



Image: © Carlos Corrao

CIVITAS INSIGHT

The high potential of walking

For many cities, the overall quality of life for its citizens is of utmost importance. This is not only characterised by a healthy environment, good living conditions and a growing economy, but also by the possibility to travel in a positive way. Walking is an efficient way of using expensive and scarce space in urban areas, and is healthy, clean, cheap and energy efficient. Almost half of all car trips are over distances of less than five kilometers. Therefore, there is enormous potential for walking, already tapped into by pioneering towns and cities.



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION



Walking is good for the health of people as well as the environment

On average an inactive person spends up to 40 percent more days in hospital and visits the doctor up to six percent more often than an active person. The World Health Organisation (WHO) reports that a lack of physical activity is one of the leading risk factors for ill-health in its 53 Member States in the European Region, contributing to an estimated nearly one million deaths per year. Inactivity is encouraged by overuse of private cars. Moreover, air pollution is a major environmental risk to health, adding to the burden of disease from stroke, heart disease, lung cancer, and chronic and acute respiratory diseases, including asthma. The European Commission states that road transport contributes about one fifth of the EU's total emissions of carbon dioxide (CO₂), the main greenhouse gas. While these emissions fell by 3.3 percent in 2012, they are still 20.5 percent higher than in 1990. Transport is the only major sector in the EU where greenhouse gas emissions are still rising.¹

There is huge potential for improving physical and mental health by changing mobility behaviour towards more active travel, such as walking and cycling. It is important to highlight the benefits of active mobility promotion in the context of policies for the reduction of emissions of greenhouse gases from transport. More walking and cycling for any purpose – for work, education, shopping, social and leisure trips – can generate economic benefits through improved public health in addition to reduced pollution and congestion.

In European policy, transport and health are explicitly linked. Numerous policy documents demonstrate this; most prominently, Action 3 of the Urban Mobility Action Plan;² the WHO European Charter on Counteracting Obesity,³ which mentions safe cycling and walking as part of the package of measures and policies to be promoted

to address obesity; and the mention of the importance of physical activity in the 2007 'Strategy for Europe on Nutrition, Overweight and Obesity-related health issues',⁴ stressing the role of active urban commuting in encouraging physical activity. As increased car usage has resulted in more atmospheric pollution, noise, traffic congestion, and less active lifestyles, walking is a sustainable travel mode which could address such problems by replacing private car journeys.

Additionally, since health costs caused by air pollution represent the largest part of the external costs of transport, active transport and health fits within the strategy of reducing the burden of the external costs posed by the transport sector to society. The European Commission's transport White Paper⁵ states that full internalisation of external costs should be pursued, and health is clearly an important external cost that should be taken into account.

The benefits of walking to the individual and to society are obvious when considering the challenges of climate change, health problems, peak oil, and rising energy costs. The sooner walking and public space improvements are implemented and established at the core of national and local transport, environment, health and social inclusion strategies, the greater the potential benefits in the future. Measures for improvement must be an essential part of overall urban development, so that unsustainable trends are not concealed by a few cosmetic measures taken for walking. The future will demand even better management of the limits, be they environmental, economic-, resource- or space related, especially as more and more people are living in urban areas and car ownership among young people is decreasing. This contributes to the increased attractiveness for walking as an alternative mode.

¹ Road transport: Reducing CO₂ emissions from vehicles, accessed January 11, 2016, http://ec.europa.eu/clima/policies/transport/vehicles/index_en.htm

² Action Plan on Urban Mobility, 2009, accessed November 30, 2015, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52009DC0490:EN:NOT>

³ European Charter on Counteracting Obesity, 2006, accessed November 30, 2015, http://www.euro.who.int/_data/assets/pdf_file/0009/87462/E89567.pdf?ua=1

⁴ White Paper On a Strategy for Europe on Nutrition, Overweight and Obesity related health issues, 2007, accessed November 30, 2015,

⁵ White Paper on transport: Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, 2011, accessed November 30, 2015 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0144:FIN:EN:PDF>



CIVITAS encourages people-powered transport

Conditions for walking can be enhanced by incorporating equitable access to living spaces into the design of urban areas, for instance through pedestrian zones or shared space concepts. Some examples are pedestrian zones or shared space concepts. The CIVITAS Initiative's Thematic Group on Demand Management Strategies⁶ provides a number of resources relevant to the topic of walking with a view to spreading lessons learned among cities.

