer different solutions	32	23%
		Not useful	3	2%
		Do not know	2	1%
TOTAL		137	100%	
2	Have you noticed that all newly constructed pedestrian crossings in the city centre are barrier free and are equipped by guiding elements for blind people?	Answers	No.	Percentage
		Yes	96	70%
		No	39	28%
		Do not know	2	1%
TOTAL		137	100%	
3	Within the Civitas Archimedes activities, access routes in the city were surveyed and barriers on the routes were identified for improvements. The access routes will be presented to public via an interactive map portal. Will you utilise the provided services?	Answers	No.	Percentage
		Yes	41	30%
		I would like to know more	33	24%
		No	62	45%
		Do not know	1	1%
TOTAL		137	100%	
4	Do you agree with systematic removal of barriers on these access routes in the city?	Answers	No.	Percentage
		Yes	109	80%
		I would like to know more	22	16%
		No	5	4%
		Do not know	1	1%
TOTAL		137	100%	
5	What would you change to improve accessibility of major public locations in the city?	Most frequent answers	No.	Percentage
		bad condition of side walks, crossings, walking trials and surrounding areas	14	
		bad parking conditions, cars restricting pedestrians	10	
		Barriers on routes	10	
		more low-floor PT vehicles	7	
		Modify the environment in the city centre for priority of pedestrians	6	
		Need for more safe pedestrian crossings	4	
Improve conditions for people with mobility restrictions	3			
6	Do you prefer barrier-free public transport?	Answers	No.	Percentage
		Yes	109	84%
		No	5	4%
		Do not know	16	12%
		TOTAL	130	100%