CIVITAS I | Graz (Austria): Introducing strolling zones

The city of Graz began to set the course for the implementation of its concept of 'Gentle Mobility' for the inner city areas in 1986. Using an innovative approach to reduce car traffic and on-street parking, four zones were established in which pedestrians have priority but car use is not totally excluded. With wider and more attractive pavements, the new strolling zones were designed to offer more space to people, improve the quality of life in the city centre, increase pedestrian activity, and boost commercial activity. The first zone was Freiheitsplatz, a central square around the theatre with a strolling zone for pedestrians and a large number of cycle racks. The redesign of another square, Karmeliterplatz, was made possible due to the construction of a new underground car park, which greatly reduced the need for on-street parking spaces there and in Freiheitsplatz. In the case of Obere Neutorgasse, an intensive public participation process⁷ was used for the first time in Graz, resulting in the creation of a list of recommendations based on the opinions of residents. The street now experiences less car traffic and an increase in active mobility. It was further developed with an enlarged square in which to spend time. Finally, the opening of the Museum of Contemporary Arts during Graz's year as European Capital of Culture in 2003 made it possible to redesign the urban space around the building. This was integrated into one aesthetic concept with the redesign of the Obere Neutorgasse and the opposite riverbank. With these measures, the City of Graz was able to set new trends in traffic policies and, through further measures within the CIVITAS Initiative, extends the success story of the concept 'Gentle Mobility'.⁸

6 CIVITAS Initiative – Thematic Group on Demand Management Strategies, accessed November 30, 2015, <http://www.civitas.eu/TG/demand-management-strategies>

7 Citizen jury for Obere Neutorgasse in Graz, accessed March 06, 2016, <http://www.partizipation.at/338.html>

8 Introducing strolling zones, CIVITAS Initiative, accessed November 30, 2015, <http://www.civitas.eu/content/introducing-strolling-zones>



CIVITAS II | Ploiesti (Romania): Creating new infrastructure for walking and cycling

Romania follows the trend set out by the European Community in improving air quality and city mobility by encouraging alternative transport modes and Public Transport instead of self-car use. In these conditions, even without CIVITAS, traffic restriction would have been imposed for the city central area. Ploiesti City Hall, in the spirit of sustainable development, promotes and sustains the design and implementation of pedestrian areas within the city, not only for the central area. The project CIVITAS SUCCESS came as an answer to the Municipality efforts in the modernization of Ploiesti Central Area. Implementation of such measure was actually an objective on the Local Agenda 21, Ploiesti Plan for Sustainable Development. The necessity of clear zone development in the city centre came from concerns regarding a sustainable traffic system in the city in the context of increasing traffic congestion

and air pollution, and the need of coordinating - at a future urban development level - the high density zones and pedestrian facilities needed for traffic safety and increased recreation facilities. Furthermore, the important number of inhabitants with no access to a car and for whom daily walking is a must, and because of an increased number of elderly people for whom walking is important and beneficial. What should be also mentioned here is that the implementation of a pedestrian area in the city centre, was programmed by the end of 2010, and the CIVITAS SUCCESS project offered at least 2 years advantage. By implementing cycling and walking infrastructure in Ploiesti, facilities, accessibility and connectivity were improved. New cycle lanes and walking routes were created and this contributed to lower pollution and traffic congestion.⁹

CIVITAS PLUS | Vitoria - Gasteiz (Spain): Pedestrian and bicycle lane network

Vitoria-Gasteiz is eager to tackle the city's growing car traffic and revive local walking and cycling. As part of this, the city planned an ambitious extension of its pedestrian and cycle networks during CIVITAS PLUS. The objective of this measure was to create a new mobility framework for cyclists and pedestrians in the city, based on the superblocks model.¹⁰ Related to pedestrian mobility, during the duration of the CIVITAS measure, a draft of the Pedestrian Mobility Master Plan was produced. All the public works related to superblocks implied the redesigning of all the public space reserved for pedestrians. The two main projects related to pedestrian mobility were the Alhóndiga project and the creation of

a pilot superblock as a demonstration. The Alhóndiga project was designed to support small retail outlets, but also to increase pedestrian traffic in the zone. Only some parts of this project were fully implemented, with works done in several short streets. However, the creation of the pilot superblock prioritised pedestrians as the main mobility mode in the zone. This led to an increase of pedestrian surface in the superblock from 45 percent of the total surface before the action to 74 percent after implementation. Furthermore, pedestrian accidents in the entire city have decreased from 187 in 2009 to 160 in 2010.¹¹

9 Creating new infrastructure for walking and cycling, CIVITAS Initiative, accessed March 06, 2016, <http://www.civitas-initiative.eu/content/creating-new-infrastructure-walking-and-cycling>
10 Superblocks model, CIVITAS Initiative, accessed November 30, 2015, <http://www.civitas.eu/content/superblocks-model>
11 Pedestrian and bicycle lane network, CIVITAS Initiative, accessed November 30, 2015, <http://www.civitas.eu/content/pedestrian-and-bicycle-lane-network>



Walking is a human instinct

“Walking is the first thing an infant wants to do and the last thing an old person wants to give up. Walking is the exercise that does not need a gym. It is the prescription without medicine, the weight control without diet, and the cosmetic that can’t be found in a chemist. It is the tranquilliser without a pill, the therapy without a psychoanalyst, and the holiday that does not cost a penny. What’s more, it does not pollute, consumes few natural resources and is highly efficient. Walking is convenient, it needs no special equipment, is self-regulating and inherently safe. Walking is as natural as breathing,” says John Butcher, Founder of Walk21.

Walking is such a ubiquitous activity that it is often not regarded as a transport mode at all. However, even in highly motorised societies, it is an important component of almost all trips and in most places it still remains an important mode in its own right. Walking is also very complex. Anyone who has observed pedestrian movements, interviewed people about their motivations and perceptions as pedestrians and tried to plan according to their needs knows the intricacies associated with walking. Creating good urban spaces requires knowledge of the characteristics of walking and the needs, abilities and wishes of pedestrians. Understanding these aspects is essential if we aim to create appropriate institutional frameworks, devise good policies and design, and build and maintain adequate facilities for pedestrians.

The following non-exhaustive overview provides an insight on different examples and experiences of past and ongoing projects and initiatives in Europe and beyond.

- Walk21 exists to champion the development of healthy, sustainable, and efficient communities where people choose to walk. Through the Walk21 conference series and the International Charter, Walk21’s vision is to create a world where people choose and are able to walk as a way to travel, to be healthy and to relax. The Walk21 conference series has been established “to support, encourage and inspire professionals to evolve the best policies and implement the best initiatives, which create and promote environments where people choose to walk as an indicator of liveable communities”. The opportunity to hear from leading professionals about programmes, policies and projects that really work, and to explore those themes in action through walking tours and visits arranged in the host city, draws hundreds of international delegates at each Walk21 conference.¹²
- The FLOW project (2015-2018, supported by Horizon 2020) is a project that aims to put walking and cycling on an equal footing with motorised modes as a solution to tackle urban congestion, by developing a user-friendly methodology, involving traffic modelling, to assess the effectiveness of walking and cycling measures. FLOW targets three main stakeholder groups: cities, businesses and decision-makers - with the aim of shifting the way these groups think about and act on the potential for non-motorised transport to reduce congestion. FLOW will communicate the project’s results through tailored materials for use by practitioners in each of these three key fields. FLOW partner cities will pilot an assessment tool that looks at the congestion impact of walking and cycling measures as well as improved transport modelling simulation tools. These will be used to develop implementation scenarios and action plans to add or upscale cycling and walking measures shown to reduce congestion.¹³

¹² Walk21, accessed November 30, 2015, <http://www.walk21.com>
¹³ FLOW project, accessed March 06, 2016, <http://h2020-flow.eu>



- The SWITCH project (2014–2016, co-funded by Intelligent Energy-Europe) focuses on encouraging walking and cycling as important alternatives to car use especially for short urban journeys, and uses personalised travel planning approaches to achieve this. The implementation cites Antwerp (Belgium), Donostia-San Sebastián (Spain), Gdansk (Poland), Hounslow (United Kingdom), and Vienna (Austria) choose, combine, and adapt approaches and develop them into their own SWITCH campaign. While the campaigns will look different in each city, the common denominator is a personalised travel planning approach addressing frequent car users using arguments from public health and mobility campaigning, and the use of information and communication technologies.¹⁴
- The promotion of active transportation for day-to-day travel is a promising approach to increase overall physical activity. Health impact models show substantial net benefits of active travel. However, a number of uncertainties affect these models. The PASTA project (2013 – 2017, co-funded by FP7) aims to connect transport and health by promoting active mobility in cities as an innovative way of integrating physical activity into our everyday lives. It takes a broad approach in investigating how active transportation contributes to physical activity. It brings together perspectives from transport planning, travel behaviour and health research as well as policy and practice. A main aim of this empirical study is to contribute to the improvement of health impact models of active transportation.¹⁵
- The Active Access project (2009-2012, co-funded by Intelligent Energy-Europe) aimed to increase the use of cycling but especially walking for short everyday trips in local areas, in order to benefit people's health, and the health of the local economy. By changing

people's mental maps of their local neighbourhoods so that they realised what is available on their doorstep, rather than in the edge of town retail park, the project transferred longer car journeys to shorter walking and cycling trips. The project also aimed to raise awareness and provide know-how regarding promoting walking and cycling to Active Access partners, key stakeholders and the European Union, especially new member states. A common strategy was established between transport- and health-related activities based on the idea of active travel.¹⁶

- The AENEAS project (2008-2011, co-funded by Intelligent Energy-Europe) addressed people aged 50 and older. These have different abilities, mobility styles and preferences that needed to be targeted by dedicated measures and campaigns. These efforts included a wide range of activities, from promoting cycling to motorists in their 50s to teaching safe bus-riding techniques to people in their 80s. One out of many measures of the AENEAS project was 'Walk and Talk' that started as part of an education programme within senior sport for two employees of the city of Odense, Denmark – both work on health promotion and prevention for older people. The aim was to increase older people's motivation to walk, strengthen their social relations and hold on to good walking habits. The activity was an offer to both active and less active older people, since the walking trips can be adjusted in both length and speed.¹⁷



14 SWITCH project, accessed November 30, 2015, <http://www.switchtravel.eu>
 15 PASTA project, accessed November 30, 2015, <http://www.pastaproject.eu>
 16 Active Access project, accessed November 30, 2015, <http://www.active-access.eu/>
 17 AENEAS project, accessed March 06, 2016, <http://www.aeneas-project.eu/?page=about>



Walking 2.0 and Future Mobility

Walking is mankind's earliest mode of being mobile and currently the latest (re)discovery for making our lives more healthy, sociable and sustainable. Many new methods are being created to value, measure and catalyse walking for individual mobility.

Walking and technology

Walking can be enhanced and complemented by various means such as wearable technology, devices, applications or social strategies. One of such technologies is the Trace app that generates walking routes based on digital sketches people create, digitally mark and send to others. In contrast to most walking apps, Trace emphasises travel over transport, serendipity over precision and social connections over goals.¹⁸

The Trace project emerged from a reflection on contemporary technologies for walking. The design team at the University of Washington, United States, convened to explore this technological space and noted a turn toward competition - and goal-oriented techniques. Pedometer++, for example, is a smartphone application that displays bar charts of someone's approximate

number of steps (or shakes of a phone). Colours indicate success based on whether the count moves above or below a default threshold. These applications became intriguing for their functionalist approaches to walking. By emphasising a target number of device shakes or a pre-specified destination, the applications oriented walking toward particular concerns for number and end goal, emphasizing geographic precision over local improvisations.

The first step was to imagine how GIS routing applications could offer situated and partial views of walking that emphasise other values. What if instead of emphasizing transport, the app foregrounded experiences of travel? What if instead of orienting toward step counts and end goals, the app supported social connections? What if instead of precision, the app promoted exploration and improvisation? In other words, how might people reflect on existing technologies when presented with the same technology done in different ways? Trace arose from these questions of difference in GIS routing. The application generates walking routes based on digital sketches people create and digitally mark without a map. In addition to creating walking paths, Trace enables people to send their paths to others. When someone receives a Trace (for example circle, star or letter) the application produces stretches of a path wherever those people happen to be. Depending on the location of that person and how long they wish to walk, Trace draws the walk across different roads and trails.



¹⁸ Daniela, Seattle, United States Trace: Walking by Drawing, Walk21 Vienna 2015, accessed March 06, 2016, http://walk21vienna.com/?dg_voting_submission=trace-walking-by-drawing-3



Walking and urban planning

The walk mobility planning for social and economic policies - without the prospect of temporal consequences - should provoke further reflection on the theme, and creating policies and projects suitable for pedestrians.

Cities are living, independent bodies, having their own dynamics of development, and impacting directly on the movement of people who have specific needs.¹⁹ The large city centers have presented a large population growth. And in this direction it can be observed that several routes are outlined by pedestrians to reach the final destination. This occurs with a focus on urban areas, since its development modifies the local dynamics and provides opportunities and new forms of movement conditions mainly in urban centers. Thus, the urban space is emphasised, and which is dynamic in essence, also carries modifications 'according to the needs, aspirations and contradictions of society; its structure reflects in each historical period the shares entered in this built space' ALVES, 2010, p.10).

In a careful study on the dynamics of walking in cities, analysing forms, difficulties, signaling, desire lines, socioeconomic conditions, identified routes related to

some kind of specific activity, requires an appropriate treatment, returned to their specificity. Such a profound analysis of the basics and primitive aspects of walking and own political and administrative structure can unravel many factors in this 'universe'.

Many cities have routes that are targeted specifically to the group of pedestrians. Therefore it is necessary to analyse these routes in order to provide a safe displacement, linear, with service offerings and providing intermodality; a current and ever-present need in big cities. These properly identified and treated factors generate positive effects on the mobility of cities, where people increasingly migrate to mobility on foot. A precise analyse of the movement of pedestrians can help to identify barriers in the paths that permeate from the quality of the pavement, narrow sidewalks, poles, signs, street trade, legalised trade (released by own public power), bus shelters, lack of signage and lighting focused on pedestrian, lack of universal accessibility, pedestrian crossings in the induction insecurity, need for shadow areas, commerce and the lack of linearity in the paths, respecting desire lines and the parking permit, private works and loading and unloading the sidewalks.

Urban planning should intervene not only in the legalisation and deployment. A profound vision and critical view on the city's own development, verifying aspects of development, and prospecting the direction of the city's growth are important too. All these factors directly impact the city and especially in the movement of pedestrians moving in next-way routes of motor vehicles. By increasing the quality of pedestrianisation in large cities, and by analysing the pedestrian's needs, urban planning can help to move towards better levels of quality of life and sustainability in urban centers.



19 Transporte Ativo, Rio de Janeiro, Brazil, Walking to the future – Walk21 Vienna 2015, accessed March 06, 2016, http://walk21vienna.com/?dg_voting_submission=walking-to-the-future



www.civitas.eu

CIVITAS Insight N°8, March 2016

Author:

Fred Dotter (Mobiel 21)

Edited by

Lewis Macdonald (ICLEI)

Design by

Nadine Maes (Mobiel 21)

The CIVITAS Insights are produced by the CIVITAS CAPITAL team. Any query about the content or frequency of the Insights can be directed to jan.christiaens@mobiel21.be

Do you have ideas for future Insights or want to share you expertise? Please contact us!

The content of this publication does not reflect the official opinion of the European Union. Responsibility for the information and views expressed in the publication lies entirely with the author(s).



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION