



CityWalk

Good Practice Catalogue – final version

Prepared with the contribution of the project partners

May 2018

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Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

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1 Executive summary

This Good Practice Catalogue is prepared in the frames of the Danube Transnational Programme CityWalk project – “Towards energy responsible places: Establishing walkable cities in the Danube Region” – which helps cities in the Danube Region to reduce emission and noise and become safer, better places to live by increasing the role of more sustainable forms of mobility in the urban transport mix, especially active transport forms like walking and cycling. It provides a solution and answer to sustainable urban mobility issues that have growing importance nowadays worldwide. In the framework of the CityWalk project, common practices and methodologies are created in the field of sustainable urban mobility. This Good Practice Catalogue is prepared during the activities of the 4th Work Package of the project that is focused on delivering a Walkability Toolkit that can be used quickly and efficiently in order to improve the conditions of walkability in any city.

The aim of this Good Practice Catalogue is collecting, processing and presenting sustainable urban transport and walkability good and bad practices. With doing so, this document will serve as an idea-book for cities and the wider public to have concrete examples on how to and how not to implement interventions in connection with sustainable urban transport and walkability. All in all, 47 good practices from 18 countries and 17 bad practices from 12 countries are presented.

The catalogue has three main parts that contain the collected good and bad practices from the partnership: complex walkability interventions – different harmonized actions in order to increase walkability, individual walkability actions – independent initiatives to promote walkability, and bad practices – measures that aimed at improving walkability but at the end turned out to be unfeasible, unsuccessful, ineffective or unsustainable. In all three chapters, the practices are divided into two groups taking into account the characteristics of the countries from which the good/bad practices come from: countries from the partnership and countries from outside of the partnership. After the presentation of the good and bad practices a chapter can be found that provides information about the responsible innovation aspects of the content of the Good Practice Catalogue. This chapter is divided into three subchapters that clarify the definition of responsible innovation and demonstrate the relations between it and the good and bad practices. Last but not least, there is a summary at the end about the main conclusions.

In each good and bad practice presentation, the description, the benefits and the disadvantages are demonstrated. In the case of the good practices, the collection also contains easy to follow guides for implementation. Furthermore, there are conclusions after the presentation of good and bad practices highlighting the main success and failure factors which can be used as a checklist for sustainable urban mobility experts, developers and implementers – what to do for success and what to avoid.

Based on the collected and presented good practices, there are ten factors that contribute to the success of an intervention or action. They are the following: positive impact on society; detailed planning; good communication, awareness raising; the involvement of stakeholders; manifold economic advantages; environmental factors; suitability for everyone; sustainability; up-to-date, smart solutions; and collecting feedback, monitoring the change. All of these factors are supported by numerous good practices.

In the case of the bad practices, a similar list has been created defining the factors that lead to the failure of an intervention or action. According to the bad practices presented in this catalogue, there are six factors that put an intervention/action in jeopardy. They are the following: scarcity of rules; not putting the pedestrians at the first place; lack of communication; inappropriate location; unattractive public spaces; and safety issues. These factors were supported by various bad practices as well.

In the chapter about the responsible innovation and its connection to the presented good and bad practices one can get familiar with the term of responsible research and innovation and how its aspects are fulfilled (or not) by the characteristics of the presented practices. The term of responsible research and innovation is clarified in this chapter, giving information about the main dimensions and keys. The success and failure factors of the good and bad practices are analysed again from these points of views. As a summary, it can be concluded that inclusion (public engagement), anticipation (e.g. ethics) and responsiveness (governance) are key elements to ensure sustainable and socially accepted walkability practices.

2 Introduction

This Good Practice Catalogue is prepared in the frames of the Danube CityWalk project – “Towards energy responsible places: Establishing walkable cities in the Danube Region” – which helps cities in the Danube Region to reduce emission and noise and become safer, better places to live by increasing the role of more sustainable forms of mobility in the urban transport mix, especially active transport forms like walking and cycling. It provides a solution and answer to sustainable urban mobility issues that have growing importance nowadays worldwide. As the population is steadily growing, the urban mobility needs are also increasing, resulting in a higher amount of motorised transport on the roads which have several negative consequences. Among these negative consequences we can find health problems, environmental impacts and the scarcity of public spaces in a city. The partnership of the CityWalk project consists of 17 partners from 9 countries and it has been given 2.2 million euros to achieve its objectives.

In the framework of the CityWalk project, common practices and methodologies are created in the field of sustainable urban mobility. The activities are divided into five Work Packages from which the first is dealing with management activities (WP1) and the second one is dedicated to communication activities (WP2). The remaining three Work Packages are walkability-related (WP3 – Walkability Planning, WP4 – Walkability Toolkit and WP5 – Tests and policy integration), and they are all in accordance with each other. The WP4 concentrates on delivering a Walkability Toolkit that can be used quickly and efficiently in order to improve the conditions of walkability. Several deliverables will be prepared during its activities, such as a Walkability Guidebook, this Good Practice Catalogue, a Walkability Index, an online Walkability Assessment Tool and a related mobile application.

The aim of this Good Practice Catalogue is collecting, processing and presenting sustainable urban transport and walkability good and bad practices. With doing so, this document will serve as an idea-book for cities and the wider public to have concrete examples on how to and how not to implement interventions in connection with sustainable urban transport and walkability. All in all, 47 good practices from 18 countries and 17 bad practices from 12 countries are presented. This document is designed for users who can search for specific walkability issues that are present in the demonstrated good and bad practices. There are several tables in the document that ease the process of searching as they categorize the practices.

The catalogue has three main parts that contain the collected good and bad practices from the partnership: complex walkability interventions – different harmonized actions in order to increase walkability, individual walkability actions – independent initiatives to promote walkability, and bad practices – measures that aimed at improving walkability but at the end turned out to be unfeasible, unsuccessful, ineffective or unsustainable. In all three chapters, the practices are divided into two groups taking into account the characteristics of the countries from which the good/bad practices come from: countries from the partnership and countries from outside of the partnership. After the

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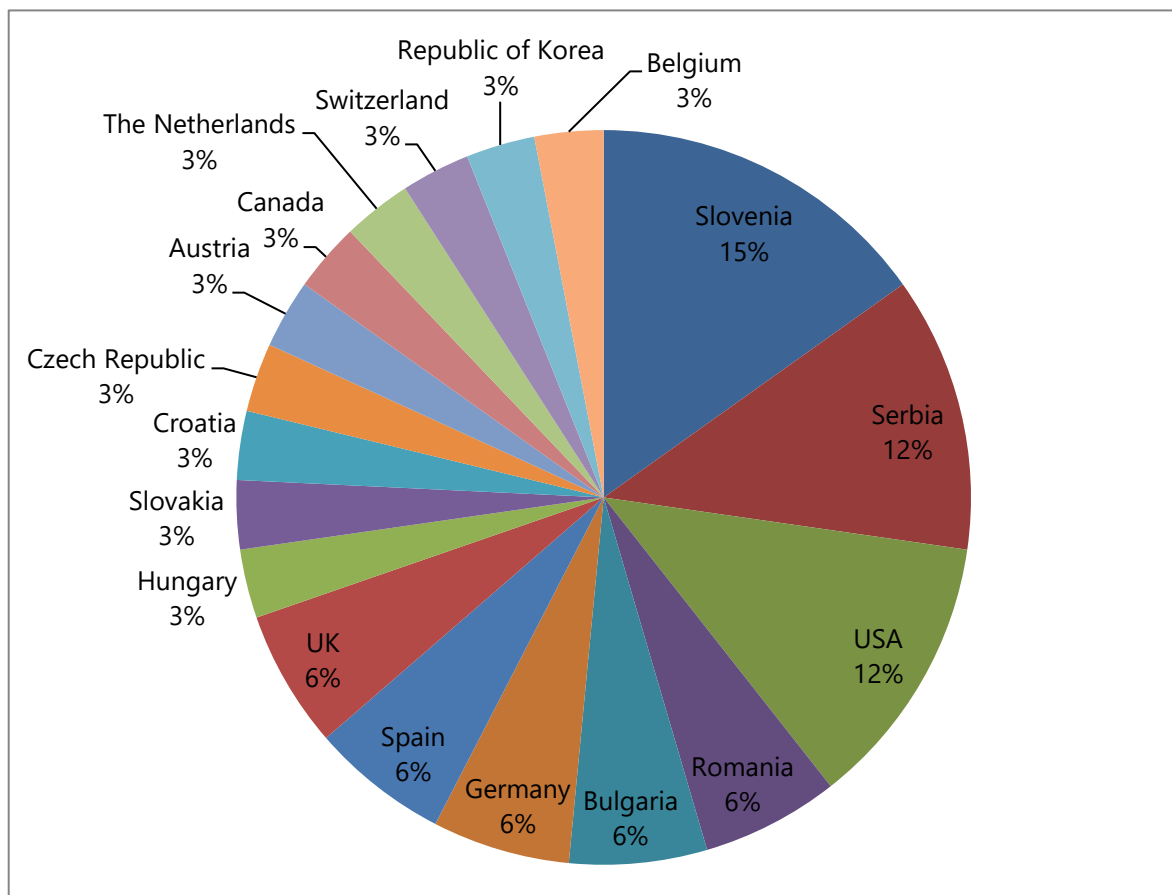
presentation of the good and bad practices a chapter can be found that provides information about the responsible innovation aspects of the content of the Good Practice Catalogue. This chapter is divided into three subchapters that clarify the definition of responsible innovation and demonstrate the relations between it and the good and bad practices. Last but not least, there is a summary at the end about the main conclusions.

In each good and bad practice presentation, the description, the benefits and the disadvantages are demonstrated. In the case of the good practices, the collection also contains easy to follow guides for implementation. Furthermore, there are conclusions after the presentation of good and bad practices highlighting the main success and failure factors which can be used as a checklist for sustainable urban mobility experts, developers and implementers – what to do for success and what to avoid.

3 Complex walkability interventions

In the second main chapter of the catalogue, the complex walkability interventions are presented, that is, the good practices which contain different harmonized actions in order to increase walkability. These complex walkability interventions are divided into two groups taking into account the characteristics of the countries of origin: countries of the partnership and countries outside of the partnership. There are 33 complex walkability intervention good practices from 18 different countries. As it can be seen in Figure 1, the majority of the complex walkability interventions are from Slovenia, Serbia and the USA. However, there are complex walkability intervention GPs from Hungary, the Czech Republic, Switzerland, Belgium and so on.

1. Figure: Countries of the complex walkability interventions



Source: made by the author

3.1 Complex walkability intervention good practices from the countries of the partnership

In Table 1, the complex walkability interventions from the partner countries are stated – we can see which country and city they originate from and which project partner provided them. As it can be seen in the table, most of the interventions are focused on renovating/reconstructing a certain area of the city, turning it into a pedestrian area, implementing modernization, etc. Since the table also provides information about the specific walkability issues present in the practices, we can observe that several categories are touched upon. Good practices involving traffic safety, transport mode mix, regulation and so on can be found in this subchapter.

1. Table: Complex walkability interventions from the countries of the partnership

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Renovation of the city marketplace in Ptuj	Ptuj	Slovenia	LP	regulation, street design
Pedestrian area in the city of Maribor	Maribor	Slovenia	LP	regulation, street design
Residential neighbourhood JURŠOVKA	Ljutomer	Slovenia	LP	regulation, street design, participative planning
Expanding the P+R system in Ljubljana	Ljubljana	Slovenia	PP2	parking, public transport, transport mode mix, economic motivators
'Downtown Pedestrian Streets' project	Nyíregyháza	Hungary	PP3	regulation, street design
Urban cycling and walkability plan	Prešov	Slovakia	PP4	cycling, street design
Sharrow in Zagreb City Centre	Zagreb	Croatia	PP5	regulation, traffic safety
Pedestrian zone in Ljubljana City Centre	Ljubljana	Slovenia	PP5	regulation, street design, parking

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Rehabilitation and modernization of Unirii Square in Oradea	Oradea	Romania	PP6	regulation, street design, public transport
Rehabilitation of Vasile Alecsandri Street	Oradea	Romania	PP6	regulation, street design
Aesthetization and modernization of major pedestrian zones and areas for public recreation	Varna	Bulgaria	PP7, PP10	street design
Sustainable Urban Mobility Plan of Pilsen: Plán udržitelné mobility Plzně (PUMP)	Pilsen	Czech Republic	PP8	regulation, street design, transport mode mix, parking, public transport, cycling
Step by step to more life – Promotion of walkability through neighbourhood development and meeting zone	Hohenems, Vorarlberg	Austria	PP9	street design, land use, participative planning, economic motivators
Reconstruction of Mara Taceva Str. and major overhaul on Parvi May Blvd, construction of pedestrian passageways, playgrounds, recreation areas, attractions, sports grounds, bay afforestation, bikes in the Asparuhovo area	Varna	Bulgaria	PP10	street design, cycling, parking
Reconstruction of the Karadjordjeva Street	Valjevo	Serbia	IPA PP1	signage, traffic safety

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Intervention in the green area of the narrow center of the city – Reorganization of the park and construction of a fountain in the green zone along Karadjordjeva Street in Valjevo	Valjevo	Serbia	IPA PP1	street design
Intersection of the Mirko Obradovic Street and Sindjeliceva Street	Valjevo	Serbia	IPA PP1	regulation, signage
Usce Park – Improving the living conditions and attractiveness of the location	Belgrade	Serbia	IPA PP2	street design, cycling

Source: made by the author

3.1.1 Renovation of the city marketplace in Ptuj – Ptuj, Slovenia¹

Population: 23,117 (2017)

Challenge: The city marketplace is not accessible as a pedestrian zone currently because of the non-functionality and bad condition of its interior spaces and exterior surfaces.

Solution: The municipality plans to renovate it – while also establishing new facilities there – and change the traffic regulations: the pedestrian zone will increase; the number of parking places will be reduced; and traffic in the marketplace will be limited for only delivery and residents.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The Municipality of Ptuj plans to renovate the city marketplace from a functional point of view that includes the development of interior spaces and exterior surfaces with appropriate traffic arrangements for pedestrians, running and stationary motor traffic. With this in mind, the city aims to acquire an arranged space that will be a centre of events: the selling point of home products, culinary pleasures and space for the realization of spare time. The renovation will result in a change in the traffic regulations of the given part of the city: the pedestrian zone will increase; the number of cars and parking places will be reduced and the traffic in the marketplace will be limited for only delivery and residents. The concerned area is 8,000 m² exterior surface and 729 m² interior surface that are not accessible currently because of their non-functionality and bad condition. The renovation will also result in new premises that facilitate new activities – thus, new jobs – after the end of the project.

There are numerous benefits of the previously mentioned good practice from different point of views. Infrastructural investment in a less developed part of the city can result in increasing the attractiveness and standard of the given area. With providing proper infrastructure for public use, the access for the population is more equal. The new marketplace can serve as a venue for cultural events, spending free time, thus, it increases the living conditions, too. Moreover, the local economy benefits from the reconstruction: the number of tourists is increased, the marketing of local goods is improved, and the job creation has an indirect impact on economic growth, not to mention that the

¹ Source: Municipality of Ptuj; ARK Arhitektura Krušec d.o.o., 2017

renovation also contributes to the attractiveness of the city centre and preserves the cultural monuments of local importance. From a different point of view, the disadvantages need to be taken into account as well. The opposition of the owners of local bars and businesses is an issue due to temporarily limiting the use of the city centre. In addition, the population has to get used to the new traffic rules that can cause inconvenience.

This arrangement could be implemented in the following way:

1. preparing the project and investment documentation;
2. executing the public procurement for the selection of a contractor for archaeological research, a building contractor, professional supervision and the purchase and installation of equipment;
3. executing the construction works;
4. installing the equipment;
5. and obtaining the necessary operating permits.

All in all, this good practice is recommended for implementation among project partners, since the public interest in connection with it is large as an improved quality of the residents' life is expected. However, a significant financial investment is needed.

The good practice is supported with the following photos:



3.1.2 Pedestrian area in the city of Maribor – Maribor, Slovenia²

Population: 111,079 (2017)

Challenge: In the pedestrian zone of Maribor, traffic regulations were changed very often and most of the changes were at the expense of the pedestrians: they had to constantly change the direction of walking due to obstacles (bar gardens, intervening driveways, etc.).

Solution: Traffic and urban criteria were determined for the location of the bar gardens with pedestrian movement as an important concern. A map was created for the safe and comfortable walking of the pedestrians with direct directions without obstacles, with sufficient widths and connected in a continuous network.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Based on the analysis of the existing conditions in the pedestrian zone of Maribor, many improper arrangements have been identified that – in addition to the poorly shaped space – create conflict situations. At the time of the study, traffic regulations in the zone were changed very often and most of the changes were at the expense of the pedestrians. The problematic part was not pedestrian density but how to guide pedestrians across the streets and markets. They had to constantly change the direction of walking due to obstacles (bar gardens, among others). There were also unclear and unknown directions due to intervening driveways of delivery vehicles. Traffic and urban criteria were determined for the location of the bar gardens, but pedestrian movement was only a background concern. The purpose of the foot traffic and the transportability of the pedestrian zone were analysed for interventions. By counting and recording the density of pedestrians and other participants (bicycles, mopeds, cars), a sufficient width surface for pedestrian use was calculated. A map was created for the safe and comfortable walking of the pedestrians with direct directions without obstacles, with sufficient widths and connected in a continuous network. The proposal for arrangements was given for each street separately.

² Source: Municipality of Maribor; Expert's study for regulations of the pedestrian area in the city of Maribor; <https://maribor-pohorje.si/images/>

Implementing this good practice has been beneficial in many different ways. Now, the area is more populated and gives more opportunities for meetings, communication and events taking place there. It became a better playground for interaction between different types of users (kids, elderly and students). Moreover, the outdoor sitting areas of the different providers are better shaped and have a more unified image. The area is functioning better as a completely pedestrian zone and in that way, it gives a lot of freedom to all the different users.

The good practice was implemented in Maribor in the following way: the Municipality involved experts in the data collection and analysis and on the basis of these, defined the locations and areas of the bar gardens.

The implementation of this good practice among other partner cities is recommended. Even though it takes some time for people (shop owners) to see how the bigger picture might improve their chances, the positive gain that the users have from this pedestrian zone and its better designed space certainly outweighs all the negative parts of the process.

The good practice is supported with the following photo:



3.1.3 Residential neighbourhood JURŠOVKA – Ljutomer, Slovenia³

Population: 11,374 (2017)

Challenge: Prior to the implementation of the project, there were some measurements concerning the speed of cars and the measured speed on site was more than 60 km/h – renovation with the expansion of the road would have been inappropriate since the vehicles would have achieved even higher speed.

Solution: The Municipality of Ljutomer took a different approach and used a new solution to achieve traffic calming with interventions on the street, putting the pedestrians and cyclists first.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In 2011, the Municipality of Ljutomer prepared a pilot SUMP, the first in Slovenia for municipalities of this size. It turned out that this strategy was successful: it was among the three most successful in the EU in 2013, and it has become an example to other Slovenian municipalities. Juršovka is one of the first results of this new thinking which puts the pedestrians and cyclists first. Prior to the implementation of the project, there were some measurements concerning the speed of cars and the measured speed on site was more than 60 km/h – renovation with the expansion of the road would have been inappropriate since the vehicles would have achieved even higher speed. The Municipality of Ljutomer took a different approach and used a new solution to achieve traffic calming with interventions on the street.

One of the beneficial effects of the implementation is that the area is more populated, and it became a better playground for interaction between different kinds of users. What is more, the streets are safer, so kids can play outside (even on the streets themselves). Moreover, the value of houses on these streets increased as more people want to live there. The residents accepted the changes with affection, however, road users had to get used to the new traffic rules.

³ Source: Municipality of Ljutomer

The way of implementing this project was the following:

1. The implementation of the project was initiated by the need to change the sewage network for the discharge of waste waters.
2. Before the reorganization, the conceptual design of the proposed solutions was carried out with public participation on one of the streets of the neighbourhood in the form of a workshop with the residents at an outdoor place.
3. Based on the comments and suggestions of the residents, the project was completed.

This good practice is recommended for implementation among other partner cities. As the area is more thoughtfully and better designed than other similar areas, it is better suited for residents and the users can also see these differences.

The good practice is supported with the following photos:



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3.1.4 Expanding the P+R system in Ljubljana – Ljubljana, Slovenia⁴

Population: 288,919 (2017)

Challenge: Ljubljana strives to decrease transport flows to the city centre and improve the use of public transport.

Solution: In 2001, Ljubljana started to build a P+R close to the Ljubljana ring so that visitors to the city centre can park their vehicles and continue their trip to the city by bus. All day parking only costs €1.2 and the parking ticket also includes two bus trips for the same day when the parking ticket was bought.

Specific walkability issues:

- | | | | |
|------------------------------------------------------|---------------------------------------------------------|--------------------------------------------|-----------------------------------|
| parking <input checked="" type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input checked="" type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input checked="" type="checkbox"/> | economic motivators <input checked="" type="checkbox"/> | | |

In 2001 Ljubljana started to build a P+R system which strives to decrease transport flows to the city centre and improve the use of public transport. The P+R areas were mainly built close to the Ljubljana ring so that visitors to the city centre can park their vehicles and continue their trip to the city by bus. All day parking only costs €1.2 and the parking ticket also includes two bus trips for the same day when the parking ticket was bought. Bus users walk from the bus stations to their destinations and each passenger on the bus means one car less in the city centre. This is one of the cheapest P+R systems in the EU which makes it even more interesting for users.

This good practice has many beneficial results both to its users and to the city itself. The cars – which stay parked close to the ring – mean less transport in the city. That results in less noise, less air pollution, more free space and increased traffic safety; and all of that improves the conditions for walking. Moreover, public transport users almost always walk to their final destination – it is rarely the case that bus/train stations are the final destination of passengers – so public transportation also supports walking. However, we also need to consider the imperfections of this practice. First of all, it

⁴ Source:

Jamnik, Ž. (2018). Zbirna središča P+R kot pomemben element trajnostne mobilnosti v Mestni občini Ljubljana, master thesis, Department of Geography, Faculty of Arts, University of Ljubljana https://www.google.si/search?q=P%2BR+barje&source=lnms&tbn=isch&sa=X&ved=0ahUKewjlvpGAK5zZA hXEwywKHdAjBHIQ_AUICygC&biw=1188&bih=539#imgsrc=3CEGoBSFbPij_M:&spf=1518293220016

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is not possible to buy monthly or annual tickets for P+R; it is only possible to buy a daily ticket. Also, this P+R system is so cheap, that it stimulates the users of public transport from other regions to come to Ljubljana's edge by car and then use P+R there instead of using public transport from their home cities.

The P+R parking lots were built in several steps:

- Currently, there is 5 open P+R parking places in Ljubljana with the capacity of 2,205 parked vehicles and new P+R parking places will be opening soon. In the next phase, P+R parking places will expand on an area outside Ljubljana's ring, so they can gather visitors from other regions that come to Ljubljana.
- Almost all P+R parking places are equipped with a city rental bike system, called Bicikelj, which promotes biking towards the city or from the city to the P+R parking place. They also have parking places for e-cars with the possibility of recharging them; special parking places for bicycles are also a part of the standard equipment of most P+R parking areas.

All in all, the application of this good practice is recommended to other partner cities, but it is necessary to connect the P+R systems with trams or city trains, as they are a faster and more efficient way of transportation than buses. It is also important to build P+R parking places as far from the city as possible, to gather visitors to the city as soon as possible.

The good practice is supported with the following photo:



3.1.5 'Downtown Pedestrian Streets' project – Nyíregyháza, Hungary⁵

Population: 117,689 (2017)

Challenge: For a long time, the city's downtown area suffered from excessive car use and all of its detriments like air pollution and traffic accidents, therefore, there was no appealing route for pedestrians that would connect the important and otherwise attractive destinations in the centre of Nyíregyháza.

Solution: A major pedestrianisation effort has been carried out between 1987 and 2012. The centre was designated free from motorized traffic as a continuous pedestrian corridor with multiple green areas, restaurants, cafes, fountains and sculptures.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Nyíregyháza is the 7th largest city in Hungary with a population of 118,000: an economic and cultural center. For a long time, the city's downtown area suffered from excessive car use and all of its detriments like air pollution and traffic accidents, therefore, there was no appealing route for pedestrians that would connect the important and otherwise attractive destinations in the centre of Nyíregyháza. In order to improve the quality of the downtown area and reduce vehicular traffic, a major pedestrianisation effort has been carried out between 1987 and 2012. The centre was designated free from motorized traffic as a continuous pedestrian corridor with multiple green areas, restaurants, cafes, fountains and sculptures. The finished 'product' creates a peaceful island in the middle of the city which is suitable for organizing various outdoor events such as the Vidor Festival, Central Europe's largest world music festival. At the northern end of the square a large shopping mall was built, which – in contrast with most of the similar facilities – did not cause the extinction of local businesses, but rather reinforced the function of the city centre. It also features the largest bridge between buildings in Hungary. The pedestrian corridor is only authorized for emergency and cargo vehicles (if they belong to a local business) and maintenance. All in all, the area is truly a mixed-use pedestrian and cyclist zone with barrier-free traffic.

⁵ Source: Department of City Development and Urban Management – inside documents; Magyar Tájépítészek Szövetsége (2013): Nyíregyháza. In <http://tajepiteszek.hu/nyiregyhaza>, 09.02.2018.

This investment has many beneficial results in Nyíregyháza. The decreased car traffic in the downtown area creates peaceful surroundings without noise and with better air quality. The city became greener and parking lots and rough outbuildings were replaced by community, service, catering and tourist facilities. This safer environment for walking attracts more pedestrians and cyclists who provide a constant source of income for the restaurants, outdoor cafes and other businesses there. It should be noted that without planning ahead, the diverted downtown traffic can paralyze other areas. Moreover, cyclists and pedestrians share the created corridor without regulation for now which can cause some problems (e.g. accidents) and needs to be remedied. Apart from that, the attitudes of the citizens play a role as well: investments that prioritize pedestrians over cars can draw the ire of drivers.

The way of implementing this good practice happened in the following way:

- First, city officials analysed the problems the downtown area faced and informed the citizens about their plans.
- It was also important for the city leadership to consider the ramifications of the changes implemented on the selected street sections and the possible solutions to these.
- After selecting the locations, the designers had to make sure that the modifications – especially the construction work – will cause only the minimum amount of discomfort in the daily life of the residents.
- During the implementation phase, city officials kept in mind that the street design must be colourful, satisfying the pedestrians' and cyclists' need for greenery (trees, decorative flowerbeds), art (fountains, sculptures), culture (exhibitions, festivals), shopping (local businesses, shopping malls) and rest (street furniture).

All in all, this GP is very beneficial and recommended for implementation among other partner cities. However, as it can take a long time (even decades) to reach this objective, it is advised to incorporate only some parts of the GP, like freeing culturally and touristically relevant streets from motorized traffic, making areas greener or providing services and entertainment to pedestrians and cyclists.

The good practice is supported with the following photos:



Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

3.1.6 Urban cycling and walkability plan – Prešov, Slovakia⁶

Population: 89,618 (2016)

Challenge: Limits that hinder possible developments of the cycling infrastructure are barriers intersecting the city in the north-south direction (the rivers Torysa and Sekčov). Missing city bypasses and the associated increased road traffic on crossroads also contribute to a bad state.

Solution: The city now has a built network of cycling roads – separate paths for cyclists passing through the two largest settlements in the city and routes on existing roads (bicycle lanes on motor and pedestrian roads). The proposal also presents a network of recreational cycling trails in the area.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Cycling and walking are alternative transportation modes to moving by a personal motor vehicle and by public transport. Within the city, it can perform a traffic function (for example, when going to work or school) as well as a recreational and sports function. In the city of Prešov, the concept of cycling transport has been developed over the last several years. The city now has a built network of cycling roads – separate paths for cyclists passing through the two largest settlements in the city and routes on existing roads (bicycle lanes on motor and pedestrian roads). Limits that hinder further possible developments of the cycling infrastructure are barriers intersecting the city in the north-south direction (the rivers Torysa and Sekčov). Missing city bypasses and the associated increased road traffic on crossroads also contribute to a bad state. The proposal also presents a network of recreational cycling trails in the area. The aim of this project is:

- to reduce the traffic load of the city caused by cars by increasing the share of cycling traffic from the current 1% share to 10%;
- to reduce noise and air pollution;
- and to convince adults and children to use their leisure time to do some physical activity.

⁶ Source:

<http://kostitras.sk/wp-content/uploads/2015/05/GCD-03-navrh.pdf>

<https://presov.korzar.sme.sk/c/20576400/cyklisti-maju-v-presove-novy-cyklochodnik.html>

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

The proposal on the bicycle transport in the city of Prešov is based on the already implemented cycling network as well as the concept specified in the land-use planning documentation (City Planning Plan Prešov). The routes in the proposal are divided into a four-stage system according to the functional categories:

1. Main city cycling routes (traffic): This is the main skeleton of the cycling network. The proposal is based on the already existing cycling paths, which it complements in order to create a network of interconnected routes providing access to most of the residential complexes, and the civic/transport facilities in the city.
2. Additional urban cycling routes: complementing the main cycling network, linking to the less exposed parts of the city.
3. Local cycling routes: assumed lower cycling intensity;
4. Recreational cycling routes.

The resulting draft concept aims to achieve 119 km of cycling routes in the city; solve collision situations; establish a network of cycling routes on existing roads and a network of cycling routes outside the transport area; providing equipment for cycling infrastructure (parking, stands, rest areas) and delivering a proposal for the construction phase.

There are many benefits of this good practice from different perspectives. Given that there are a wide range of transport options and accessibility that quickly and conveniently connect different parts of the city, residents use it. Therefore, it is important to offer them an alternative in the form of cycling (and walking). Short distances in Prešov are an advantage. For a large part of the city's population, cycling is an appropriate solution if cycling infrastructure are built. However, cycling cannot be a solution for all urban mobility. Just to give a few examples: some older people cannot use it due to their health problems, and other active citizens work in positions where it is not advisable to go to work on bicycle. Another big problem about using bikes and walking is that if the air is heavily polluted, it is dangerous for our health.

Taking into account the characteristics of the good practice, it can be recommended for other partnership cities – its benefits outweigh its disadvantages.

3.1.7 Sharrows in Zagreb City Centre – Zagreb, Croatia

Population: 688,163 (2011)

Challenge: Previous attempts to establish a continuous network of cycling infrastructure usually included narrowing the (pedestrian) sidewalk in order to ensure the minimum width for cycling lanes. Due to these measures, the city soon faced dissatisfaction from both cyclists and pedestrians.

Solution: The trend was changed in 2016, when Gajeva Street in the City Centre was reconstructed as the first street in Zagreb following the sharrow concept. The street's sidewalk is – in its full width – left to the pedestrians while cars and bicycles share the road on the condition of slow traffic (30 km/h), with priority given to the cyclists.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------------|--------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input checked="" type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

For the last two years, the City of Zagreb aimed to achieve a friendlier approach to cycling/pedestrian infrastructure planning and reconstruction. Previous attempts to establish a continuous network of cycling infrastructure usually included narrowing the (pedestrian) sidewalk in order to ensure the minimum width for cycling lanes. Due to these measures, the city soon faced dissatisfaction from both cyclists and pedestrians. Their criticism was mostly related to the dense physical interruptions of the cycling lanes (hydrants, parked cars, lighting poles, bus stops, etc.) and to the lack of safety for both groups. However, the trend was changed in 2016, when Gajeva Street in the City Centre was reconstructed as the first street in Zagreb following the sharrow concept. The street's sidewalk is – in its full width – left to the pedestrians while cars and bicycles share the road on the condition of slow traffic (30 km/h), with priority given to the cyclists. Feedback from all transport system stakeholders is very positive.

This good practice has many beneficial effects to the residents of Zagreb. The solution preserves pedestrian surfaces and enables high quality contact between the pedestrians and commercial/cultural/other facilities along the street. Moreover, planned maintenance and works on existing infrastructure can easily be used as an opportunity to change the traffic concept since the solution is not complex. However, we also need to take into account that a significant amount of funds is necessary to adjust the existing network in the City Centre and that additional activities are needed in order to familiarise the public with the new solution. The possible safety issues for cyclists

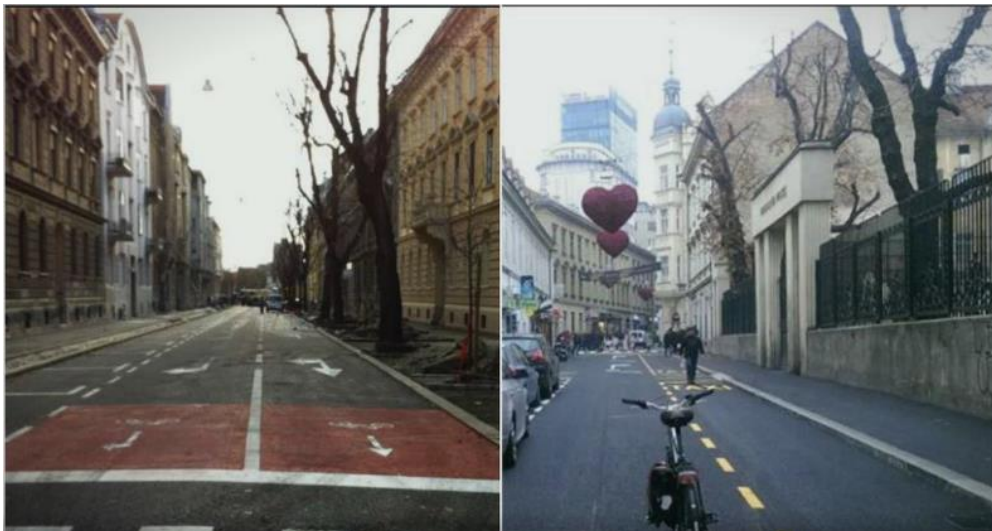
is also a problem, as the maximum speed of 30 km/h is not required by law, only recommended (for now) – high quality signage and educational campaigns can help solving this issue.

The steps for implementing this good practice were the following:

1. An analysis of the streets in the City Centre suitable to apply the sharrow concept with the aim to ensure a complete and continuous network for cyclist mobility;
2. Public promotion and consultation;
3. Technical documentation preparation (works and signage);
4. Construction works.

The implementation of this GP is recommended in partner cities where the street-width is limited, and traffic flows are slower as Zagreb's solution is suitable for these conditions.

The good practice is supported with the following photos:



Project co-funded by European Union funds (ERDF, IPA)

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3.1.8 Pedestrian Zone in Ljubljana City Centre – Ljubljana, Slovenia⁷

Population: 288,919 (2017)

Challenge: Ljubljana City Centre faces an increasing number of daily commuters, which contributes to air pollution, noise and congestion problems.

Solution: In 2007, the city centre was closed to all motor vehicles and this designated ecological zone has been gradually enlarged, with further measures to promote non-motorised transport modes – like reduced speed zones, the reduction of available parking spaces in the city centre and the introduction of one-way streets.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input checked="" type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Ljubljana City Centre faces an increasing number of daily commuters, which contributes to air pollution, noise and congestion problems. In 2007, the city centre was closed to all motor vehicles and this designated ecological zone has been gradually enlarged. Today, it covers an area of more than 10 hectares. Ljubljana implemented further measures to promote non-motorised transport modes in order to tackle congestion and improve the modal split ratio between car traffic and environmentally friendly modes of transport – like reduced speed zones, the reduction of available parking spaces in the city centre and the introduction of one-way streets. In 2013, a core part of Slovenska Street, a main traffic artery in the city centre was closed to motorised vehicles and is now accessible only for pedestrians, cyclists and public transport. The objective of the intervention was to transform the city into “a pleasant public space and an attractive setting for a variety of social, cultural and sports events”.

As a beneficial result of this good practice, the amount of walking between 2003 and 2013 increased from 33% to 53%, while car use decreased from 47% to 19%. Moreover, Ljubljana succeeded in transforming itself from a previously car dominated city into a city with a focus on pedestrians, cyclists and public transport. In addition, large amounts of public open spaces were renovated, creating qualitative gains for the citizens living in Ljubljana. However, this good practice also has

⁷ Source:

http://h2020-flow.eu/uploads/tx_news/FLOW_REPORT_Portfolio_of_Measures_v_06_web.pdf

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

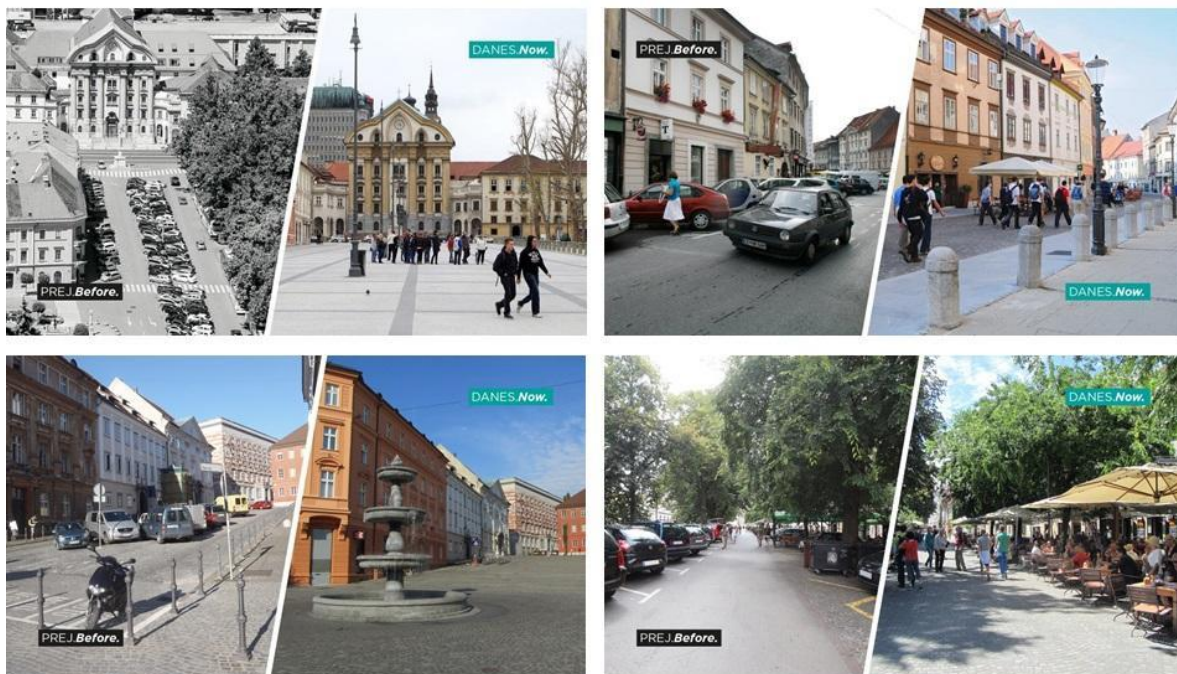
some disadvantages. Such interventions require careful consideration of possible consequences and network possibilities and an existence of alternative routes for cars and/or investments to increase the capacity on other parts of the network. Moreover, projects like this often get much resistance from the public, therefore, it is crucial that they are well promoted and communicated in the planning phase.

To implement this good practice, Ljubljana took the following steps:

- To reduce traffic in the streets around the city centre, an inner ring road was completed with the opening of the new two-level bridge in 2012. The entire lower deck of the bridge is exclusively for cyclists and pedestrians. To compensate for reduced parking spaces in the city centre, additional Park & Ride facilities were created.
- As an additional measure to provide better accessibility to the city centre, Ljubljana also offers a fleet of four electric vehicles as free means of transport, available to anyone who has difficulty walking within the pedestrian zones. The e-vehicles travel at a speed of 25 km/h and can carry five passengers.

The implementation of this good practice is directly suggested to the city of Varaždin that has one of the largest pedestrian zones in Croatia, located in the oldest historic part of the city. This project would be suitable for the city as its distances are walkable and its culture of walking is well developed.

The good practice is supported with the following photos:



3.1.9 Rehabilitation and modernization of Unirii Square in Oradea – Oradea, Romania⁸

Population: 196,367 (2011)

Challenge: The city had a goal to increase the quality of life in Oradea, improve transport and population mobility conditions and increase the city's tourist attractiveness.

Solution: The entire public square was completely transformed, and the road infrastructure was significantly reduced and replaced by green areas and pedestrian zones.

Specific walkability issues:

- | | | | |
|------------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input checked="" type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The above-mentioned project was financed through the Regional Operational Programme 2007-2013 and implemented in 2015. The general objective of the investment was to increase the quality of life in Oradea by rehabilitating urban infrastructure and improving urban services, improving transport and population mobility conditions, and increasing the tourist attractiveness of Architectural Urban Ensemble I – Oradea Historical Center. The entire public square was completely transformed, and the road infrastructure was significantly reduced and replaced by green areas and pedestrian zones. The cost of the investment was around €5.5 million.

The following steps achieved the rehabilitation and modernization of Unirii Square:

- Full rehabilitation of pavement infrastructure;
- Reduction of light pollution by modernizing and improving the public lighting system;
- Increasing comfort to 100% by replacing all the constituent elements of urban furniture;
- Maximizing the mobility in the Unirii Square area by bringing an approximately 20,000 square metres pedestrian surface into circulation; and

⁸ Source:

<http://www.oradea.ro/subsituri/piataunirii/index.php>

https://www.welcometoromania.ro/Oradea/Oradea_Piata_Unirii_r.htm <http://www.ebihoreanul.ro/stiri/ultima-or-31-13-20-3-47/s-a-deschis-targul-de-craciun-din-oradea-piata-unirii-invadata-de-lumini-138272.html>

<http://www.oradeainimagini.ro/de-vizitat/centrul-istoric/de-vizitat-piata-unirii/>

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- Modernizing public transport by relocating and upgrading two public transport tram stations.

The application of this good practice has created many beneficial results for the city of Oradea and its residents. Environmental pollution decreased by 25% while traffic was fluidized. Moreover, the number of tourists saw an increase of at least 10%. In addition, by increasing the tourist potential of the central area, Unirii Square also became more attractive for investments. The main disadvantage noticed was the discomfort created by the events organized in the square after the rehabilitation, especially for citizens living in the nearby areas.

This good practice is a recommended measure to other partner cities, since investments that aim to increase the surface of pedestrian zones have direct results in increasing the level of walkability in the involved cities.

The good practice is supported with the following photos:



2014



2015

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3.1.10 Rehabilitation of Vasile Alecsandri Street – Oradea, Romania⁹

Population: 196,367 (2011)

Challenge: This street is an important artery in the center of the city with a lot of coffee places and restaurants, and until recently was also intensely circulated by cars and used for car parking directly on the streets or on the sidewalks.

Solution: Starting from the summer of 2017, the street entered a rehabilitation process in order to be transformed into a pedestrian zone with car access only permitted for residents.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Vasile Alecsandri Street is a central street that connects Unirii Square to 1 December Central Park. This street is an important artery in the center of the city with a lot of coffee places and restaurants, and until recently was also intensely circulated by cars and used for car parking directly on the streets or on the sidewalks. Starting from the summer of 2017, the street entered a rehabilitation process in order to be transformed into a pedestrian zone with car access only permitted for residents. The total rehabilitated area of the street is 4,250 square metres of which around 2,000 square metres are destined to pedestrians. This investment was proposed and implemented by funds from the local budget with the possibility of including the investment in the projects financed through the local mobility plan.

Due to the fact that the street is populated mostly with coffee shops and restaurants, transforming it into a pedestrian street brings a huge benefit to both shop owners and customers. Also, changing the street design from car circulated to pedestrian combined with the adjacent square that is mostly dedicated to walking adds to the attractiveness of the whole central area of the city.

⁹ Source:

<http://www.bihon.ro/strada-vasile-alecsandri-va-deveni-zona-pietonala/1638753> <http://www.oradea.ro/stiri-oradea/au-inceput-lucrarile-de-amenajare-a-strazii-vasile-alecsandri>

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This good practice is a recommended measure to other partner cities, since investments that aim to increase the surface of pedestrian zones have direct results in increasing the level of walkability in the involved cities.

The good practice is supported with the following photo:



Project co-funded by European Union funds (ERDF, IPA)

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3.1.11 Aesthetization and modernization of major pedestrian zones and areas for public recreation – Varna, Bulgaria¹⁰

Population: 343,991 (2016)

Challenge: The main objective was to improve the physical and living environment in the city centre as a prerequisite for providing a sustainable and environmentally friendly urban environment with a higher quality of life.

Solution: The project provided a unified concept for a safe and sustainable urban environment with high environmental and aesthetic quality – pedestrian walkways, bicycle lanes, colour layout and artistic lighting, appropriate elements of urban design (small architectural forms, signs and energy-saving street lighting).

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In the period of 2013-2016 in Varna, after an architectural competition and with the financial support of the Regional Development Operational Programme, a project for the aesthetization and modernization of the main pedestrian zones and areas for public recreation was realized. The main objective of the project was to improve the physical and living environment in the city centre as a prerequisite for providing a sustainable and environmentally friendly urban environment with a higher quality of life. The good practice included the creation of an accessible architectural environment for disabled people, the creation of conditions for the integration of disadvantaged groups, and the improvement of the safety and security of the urban environment. Under this project,

¹⁰ Source:

<http://www.varna.bg/bg/articles/10423/>

https://gradat.bg/bgprojects/2012/11/19/1950008_pet_proekta_s_nagradi_v_konkursu_za_estetizacija_na/

https://gradat.bg/bgprojects/2013/03/03/2014460_rekonstrukciata_na_peshehodnata_zona_na_varna_mojeda/?ref=miniurl

https://gradat.bg/bgprojects/2012/11/19/1950010_gradska_tukan_prusteni_i_puteki/&rubname=news/

<http://www.skyscrapercity.com/showthread.php?t=1584884&page=4>

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

a complete reconstruction and modernization of the pedestrian zone of Varna was carried out. The project provided a unified concept for a safe and sustainable urban environment with high environmental and aesthetic quality – pedestrian walkways, bicycle lanes, colour layout and artistic lighting, appropriate elements of urban design (small architectural forms, signs and energy-saving street lighting).

Carrying out this good practice has many beneficial results both to the city of Varna and to its residents. These advantages include lower atmospheric emissions; better built environmental conditions; discouraging the usage of private cars and other motorized vehicles, and at the same time encouraging active transportation modes; and finally, enhancing economic vitality. Considering the excellent layout of the city centre of Varna, and its close proximity to the sea, the sea garden and many cultural and historical sites, it can be claimed that the cafés and small retail shops, the restaurants and other public services there will also benefit from a proper pedestrian network. Citizens like to walk in the centre, thus they spend money there, too, which can boost the local economy. However, we also need to consider the possible problems and disadvantages of the project. One of the main problems of pedestrian zones is related to parking management where parking is not controlled in the surrounding areas. Other disadvantages are related to the building period as, during construction activities, residents living in the area will experience inconveniences and cafés, retail shops, restaurants and other public services may suffer financial losses.

To implement this good practice into a city's life, the next steps should be followed:

- Firstly, the impact area should be defined. For this purpose, it is necessary to analyse the major city areas that have the potential to attract large amounts of pedestrians, as well as trade and public services. At the same time, it is important to also explore the possibilities of creating new pedestrian links or to reconstruct existing ones that lead to nearby tourist sites, public service units and other pedestrian flow generators.
- It is of great importance that the vision of the territory is determined via public discussions involving professionals, NGOs and citizens. Here, a preliminary estimate of the necessary funds should be made. If there is no clarity about the project's budget, there is the risk for not corresponding to the prior vision of the project or to delay its implementation for financial reasons.
- The next step is to organize an architectural competition for selecting the most relevant project proposal. This will create detailed drawings and calculations that are essential in terms of the project implementation.
- For having a successful realization, it is fundamental to have permanent relationships with the interested parties. Another crucial action is to carry out an awareness campaign about the benefits of the project but also about the temporary inconveniences, which the residents of the area and the owners of shops, restaurants and other public service facilities will face during the construction period.

Taking into account all the different aspects of Varna's good practice, it is recommended for application among other partner cities. The project's advantages are more significant than its disadvantages and these interventions can result in a relevant increase of walkability. Although the implementation is not without difficulties, in the long term, it is worth the efforts.

The good practice is supported with the following photos:



3.1.12 Sustainable Urban Mobility Plan of Pilsen: Plán udržitelné mobility Plzně (PUMP) – Pilsen, Czech Republic¹¹

Population: 170,936 (2018)

Challenge: The synergy and interdependence of the different modes of transport had to be chosen in such a way that the most appropriate mode of transport is always used.

Solution: This PUMP-proposal seeks to promote the various modes of transport where they are the most useful and where they can reach the widest range of users to shift from cars to sustainable modes of transportation.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|--------------------------------------------------------|-----------------------------------------|---------------------------------------------------|
| parking <input checked="" type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> |
| participative planning <input type="checkbox"/> | transport mode mix <input checked="" type="checkbox"/> | | awareness raising <input type="checkbox"/> |
| | public transport <input checked="" type="checkbox"/> | | economic motivators <input type="checkbox"/> |

A mobility plan is, by nature, a strategic plan, taking into account the principles of integration, participation and evaluation, with the aim of meeting the mobility needs of today's and future generations and improving the quality of life in cities. The synergy and interdependence of the different modes of transport is chosen in such a way that the most appropriate mode of transport is always used. Therefore, this PUMP-proposal seeks to promote the various modes of transport where they are the most useful and where they can reach the widest range of users to shift from cars to sustainable modes of transportation. The thematic areas covered by PUMP include parking, street design, walking, cycling, public transit, individual car transport, mobility management and freight transport.

The benefits of the proposed measures will be reflected once all of them are fully implemented, after 2025. One of the main benefits should be the improved accessibility of the city centre by public transit and non-motorized transport – reducing the number of trips by car by 20% and increasing the number of trips by public transit by 8%. The modal split should be increased to 63% for public transit, cycling and walking altogether, while the operation performance of individual car transport in the centre of Pilsen will be reduced by 22%. One of the disadvantages is connected to the supposed termination of certain regional bus lines on the periphery of the city, resulting in an

¹¹ Source: <http://www.mobilita-plzen.cz/ke-stazeni>

increase of total travel time for certain passenger groups. At the same time, the extent of regional rail transport should be preserved without any significant increase of operation performance. Despite enhancing the number of charged parking zones, there will be no expected decline in the volume of individual car traffic in the central part of Pilsen.

PUMP proposes specific interventions for particular areas:

- In the case of parking, the extension of charged parking zones and P+R facilities that have connections to tram and railway lines, and other measures for short-term parking K+R are envisaged.
- In the field of street design, the plan proposes the revitalization of city boulevards, zones of traffic calming and measures to increase the attractiveness of the city centre for investors.
- Towards improving walkability, the plan suggests new connections over natural and transport barriers.
- In the field of cycling, there is the proposed completion of the "greenways" network around rivers. Moreover, improving the conditions for the parking of bicycles (racks, bike-boxes) and promoting the bike-sharing system is also part of the project.
- Regarding public transit, there is the supposed modernization of the radial railway lines, building and reconstructing tram-lines and the modernization of the fleet and infrastructure of the city public transit operating company. The city also wants to create restrictive measures on individual car transport and intensify the integration of public transit.
- For individual car transport, there is the proposed building of the city ring's missing parts (western, eastern), rerouting the main transit roads to divert traffic load from residential areas and complex street reconstruction and intersection optimization.
- Mobility management is represented by the integration of prepaid services (public transit, parking, cycling), the development of intelligent transport systems and the establishment of an urban mobility coordinator.

This Sustainable Urban Mobility Plan is recommended not only for large cities, but also for mid-sized cities within the partnership as its specific objectives are in line with the CityWalk project's objective of improving walkability and promoting sustainable forms of mobility in cities. Implementing this good practice is appropriate in terms of the achievable goals, however, in terms of the time it takes, it seems rather inappropriate.

The good practice is supported with the following photo:



Plán udržitelné mobility
Plzně

Souhrnná zpráva

Prosinec 2016
Útvar koordinace evropských projektů města Plzně



3.1.13 Step by step to more life – Promotion of walkability through neighbourhood development and meeting zone – Hohenems, Vorarlberg, Austria¹²

Population: 16,317 (2018)

Challenge: Until a few years ago, car traffic dominated the city of Hohenems. With a few exceptions, the unique historical ensemble in the “Jewish Quarter” consisted of shabby, partly empty houses with closed shops.

Solution: Through numerous structural measures and a gradual revitalization, a process of change, which also promotes walking, has been set in motion. As a result, the district is now a modern, friendly and traffic-calmed place.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------|----------------------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input checked="" type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input checked="" type="checkbox"/> | | |

Until a few years ago, car traffic dominated the city of Hohenems. Shopping centres on the outskirts of the city made Marktstrasse, a formerly popular, inner-city shopping street, very important. With a few exceptions, the unique historical ensemble in the “Jewish Quarter” consisted of shabby, partly empty houses with closed shops. As change was badly needed, dedicated citizens initiated a vision process “innen.stadt.leben” (inner.city.life) in 2014, with the goal of creating a city for people, not for cars. Through numerous structural measures and a gradual revitalization, a process of change, which also promotes walking, has been set in motion. As a result, the district is now a modern, friendly and traffic-calmed place. The renewal process has created numerous new uses in the area of shopping, living, working and housing. Moreover, the city centre has been upgraded by creating a meeting

¹² Source:

Begegnungszonen-Dokumentation in Österreich (Walk-space.at, 2018): „Hohenems – d’Gass Marktstraße, Schweizer Straße, Harrachgasse“ <http://www.begegnungszonen.or.at/details.php?Projektnummer=91>
 Publikation im Rahmen des Internationalen Städteforums in Graz – ISG unter dem Motto „Transformation findet Stadt“ (2016): „Quartiersentwicklung“, Markus Schadenbauer-Lacha (Lacha & Partner GmbH) <http://www.lacha.at/projektentwicklung/quartiersentwicklung/>
 derStandard.at (24. März 2017): „Hohenems: Ein bisschen Bobo in der Kleinstadt“ Jutta Berger (Standard) <https://derstandard.at/2000054342830/Hohenems-Ein-bisschen-Bobo-in-der-Kleinstadt>

zone which can be measured by a noticeably higher visitor frequency. The renovation of the historic district happened gradually and involved the following steps:

- Relocation of the state road (traffic reduction since 2010);
- Citizen participation process within the scope of the “Visionscafé”;
- Private sector investors helped the renovation and maintenance of buildings with a quality focus;
- Vacant objects that needed restoration were made available to artists, e.g. at the cultural festival Emsiana;
- Creation of publicly usable courtyards and pedestrian and bicycle-accessible public cross-connections;
- Architects are gradually redesigning the shapes of individual buildings (facade design);
- The creation of a public space by reducing traffic on the shared spaces;
- Revitalization of the first-floor areas: designing start-ups which share the concept of sustainability and offer specialized products.

This good practice has many advantages from numerous different aspects. First, transit traffic was reduced by about 25% and car-traffic is also declining sharply (23% less cars). The project also led to increased safety, as no structural measures are needed to protect pedestrians. The introduction of the “shared space” concept allows the mixed use of places and streets where many events can take place, such as festivals, markets and fairs, and cafés can have seat options on the streets. As a result of this good practice, public space became more open and expansive: it invites you to stroll and increases the quality of stay for those who walk by. Moreover, an eco-district with more than 30 shops and 8 offices was created, where resource conservation and regionality is an important part of the business model. Apart from that, more than 50 residential units got renovated and now operate by using environmentally friendly energy supply. Finally, at “Visionscafé”, stakeholders meet once a week to discuss the implementation of other beneficial actions that would strengthen the acceptance and identity of the district; such as joint planting and vegetation campaigns, school projects, days of architecture, heritage days, etc. This renewal and revitalization of the historic city centre shows the connections and solutions on how to handle current problems and topics well. The interlocking measures take into account the local conditions as well as the historical development of the district. The renewal of the city district shows perfectly that projects on walkability are most successful if integrated in a comprehensive strategy adjusted to regional features.

The project may not fit to other cities in particular, but it shows that with reorganization, establishments with high-quality materials and the creation of public meeting locations and a qualitative environment to rest, city centres can be renewed and revitalized for/with pedestrians – also within the CityWalk project.

The good practice is supported with the following photos:

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk



Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

3.1.14 Reconstruction of Mara Taceva Str. and major overhaul on Parvi May Blvd, construction of pedestrian passageways, playgrounds, recreation areas, attractions, sports grounds, bay afforestation, bikes in the Asparuhovo area – Varna, Bulgaria

Population: 343,991 (2016)

Challenge: The main aim of the extension of Mara Taceva Street – to reach the neighbouring boulevards – is to alleviate the traffic, especially during summer months.

Solution: It is envisaged to increase the places for sports and the building of recreational areas in the spirit of modern trends, while replenishing plant volumes by combining existing and newly designed vegetation. Moreover, designing a bicycle network to the nearby Asparuhov park and restoring the damaged environment are also planned.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input checked="" type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The main aim of the extension of Mara Taceva Street – to reach the neighbouring boulevards – is to alleviate the traffic, especially during summer months. Moreover, designing a bicycle network to the nearby Asparuhov park and restoring the damaged environment are also planned. A detailed survey of the area was carried out, by surveying the terrain, considering the nature of the architectural volumes, monitoring the pedestrian flow directions and analysing the state of the vegetation. It is envisaged to increase the places for sports and the building of recreational areas in the spirit of modern trends. In addition, replenishing plant volumes by combining existing and newly designed vegetation is part of the project. The new attitude towards Varna Lake, along with the administrative and economic function, allows a more focused development of sport, recreation and entertainment for children and adults. The terrain is partially separated as a local green area with recreational functions on a regional level. This project will solve the delayed problems with the goal of creating an attractive recovery area with modern design and features.

The parking zone for public services along Mara Taseva Street will be upgraded by building children's and sports grounds, recreation areas, attractions, bicycle paths, pedestrian passages and lawn afforestation on the shore of the sea-lake channel. The aim of the project is to make this space an accessible and pleasant environment for the residents and guests of the Asparuhovo district. A new

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cycling network will connect the area with the nearby Asparuhov Park. The municipality of Varna is also ready to build a fishing harbour in the quarantine area, to expand the Asparuhov park and to socialize the Asparuhov shaft. Some of the impaired impressions are the unfinished or compromised road sections – broken pavements and curbs, unresolved rainwater drainage/drainage problems. The opportunities for building bicycle routes and seaports, etc., are still unused.

The intervention was implemented by the “Landscape Architecture” with the aim to create a modern appearance for the territory by combining the unimpeded passage of the busy street movement, social contacts, recreation, sports and entertainment. The elements of the architecture are designed to create a sense of comfort and convenience. The construction was focused on the use of modern, durable and quality flooring materials, park furnishings such as benches, pergolas, bicycle stands, visual communication media, promotional media, waste bins and more. The project presents sports areas that meet the needs of physical activity of different age groups, as well as recreational areas. The project is prepared on the basis of pre-feasibility studies and surveys of the area.

The good practice is supported with the following photo:



3.1.15 Reconstruction of the Karadjordjeva Street – Valjevo, Serbia¹³

Population: 90,312 (2011)

Challenge: The core issues about the street were the unsafe driving/pedestrian crossings, the unregulated parking spaces, the devastated sidewalks, the non-standard pavement profiles and the unplanned organization of contents on pedestrian routes. Moreover, disabled people and the elderly had difficulties in terms of accessing the street.

Solution: The city went through a reconstruction with the aim of improving the conditions of traffic, parking and walking, the accessibility of pedestrians, traffic safety, the attractiveness of the routes and so on. In order to help the disabled people, a tactile tape for the blind and visually impaired were made, as well as sound signage at traffic lights. Furthermore, speed bumps and signs were installed near schools and pedestrian crossing zones.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|---------------------------------------------|----------------------------------------------------|--------------------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input checked="" type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input type="checkbox"/> | traffic safety <input checked="" type="checkbox"/> | street design <input type="checkbox"/> |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | | awareness raising <input type="checkbox"/> |
| public transport <input type="checkbox"/> | | economic motivators <input type="checkbox"/> | |

Karadjordjeva Street in Valjevo is an administrative centre, a main street where the city administration, courts, main post office and banks are located. The core issues about the street were the unsafe driving/pedestrian crossings, the unregulated parking spaces, the devastated sidewalks, the non-standard pavement profiles and the unplanned organization of contents on pedestrian routes. Moreover, disabled people and the elderly had difficulties in terms of accessing the street. Between 2012 and 2016, the city went through a reconstruction with the aim of improving the conditions of traffic, parking and walking, the accessibility of pedestrians, traffic safety, the attractiveness of the routes and so on. In order to help the disabled people, a tactile tape for the blind and visually impaired were made, as well as sound signage at traffic lights. Furthermore, speed bumps and signs were installed near schools and pedestrian crossing zones. All these interventions contribute to the greater attractiveness of the space, the higher market value of real estate, the arrangement of public spaces in terms of urban design, more accessible streets for pedestrians, decreasing the road area and increasing the pedestrian zones.

¹³ Source: General Regulation Plan Center (Official Gazette of RS No. 9/2014) <http://www.valjevo.rs/pgr-centar>

As for the benefits of the good practice, it can be stated that with the change in the profile of the street, there is more speed control, wider pedestrian paths with all the needed equipment, strictly defined and controlled parking zones. Both horizontal and vertical signage have been made professionally and in accordance with the highest standards, enabling greater security. Among the disadvantages, it can be mentioned that there were no bicycle lanes planned or made. Also, parking lots in this street are planned for temporary stops, but due to the lack of public garages and enough parking spaces in the city centre, they are often used for longer periods.

The good practice is supported with the following photos:





Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

3.1.16 Intervention in the green area of the narrow center of the city – Reorganization of the park and construction of a fountain in the green zone along Karadjordjeva Street in Valjevo – Valjevo, Serbia¹⁴

Population: 90,312 (2011)

Challenge: The arrangement of green areas is sadly not a priority in Valjevo. The green zone along Karadjordjeva Street was abandoned and unused without any attractiveness and opportunities for horticultural cultivation.

Solution: After a geological research at water level, it was confirmed that there is a possibility that water can be introduced as a natural element and enriched into this public surface. Beyond the construction of a fountain in the green area, arrangement of pedestrian paths in the park was made with installations of the appropriate quality and attractiveness.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The arrangement of green areas is sadly not a priority in Valjevo, although these public areas should be designed for the needs of gatherings, holidays, relaxation and recreation. Therefore, it is particularly important and significant to have successful interventions. The green zone along Karadjordjeva Street in Valjevo was abandoned and unused without any attractiveness and opportunities for horticultural cultivation. Due to its central location – close to the administrative area – the need of an intervention was even more obvious. The goal was to increase the attractiveness, utilization and potential of the green space for the needs of all citizens, especially the youngest and oldest generations, as well as the rest of those located in the downtown zone due to administrative and business obligations. After a geological research at water level, it was confirmed that there is a possibility that water can be introduced as a natural element and enriched into this public surface. Beyond the construction of a fountain in the green area, arrangement of pedestrian paths in the park was made with installations of the appropriate quality and attractiveness.

¹⁴ Source: General Regulation Plan Center (Official Gazette of RS No. 9/2014) <http://www.valjevo.rs/pgr-centar>

To list the benefits of the good practice, it can be claimed that there is more interest from the population and a successful respect was formed for the communal order. In addition, the intervention increased the attractiveness of this area, enriched the view, and became a favourite gathering place, especially to the oldest and youngest of the population.

To sum it up, this good practice can be recommended to other cities and interested parties.

The good practice is supported with the following photo:



3.1.17 Intersection of the Mirko Obradovic Street and Sindjeliceva Street – Valjevo, Serbia¹⁵

Population: 90,312 (2011)

Challenge: Due to the difference in height between the two roads, they were inaccessible to one another. The only link between them was stairs so cars, cyclists and disabled people couldn't access it.

Solution: The General Regulation Center's plan managed to merge these two roads. The introduction of the sidewalk-pavement as a public area enabled an attractive pedestrian destination with a view on the Kolubara River basin and a church temple in the immediate surroundings. The proper installation of signage increased the safety of pedestrian crossings and both roadways.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|------------------------------------------------|---------------------------------------------|----------------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input checked="" type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In Valjevo, the intervention that took place in the intersection of the Mirko Obradovic Street and Sindjeliceva Street was one of the key investments in transport infrastructure in 2016. Due to the difference in height between the two roads, they were inaccessible to one another. The only link between them was stairs so cars, cyclists and disabled people couldn't access it. The General Regulation Center's plan managed to merge these two roads, though the crossroads project itself demanded a very detailed development because the Kolubara River Bridge is in the immediate vicinity. The introduction of the sidewalk-pavement as a public area enabled an attractive pedestrian destination with a view on the Kolubara River basin and a church temple in the immediate surroundings. The proper installation of signage increased the safety of pedestrian crossings and both roadways.

Regarding the benefits of the good practice, it needs to be highlighted that the intervention regulated traffic at the intersection and largely opened the possibility that a part of the traffic that once inevitably passed through the narrowest city center now was tangentially guided away through a roundabout. Due to the necessary and proper signage, the route is also safe. The opening of this

¹⁵ Source: General Regulation Plan Center (Official Gazette of RS No. 9/2014) <http://www.valjevo.rs/pgr-centar>

intersection is considerably relieved traffic in the center, the spatial and temporal distances between the key residential areas have been shortened, traffic from the city center, especially transit traffic, has been displaced. A possible future improvement could be a pedestrian connection with the cultural zone of the city.

The good practice is supported with the following photos:



Project co-funded by European Union funds (ERDF, IPA)

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3.1.18 Usce Park – Improving the living conditions and attractiveness of the location – Belgrade, Serbia

Population: 1,683,962 (2016)

Challenge: There were three main goals: accelerating the pedestrian movement towards the park, forming a network of pedestrian and bicycle paths within the park and defining the basic key paths linking the built-up living space of New Belgrade with the river bank.

Solution: The project aims at connecting the park and the city, creating a fine-grained network of paths with a clear hierarchy, maximizing existing amenities, inviting people to engage and interact and connecting the fortress with the park.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

This good practice presents the work of the Gehl Architect team and Zelenilo Belgrade. It is about the reconstruction and renovation of Usce Park through a strategy of three main goals: accelerating the pedestrian movement towards the park, forming a network of pedestrian and bicycle paths within the park and defining the basic key paths linking the built-up living space of New Belgrade with the river bank. The project started in November 2016 and consisted of several phases: initial meeting, direct field research, determining the strategy design, elaborating the conceptual solution and opening the paths. The strategy plans to invite people to use and spend time in the park and when this works well, other attractions can also be located in the area, not to mention that according to the plans, a promenade is going to be activated through building a pedestrian bridge for crossing the river and a potential gondola. The project aims at connecting the park and the city, creating a fine-grained network of paths with a clear hierarchy, maximizing existing amenities, inviting people to engage and interact and connecting the fortress with the park.

The reconstruction of the park means attracting locals and tourists of all ages to a lively and dynamic public space with authentic atmosphere, where they can enjoy local food, events and nature. The new pedestrian bridge results in eliminating the waiting time and expenses to get to the other side of the river anytime. The construction is not that expensive, and it could offer seats for people to take a rest and enjoy the view. As for the disadvantages, the project depends on political priorities. What is more, the bridge needs to be high enough for the boat traffic under it. The gondola is quite expensive to run and maintain.

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

As a summary, it can be stated that this good practice is in line with the goals and mission of the CityWalk project, so it can be recommended for other partners to implement.

The good practice is supported with the following photo:



3.2 Complex walkability intervention good practices from countries outside of the partnership

In Table 2, all complex walkability interventions from countries outside of the partnership are stated: we can see which country and city they originate from and which project partner provided them. As it can also be seen, the overall picture is very diverse – we can find mobility plans and projects, awareness raising campaigns and reconstruction of city parts as well. The table includes the specific walkability issues that are present in the practices. The overall picture is diverse from this point of view, too: there are good practices in connection with regulation, transport mode mix, street design, awareness raising, etc.

2. Table: Complex walkability interventions from countries outside of the partnership

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Walk-only Zones at the Arizona State University	Tempe, Arizona	USA	PP1	regulation
WEGO	Niagara Falls	Canada	PP1	public transport
Carless district in Vauban	Freiburg	Germany	PP1, PP2	regulation, parking
Planning for liveable streets through new mobility and public space strategies	Vitoria-Gasteiz	Spain	PP3	regulation, transport mode mix, parking, public transport, cycling, participative planning
A2 Be Safe	Ann Arbor, Michigan	USA	PP3	regulation, traffic safety, awareness raising, participative planning
Pedestrian and bicycle master plan	Hanover, New Hampshire	USA	PP4	transport mode mix, participative planning, awareness raising, regulation
Chepstow Sustainable Transport Project	Chepstow	United Kingdom	PP5	awareness raising, participative planning, regulation, street design, public transport

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Smart Mobility Action Programme 2016-2018	Amsterdam	the Netherlands	PP6	economic motivators
Footpath Network Planning, Handbook	Zürich, Bern	Switzerland	PP8	street design
National Guideline for walking strategies in German municipalities	several cities	Germany	PP9	participative planning, awareness raising
Transformation of the Cheonggyecheon river area	Seoul	Republic of Korea	PP9	street design, public transport
Mobility Initiatives for Sustainable European Communities – MOBISEC	Murcia	Spain	PP10	cycling, transport mode mix, traffic safety, participative planning, signage
Richland Urban Greenbelt Trail	Richland, Washington	USA	IPA PP1	street design, cycling, awareness raising
Continuous cycle lanes on the main radial route: Lewes Road	Brighton	United Kingdom	IPA PP1	transport mode mix, cycling, signage, public transport, participative planning
Ghent – from city of cars to meeting place of people	Ghent	Belgium	IPA PP2	regulation, awareness raising

Source: made by the author

3.2.1 Walk-only Zones at the Arizona State University – Tempe, Arizona, United States of America¹⁶

Population: 185,038 (2017)

Challenge: Due to congestions, exhaust fumes and unhealthy lifestyle habits on campus, eliminating wheeled traffic was a priority.

Solution: Walk-Only Zones are campus areas where from Monday till Friday between 8 a.m. and 4 p.m. it is forbidden to ride, drive or park wheeled vehicles. The only exceptions are individuals with disabilities.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Walk-Only Zones are campus areas where from Monday till Friday between 8 a.m. and 4 p.m. it is forbidden to ride, drive or park wheeled vehicles. The only exceptions are individuals with disabilities. According to the regulation, the following are wheeled vehicles: bicycles, delivery, maintenance and landscaping vehicles, electric vehicles and golf cars, hoverboards, inline and roller skates, scooters, segways, skateboards – all motorized and wheeled vehicles. Walk-Only Zones Ambassadors, the Campus Mall Enforcement and other university staff inform the public about the rules at major entry points. The University believes that these measures and their communication campaign can have a significant impact on eliminating wheeled traffic in Walk-Only Zones and, so far, more than 25 other United States universities have created similar safety zones.

The main benefit of this Good Practice is the increased safety on campus which can affect the students, professors, visitors and staff, too. Moreover, congestion and exhaust fumes are also relieved due to the measures. This has an effect on the environment and on the health of the people, too. As a consequence of the restrictions, people do more physical activities which can boost their brain activity, as well.

¹⁶ Source: <https://cfo.asu.edu/walk-only-zones>; <https://cfo.asu.edu/woz-faq>

The way to implement such walk-only zones can be done in the following way:

1. First, you need to identify the needs and preferences of the pedestrians that are going to be the future users of the newly created layout. Using surveys and also having more personal discussions will give you a clear view of the necessities.
2. Based on the results of the survey and personal discussions, the details of the measures need to be figured out. It is very important to plan every detail of the restriction to avoid future complaints.
3. The communication campaign is important to be worked out, as it can facilitate easier acceptance from the aspect of the public.
4. After surveying and planning, the real implementation can take place. During that, gathering further feedback from users to correct the possible mistakes accordingly is also recommended.

This GP is advisable for implementation in other partner cities as well as it is not suitable only for university campuses, but it can be easily applied in any city parts or neighbourhoods, too. However, the full cost of the implementation is not yet calculable, since it is continuous.

The good practice is supported with the following photos:



Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk



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3.2.2 WEGO – Niagara Falls, Canada¹⁷

Population: 88,071 (2016)

Challenge: Niagara Falls is a long city in terms of its area, so the different sights are relatively far from each other (several kilometres), with some at the edge of town. On foot, it would be too difficult to visit these places, but if the visitors used their cars, it would cause several problems (parking, environmental pollution, damage to nature, etc.).

Solution: The WEGO was founded in 2012 to provide integrated, fully accessible and year-round bus service to visitors. In order to motivate people to use WEGO instead of cars, there are a lot of discounts on the WEGO tickets if a visitor buys a ticket to visit any attractions (e.g. the Butterfly House, the Falls).

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Niagara Falls is a small town next to the Falls (Canadian side) which is a spectacular attraction. Niagara Falls is a long city in terms of its area, so the different sights are relatively far from each other (several kilometres), with some at the edge of town. On foot, it would be too difficult to visit these places, but if the visitors used their cars, it would cause several problems (parking, environmental pollution, damage to nature, etc.). As a unique cooperation between the City of Niagara Falls and the Niagara Parks Commission, the WEGO was founded in 2012 to provide integrated, fully accessible and year-round bus service to visitors. In order to motivate people to use WEGO instead of cars, there are a lot of discounts on the WEGO tickets if a visitor buys a ticket to visit any attractions (e.g. the Butterfly House, the Falls). Furthermore, if a visitor buys the Niagara Falls Adventure Pass/Niagara Falls Wonder Pass which ensure visits to several attractions at a discounted rate, the visitor will receive free 48-hour WEGO tickets.

This good practice has numerous beneficial results. Using the WEGO bus system means that there are fewer cars on the roads and that decreases traffic jams and environmental burdens. The decreased number of cars may also lead to fewer accidents. This practice is easy to establish as it

¹⁷ Source: <http://www.wegoniagarafalls.com/about-wego/>

does not require any special infrastructural improvement and with regular operation, crowds can be avoided on the local public transport. It would also mean more satisfied visitors and therefore, more economic benefits and a good image for the city.

The following steps are needed to implement the WEGO good practice:

1. Cooperation (and agreement) between the city and another authority (it can be a tourist office or other institution). It is important that all parties accept that this cooperation aims at preserving nature, decreasing car transport, motivating people to walk when they look at the attractions.
2. Investigating the needs of the visitors and establishing the infrastructure.
3. Agreement with hotels and other agencies that a visitor could have discounts on the public transport.
4. Marketing – to ensure durability and operability.

This GP can be applicable in the partnership as well, if the characteristics of the given city are similar and there is a chance for the needed cooperation. However, it could be difficult to create the cooperation between the city and the other partner organizations. To motivate people to use this facility instead of their cars, it should be convenient and not expensive. Determining the price and discounts may cause endless negotiations. Moreover, other competitors, like hop-on hop-off buses may appear.

The good practice is supported with the following photo:



3.2.3 Carless district in Vauban – Freiburg, Germany¹⁸

Population: 227,590 (2016)

Challenge: The relatively new town wanted to ensure in advance that the main transport method would be walking or riding a bike.

Solution: The people who would like to move there have to buy a parking plot in the parking house at the entrance of the district, and they have to leave their car there (parking in front of the house is prohibited!). In the district itself, vehicles are allowed to move at a walking pace to pick up and deliver but not to park.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Vauban is a district of the German city, Freiburg. This district is “a reduced car”-district. The people who would like to move there have to buy a parking plot in the parking house at the entrance of the district, and they have to leave their car there (parking in front of the house is prohibited!). In the district itself, vehicles are allowed to move at a walking pace to pick up and deliver but not to park. So, the main transport method in Vauban is walking or riding a bike. In order to ensure this, the number of streets and roads which cross the district’s border is limited for cars – so for pedestrians and bikers it is easy to cross the district border, but for car owners it is a challenge. The inhabitants of this district have to sign a declaration annually that either they do not possess a car or own a space in the car park. The construction of the town started in 1998 and was finished in 2010. It has 2,000 housing units and 600 working places. The inhabitants of Vauban have only 160 cars/1,000 people and less than 0.5 parking place per resident. The overall residential parking space to unit ratio is less than 0.5. The share of non-motorized transport is 64% and 39% of households are involved in

¹⁸ Source: <https://www.vauban.de/en/topics/history/276-an-introduction-to-vauban-district>; CASE STUDY VAUBAN, Simon Field, ITDP Europe; <https://www.itdp.org/wp-content/uploads/2014/07/26.-092211-ITDP-NED-Vauban.pdf>; https://www.google.si/search?biw=1188&bih=497&tbm=isch&sa=1&ei=5yFWselJsqVgAb19rflDw&q=vauban+mobility&oq=vauban+mobility&gs_l=psyab.3...21327.23341.0.23910.9.9.0.0.0.175.999.5j4.9.0...0...1c.1.64.psyab..0.2.289...0i19k1j0i8i30i19k1j0i30i19k1j0i5i30i19k1.0.F2idcdhULhM#imgrc=fztRozsHUr5GIM:&spf=1518215678794

car-sharing. With this concept, Vauban follows the principle of a car-free district and supports all non-motorized modes in the function of daily mobility. The whole district is a pedestrian friendly area and also a very good example of walkability planning.

There are numerous advantages of this good practice from different point of views. If you follow the rules of the district, the whole environment is favourable for the pedestrians: they can walk without any danger coming from the cars, the children can play without any fear, and there are more green areas than in other parts of the city. Due to the strict rules on parking a car, the people who choose this district do not have a car or prefer public transport. This way, environmental pollution can be decreased. Moreover, there is almost no in-situ transport air pollution and no noise emitters; there is good transport safety. In addition, children grown and raised in such an environment are potential ambassadors of walkability and sustainable mobility. However, there may be conflicts with federal and provincial legislation on parking standards. As there is no official control whether the inhabitants follow these rules or not and no official punishment in the case of the latter, it is relatively easy to break them.

The steps of implementing this good practice are the following:

1. Conduct a survey and organize public dialogue to get to know whether there is a need for such a district and to ensure that this is a responsible innovation.
2. Find a district where you can plan this. It should be a new district – it cannot be in an existing part of the town because the support of the inhabitants is essential.
3. Finally, plan, develop and market your new district.

Taking into consideration the characteristics of this good practice, it may seem too radical in terms of public mobility perception for some south-eastern European states – it is only advantageous if a city builds a completely new district which would not be feasible considering the time frame and budgetary limits of the project. However, it is a nice example to follow even if only in small but numerous steps.

The good practice is supported with the following photo:



Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

3.2.4 Planning for liveable streets through new mobility and public space strategies – Vitoria-Gasteiz, Spain¹⁹

Population: 240,753 (2011)

Challenge: In 2008, Vitoria-Gasteiz was in the middle of an urban growth process, resulting in distances far beyond the degree in which walking could be regarded as an acceptable mode of transport: this change meant a dramatic rise in car usage with all of its problems and disadvantages.

Solution: The Sustainable Mobility and Public Space Plan and the Master Plan for Cyclist Mobility specified 24 objectives with the overall goal to create a diverse, compact, efficient and socially cohesive urban transport system with superblocks: a new on-street parking policy by tripling parking tariffs in the city centre and increasing the regulated area with 30%; a bus and tram network based on a new integrated grid which guarantees better frequencies, better use of resources and access to any point of the city with one sole transfer; etc. The city organized a consultation process through a Citizens' Forum integrating a group of stakeholders.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

In 2008, Vitoria-Gasteiz – a city with a population of 241,000 – was in the middle of an urban growth process, resulting in distances far beyond the degree in which walking could be regarded as an acceptable mode of transport: this change meant a dramatic rise in car usage with all of its problems and disadvantages. Switching from walking to cycling could have helped during the shift but a number of obstacles were in the way of progress. As a countermeasure, the Sustainable Mobility and Public Space Plan and the Master Plan for Cyclist Mobility specified 24 objectives with the overall goal to create a diverse, compact, efficient and socially cohesive urban transport system with superblocks – interior streets prioritizing walking and cycling surrounded by a grid with motorized traffic – as the main conceptual tools. The implementation of these strategies is currently underway and a remarkable success. Implementation covered a wide range of activities in different areas, for example: the development of new urban cells (400x400m superblocks); a new on-street parking

¹⁹ Source: International Network of Michelin Cities (2017): Initiative – Vitoria-Gasteiz Sustainable Mobility and Public Space Plan. In <http://www.inmc21.com/en/article/5a0177d3baf886282579eb3c>, 05.02.2018.

policy by tripling parking tariffs in the city centre and increasing the regulated area with 30%; a bus and tram network based on a new integrated grid which guarantees better frequencies, better use of resources and access to any point of the city with one sole transfer; completing the existing main network of cycling lanes and developing a secondary network and creating a network of urban paths for pedestrians, with continuity and of a high quality. To recognize both the gained benefits and the necessary interventions, evaluation and monitoring processes (and indicators) were in place.

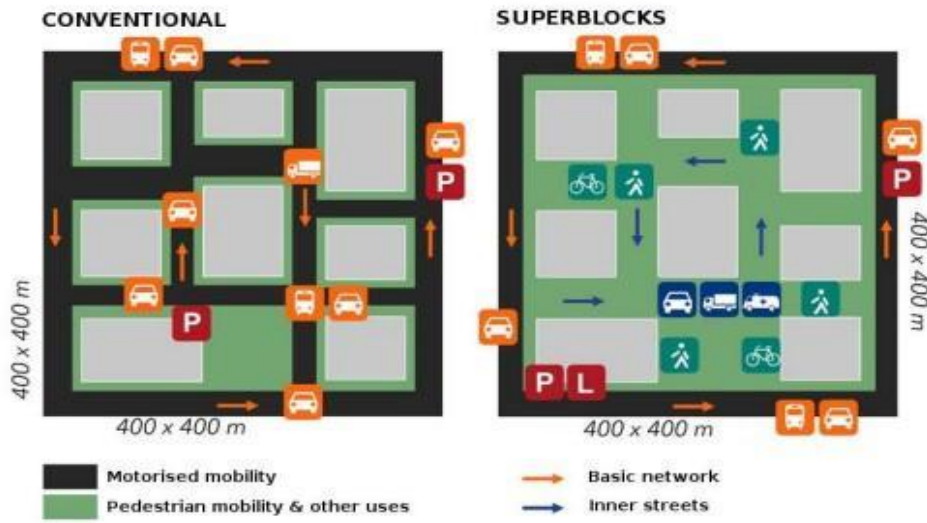
The benefits of this GP are clearly visible in the city: walking has increased from 49.9 to 54.4%, cycling has increased from 3.4 to 12.3% while driving decreased from 36.6 to 24.7%. They also managed to make urban transport energy efficient and eco-friendly by decreasing CO2 emissions with 9.5% and energy consumption with 8.9%. The number of traffic offences was cut in half, while the general accident rate has reduced to 2%. There is also a benefit that cannot be measured with these quantitative indicators: the change in mentality. Actions which before would have generated significant opposition (such as removing parking spaces or pedestrianizing a street) are now initiated by the citizens themselves, who are convinced about their necessity. Since the GP was implemented based on the previously examined and analysed specific circumstances of Vitoria-Gasteiz and the involvement of its residents, there are no significant shortcomings.

The way of implementing this good practice into the life of Vitoria-Gasteiz was the following:

- First, the city created a detailed analysis that identified the main issues associated with the urban spatial and socio-economic structure of the city.
- They organized a consultation process through a Citizens' Forum integrating a group of stakeholders who worked on defining a desirable state to aim for and signed an agreement about the outline of the consensual strategy to be followed.
- Developing the strategic plan was the next step: the objectives, the methods that will be used and the instruments needed to realize the necessary measures.

As this GP is planning for the long term – 5 years or more –, its full implementation is not possible within the project, but some of its components can be incorporated into WP5 by any partner. The most important aspect is that the supported activities have to be in line with the respective city's needs.

The good practice is supported with the following photos:



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3.2.5 A2 Be Safe – Ann Arbor, Michigan, USA²⁰

Population: 113,939 (2010)

Challenge: The city is bicycle friendly with 131 km of bike lanes. However, car travel is significant and on the rise, too. It is very important that these modes of transport do not hinder each other in their smooth operation.

Solution: A2 Be Safe is an awareness campaign with the specific goal of promoting safety to all who live in or visit the city. It consists of several themes – crosswalk safety, texting and driving – common in the local community and strives to be thought-provoking and memorable. The city involves the residents in the initiative by regularly giving them the opportunity to share their ideas and slogans, which they can use in promotional materials later.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

One of the main ingredients of a walkable (and bikeable) city is a safe environment. That is why improving traffic safety has become a priority in Ann Arbor, a city with a population of 114,000. A2 Be Safe is an awareness campaign with the specific goal of promoting safety to all who live in or visit the city. It consists of several themes – crosswalk safety, texting and driving – common in the local community and strives to be thought-provoking and memorable. The city involves the residents in the initiative by regularly giving them the opportunity to share their ideas and slogans, which they can use in promotional materials later. Since starting the project, they created a brochure, a number of logos and posters, a presentation, a newsletter, a PSA and several social media (Facebook and Twitter) messages, for example: “You're only bright if you glow in the night. Reflectors, lights, colourful clothing are a must – all the time. Do what it takes to be easily seen”.

This good practice led to many advantages and benefits. Ann Arbor became a Gold-level Walk Friendly Community and the 3rd Best City for Walking in the US. 15% of its residents walk to work which is 6-times the national average. The city is also bicycle friendly with 131 km of bike lanes. However, car travel is significant and on the rise, too. It is very important that these modes of

²⁰ Source: Walk Friendly Communities (2018): Ann Arbor, MI. In <http://walkfriendly.org/communities/ann-arbor-mi/>, 06.02.2018.

transport do not hinder each other in their smooth operation. One of the factors behind the peaceful coexistence of these three forms of travel is traffic safety and this campaign supported it with success. In this case, disadvantages can only come from faulty implementation like failing to encourage direct action or narrowing your approach to one measure.

The way of implementing this GP into the city's life was the following:

- The first task was to develop a communication strategy for a trackable and transparent campaign, including the analysis of the target groups, the messages, the tools and the planned evaluation methods. Different target groups were reached using different tactics and different media and the campaign used story-based narratives with empathy, humour and passion instead of raw statistics.
- On-going evaluation was required to ensure that the objectives are being met. When necessary, the strategy evolved to consider new priorities, activities or target groups.
- One part of the implementation was the production of the necessary promotional materials (logo, slogans, brochures, posters, traffic signs, etc.) and the other was the dissemination itself. The campaign had to reach out to citizens and engage them in a direct discussion about the topic.
- In parallel with awareness-raising, the city planned for educational activities: this meant the distribution of hand-outs and flow charts about crosswalk design, but lesson plans for students were also considered.

The implementation of this good practice is recommended to other partners as it is easy to adapt parts of it, or even the whole idea, in another city. The practice is not a city-specific initiative connecting multiple policy areas: its implementation only requires communication activities and tools, and the costs – depending on the chosen methods – are negligible in the absence of infrastructural investments.

The good practice is supported with the following photos:



Project co-funded by European Union funds (ERDF, IPA)

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3.2.6 Pedestrian and bicycle master plan – Town of Hanover, New Hampshire, United States of America²¹

Population: 8,636 (2010)

Challenge: Despite its high levels of walking and cycling, Hanover’s pedestrian and bike mode share declined between 1990 and 2000.

Solution: A plan has been developed in order to identify policies, standards and guidelines to make walking and cycling in Hanover safer, easier and more attractive; provide an action plan for future improvements to the bicycle and pedestrian network; and outline steps to promote walking and cycling in Hanover as an alternative to driving.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input checked="" type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Hanover enjoys very high levels of walking and cycling: according to the US Census Journey to Work data, the combined pedestrian and bicycle mode share in Hanover was 36.5% in 2000. By comparison, the state-wide average at that time was 3.7%. Despite these high levels of walking and cycling, Hanover’s pedestrian and bike mode share declined between 1990 and 2000, when it accounted for 43.2% of work trips. The drop is likely a reflection of the growth of the town. Encouraging walking and cycling is a fertile area of research related to transportation, congestion, environmental factors, health and wellness.

Hanover’s pedestrian and cyclist goals are as follows:

1. Increase the level of walking and cycling in Hanover.
2. Integrate pedestrian and cyclist considerations into all projects, policies and planning processes.
3. Inform and educate residents on the benefits of walking and cycling.
4. Develop a comprehensive pedestrian and cyclist plan based on the ‘Five Es’ as follows: Education, Engineering, Encouragement, Enforcement and Evaluation.

²¹ Source: <https://www.hanovernh.org/>;
https://www.hanovernh.org/sites/hanovernh/files/uploads/pedestrian_bicycle_master_plan.pdf

5. Strive to achieve the standards of the League of American Bicyclists.

This is the first master plan for pedestrian and bicycle circulation that has been developed for the Town of Hanover. The plan has been developed in order to identify policies to make walking and cycling in Hanover safer, easier and more attractive; identify standards and guidelines for pedestrian and bicycle facility design; provide an action plan for future improvements to the bicycle and pedestrian network; and outline steps to promote walking and cycling in Hanover as an alternative to driving.

As it has many beneficial effects, there are a number of reasons to promote walking and cycling in Hanover. First of all, walking and cycling provide alternative means for travel beyond driving. Encouraging trips by foot and bicycle helps to reduce demand for limited street and parking space capacity. What is more, unlike driving, walking and cycling as a means of transportation is more accessible to a broader range of individuals, particularly children and seniors who may otherwise are not able to drive. Walking and cycling also promote a sustainable and healthy environment because they are both zero emission modes of transportation. However, without doubts, walking and cycling cannot be the solution for everyone regarding urban mobility. Just to list a few examples: some elder people are not able to use them because of their health issues and some jobs require the use of cars to be able to carry all the needed tools.

Taking into consideration the characteristics of the good practice, it can be recommended for other cities of the partnership as well.

The good practice is supported with the following photos:

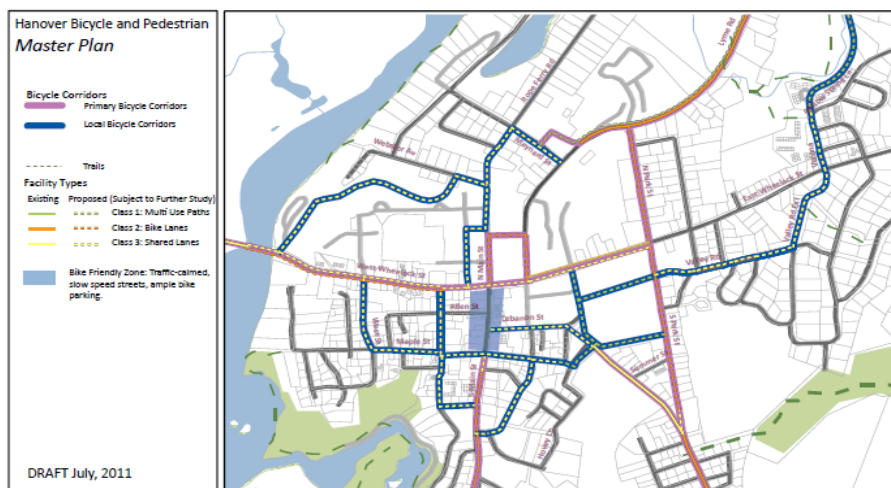


Figure 6. Bicycle Master Plan - Proposed Plan



Figure 11: Conceptual Plan for Reservoir Road

Project co-funded by European Union funds (ERDF, IPA)

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3.2.7 Chepstow Sustainable Transport Project – Chepstow, United Kingdom²²

Population: 12,418 (2016)

Challenge: The project aimed to encourage a modal shift to more sustainable forms of transport in an innovative way, embracing bottom-up, public participation and a holistic approach to planning and delivery.

Solution: Various structural/capital schemes were envisaged in Chepstow over the three years of the project implementation: a Walking Bus, a Green Travel Plan, a local business seminar, etc.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input checked="" type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The project aimed to encourage a modal shift to more sustainable forms of transport in an innovative way, embracing bottom-up, public participation and a holistic approach to planning and delivery. The objectives of the project were the following:

- 1 To identify the major processes and methodologies in implementing large scale projects that change people/employer’s attitudes to adopting a more sustainable approach to transport, recognising that most local authorities have limited funds for public participation.
- 2 To produce an integrated green transport plan for Chepstow, based on public participation and cooperation between employers, public transport and service providers, schools and statutory authorities, and to assess the application of this approach.
- 3 To test methods for the monitoring of pollution, health and congestion in the town, compatible with the County Council's Draft Local Agenda 21 document.
- 4 To prepare best practice advice to other local authorities and organisations based on the results of the project.

²² Sources:

<https://trimis.ec.europa.eu/project/chepstow-sustainable-transport-project#tab-outline>

http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=912&docType=pdf

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

- 5 To identify cultural, legislative or technical measures that would improve the implementation of the project's objectives.

Various structural/capital schemes were envisaged in Chepstow over the three years of the project implementation:

- A Walking Bus which encourages parents to let their children walk to school, accompanied by volunteer parents.
- A Green Travel Plan was completed and distributed in February 2001. The project completed 17 pedestrian areas, improved pedestrian crossing points and accessibility in the town centre and 20 bus stops with timetable designs and information, raised and tactile pavement.
- A local business seminar for 60 delegates from SME's was held in order to influence local businesses and make them think about how they can contribute to sustainable transport development. The seminar was followed-up by a business travel grant scheme for companies willing to start green transport initiatives.
- Further initiatives for which there are no measurable impacts at this stage include travel information points, the Hopper Bus Service (a free shuttle service between tourist attractions and the town centre) and cycle stands in 10 locations.

All participants of transport felt the benefits of this GP. Pedestrians (all age groups) benefited from an improved pedestrian infrastructure. Schoolchildren benefited from the Walking Bus initiative by using a healthier mobility mode with improved safety. Moreover, drivers (parents, usually taking their children to school) and all pedestrians benefited from the Walking Bus initiative due to school areas being less congested by cars leaving/collecting the students. All benefited from the achieved savings of air polluting emissions. Public transport users benefited from 20 bus stops with improved timetable designs and information, raised and tactile pavement, while cyclists benefited from cycle stands in 10 locations. However, the city originally set-up three Walking Bus schemes and only one is running permanently. This limited success points to difficulties encountered in changing behaviour and relying on voluntary effort.

This GP is recommended for implementation in other smaller partner cities as the concept is mainly suitable for them. The city of Varaždin is mentioned by name as a perfect city for this good practice.

3.2.8 Smart Mobility Action Programme 2016-2018 – City of Amsterdam, the Netherlands²³

Population: 855,896 (2018)

Challenge: While Amsterdam is a very large city, surprisingly it is also a very walkable one. This good practice tries to make the accessibility of Amsterdam even smarter and more future-proof.

Solution: The Smart Mobility Action Programme intends to get insights in (technological) developments and innovations in the field of mobility and its impact on the city; anticipate technological innovations and use these to reach its goals; stimulate and accelerate innovation in the city; and strengthen cooperation with knowledge institutions and market parties.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|---------------------------------------------------------|--------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input checked="" type="checkbox"/> | | |

While Amsterdam is a very large city, surprisingly it is also a very walkable one. The Smart Mobility Action Programme aims to improve the safety, accessibility, quality of life and attractiveness of Amsterdam. More specifically, the programme intends to get insights in (technological) developments and innovations in the field of mobility and its impact on the city; anticipate technological innovations and use these to reach its goals; stimulate and accelerate innovation in the city; and strengthen cooperation with knowledge institutions and market parties. This good practice will make the accessibility of Amsterdam smarter and more future-proof. The Smart Mobility programme is developed in cooperation with the Region of Amsterdam, Amsterdam knowledge institutions, the Amsterdam Economic Board, the Amsterdam Smart City, GVB, THINK, private partners in projects and various organizational departments within the municipality. Moreover, the municipality is actively looking for new collaborations with public and private partners.

This good practice has created benefits to both the city of Amsterdam and its residents. The people in the city prefer to move around by bicycle and foot. The number of cars in the city is growing, but ownership is in decline, while car sharing is increasing sharply – by 376% since 2008! – although only 1% of cars are actually shared. The Smart Mobility programme also resulted in better crowd

²³ Source: <https://amsterdamsmartcity.com/projects/actieprogramma-smart-mobility-2016-2018>

management: during 2015, a test was carried out using various techniques (like cameras, social media, GPS, WIFI and Bluetooth) to get a picture of pedestrian flows in real-time, predict congestion and manage slow-moving traffic. As a follow-up to this, a plan of action was devised for building a crowd management monitoring system that can be used when needed, both during events and in day-to-day situations.

The good practice is supported with the following photo:



3.2.9 Footpath Network Planning, Handbook – Zürich, Bern, Switzerland²⁴

Population: 409,120 (2017)

Challenge: This handbook provides the hitherto missing information for network planning in the field of walking.

Solution: The handbook examines key characteristics of a municipality, its traffic situation, in particular the conditions for pedestrian traffic. It also describes the structure and function of network elements: street design, route (sidewalk, ramp, street with mixed traffic), space (square, pedestrian zone, tempo-30-zone), crossing and connection (bus stops).

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

The handbook describes the criteria for good walking routes for all user groups. A good walking route needs to be attractive, safe, continuous, dense and barrier-free. The subject of the handbook is the structure and process of pedestrian route network planning – analysis of the existing network, identification of network gaps and bottlenecks, closing the network gaps, further development of the network, legal security including participation and implementation. The analysis examines key characteristics of a municipality, its traffic situation, in particular the conditions for pedestrian traffic. The handbook also describes the structure and function of network elements: street design, route (sidewalk, ramp, street with mixed traffic), space (square, pedestrian zone, tempo-30-zone), crossing and connection (bus stops).

This handbook provides the hitherto missing information for network planning in the field of walking. The benefits of the principles described in the handbook could be used by authorities and administrations, mobility and land use planners, architects, urban planners and landscape designers, transport operating companies in public transit, professional associations, interest groups, citizens' initiatives and policy makers. Moreover, for planning and project construction, operation and design ideas can help by techniques that are not represented in the standards yet. One possible disadvantage of this handbook may be the difficult transferability of some infrastructural adjustments

²⁴ Source: <https://fussverkehr.ch/publikation/>

due to the different national regulations and standards (with regard to the fact that Switzerland is a non-EU country).

To realize this good project, we need to consider the following aspects:

- The implementation of the basic rules of this handbook is ensured through legal provision of planning the pedestrian routes in Switzerland. These rules, principles and recommendations are used in regional and local authority-bound plans (land use plans).
- It is necessary to distinguish between the renovation/adaption of an existing facility or a new structure. In case of existing facilities, a bottleneck assessment should be realized. After adding the bottlenecks to lists or a database, they can be described and mapped. The following measures can be used to remove the bottlenecks: construction work, design improvements, traffic rule changes, traffic signals, speed reduction, eliminating obstacles, marking and signposting, information, promotion and public relations.
- In case of newly built footpaths (closing the network gaps), separate planning and construction projects are usually necessary. The following elements apply as new network components: independent footpaths and sidewalks, pedestrian and residential zones, crossings. In addition, in urban or tourist areas, where the destinations can accumulate, the introduction of a specific signposting is necessary to make walking easier. Direction and distance information enable an adequate choice of transport mode and make walking more calculable.

Due to the fact that this handbook is primarily focusing on route network planning, its outlined principles could be mainly used within WP3. In the field of pilot activities under WP5, it is recommended to use less costly measures of a short-term nature.

The good practice is supported with the following photo:



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3.2.10 National Guideline for walking strategies in German municipalities – Germany²⁵

Population: not relevant

Challenge: Within the framework of the project, a guideline is being developed to strategically promote pedestrian traffic in German municipalities – its creation responded to the need for one.

Solution: The guidebook (brochure) aims to serve as a tool for cities and municipalities with over 20,000 inhabitants and for NGOs willing to support it, to develop strategic walkability promotion. The project also aims to raise awareness.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Within the framework of the project, a guideline is being developed to strategically promote pedestrian traffic in German municipalities. The guidebook (brochure) aims to serve as a tool for cities and municipalities with over 20,000 inhabitants and for NGOs willing to support it, to develop strategic walkability promotion. The project also aims to raise awareness, because promoting walking is a field involving many factors and contents. The guideline aims to raise awareness of its complexity and provides suggestions for the initial steps in the implementation. In addition, the realization of this project is already an important step in order to promote the topic of walkability and sustainability.

This good practice is beneficial to the city's life, as an action guideline for municipal walkability strategies can significantly promote pedestrian traffic and initiate future actions. Moreover, the walkability strategy is also important for image and consciousness. What is more, municipalities often have to fulfil many requirements, such as climate protection (limits for air and noise pollution),

²⁵ Source:

<http://www.fussverkehrsstrategie.de>

<http://www.umkehr-fuss-online-shop.de/kostenlosedownloads/category/1-fussverkehrsstrategie.html?download=105:flyer-schritte-zu-einer-fussverkehrsstrategie>

<http://www.umkehr-fuss-online-shop.de/kostenlose-downloads/category/1-fussverkehrsstrategie.html?download=320:projekt-zwischenbericht-1-4-2016-27-2-2017>

Project co-funded by European Union funds (ERDF, IPA)

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accessibility, road safety (Vision Zero, safety on the roads), health promotion, etc. For all these challenges, walking is an essential part of the solution.

There is also an added value to this project; it is the realization/integration of 3 research projects:

- “Active Mobility: More Quality of Life in Metropolitan Areas”
- “Model project sustainable urban mobility with special consideration of the distribution of the street space”
- “Experimental Housing and Urban Development (ExWoSt) – Research Field Active Mobility in Urban Neighbourhoods”

The big danger of manuals is that they only exist on paper; therefore, it is important to raise awareness of their topic at all levels. The implementation of an action guideline supports walkability; however, it also needs to be considered that it depends on political, administrative and financial support.

The approach and methods for realizing the guideline are the following:

- Researching other guidelines from abroad or promoting cycling.
- Online survey of the public and online expert survey/interviews on topics and priorities.
- Target group research (e.g. young people, senior citizens, etc.).
- Choose five model cities for the project and, in each of them, conduct a walkability check to identify the aspects of promoting walkability; and a workshop to identify local problem areas and issues; network building, thematic awareness and strategy development.
- Identification of pedestrian-related issues and topics that should be addressed in a pedestrian strategy (such as stakeholder groups).
- Technical support by an expert advisory board: 20 representatives of municipal organizations, city administrations of different sized cities, planning offices, universities, German specialist networks, national „D-A-CH“ pedestrian associations from Switzerland, Austria and Germany.
- Press and public relations as well as project documentation (project website) to raise awareness and spread knowledge.

This good practice is suitable for all municipalities with a more or less similar size. Moreover, the proportion of pedestrian traffic can be increased very rapidly with comparatively small resources, if walkability strategies are budgeted and systematically implemented. For these reasons, implementation of the good practice is recommended to other partner cities.

The good practice is supported with the following photo:

Gehen ist die Basis städtischen Lebens.
Die Vorteile des Fußverkehrs sind äußerst vielfältig. Es beginnt damit, dass Gehen Spaß macht, denn es bietet viele Möglichkeiten der Beobachtung und der direkten menschlichen Kommunikation. Aktive Mobilität verbessert die Gesundheit, erhöht die Lernfähigkeit von Kindern und hält die Menschen fit bis ins hohe Alter. Gehen verursacht erheblich weniger Verkehrsunfälle mit Verletzten und Toten als der motorisierte Verkehr. Der Fußverkehr erzeugt keine Luftschadstoffe wie Staub und Stickoxide oder Klimagas. Fußgängerinnen und Fußgänger machen in der Regel wenig Lärm, verbrauchen kaum Ressourcen und sparen Platz. Sie verbessern gleichermaßen die ökologische Bilanz und das soziale Miteinander im öffentlichen Raum. Fußverkehr ist das Bindeglied der städtischen Mobilität und fördert die Lebensqualität in den Innenstädten. Infrastrukturmaßnahmen zugunsten des Fußverkehrs und die Instandhaltung von Fußverkehrsmitteln sind im Vergleich zu den anderen Verkehrsträgern sehr kostengünstig. Die Verlagerung und eine Prioritätensetzung auf den Umweltverbund (Fuß-, Rad- und Öffentlicher Personennahverkehr) entlasten daher die öffentlichen Haushalte sehr stark. Jeder investierte Euro zahlt sich also später aus.

Fußverkehr auf die Agenda
Der Fußverkehr ist in den letzten Jahrzehnten häufig vernachlässigt worden. Als Folgen fühlen sich Menschen nicht zum Gehen motiviert oder sogar als Fußgänger gefährdet. Die Geschwindigkeitsdifferenzen zwischen den Verkehrsteilnehmern sind im Stadtverkehr zu groß und zu oft sind die Sichtbeziehungen nicht ausreichend, um eine Fahrbahn sicher überqueren zu können. Fußgängerinnen und Fußgänger gehen zwar aus eigener Kraft, sie müssen dennoch als Verkehrsteilnehmer planerisch beachtet werden. Deshalb müssen die Wahrnehmung des Fußverkehrs als eigenständige Verkehrsart und seine systematische Förderung stets Teil der kommunalen Verkehrspolitik sein. Punktuell Maßnahmen in einem Straßenzug oder auf einem innerstädtischen Platz sind oftmals sehr hilfreich und dennoch bedarf auch der Fußverkehr städtischer Ansatze, klarer Zielvorgaben, verkehrspolitischer Entscheidungen, eines eigenen Haushaltstitels und vor allem muss der Wille bestehen, Maßnahmen in einem fest gesetzten Zeitrahmen umzusetzen.

Fußverkehr muss gefördert werden!
Der planerische Rückbau von Maßnahmen, die den Fußverkehr in den Städten möglichst fördernd fördern, scheint unbegrenzt. Doch geht es stets um die „Stadt der kurzen Wege“, um Aufenthaltsqualität und Attraktivität von Straßenzügen und vor allem um Plätze. Wo direkte menschliche Kommunikation, Beobachtung und Austausch möglich sind, findet wirklich städtisches Leben statt. Plätze können so zu Zentren einer Stadt werden, an denen es möglich ist, eine Vielzahl von Erledigungen, wie Arbeitsbesuche oder Angebote der öffentlichen Verwaltung mit Einkäufen und Gastronomie zu verbinden. Der Anteil der zurückgelegten Fußwege kann durch die Verbesserung der Aufenthaltsqualität, der Verkehrssicherheit und der sozialen Sicherheit erhöht werden. Das sind die drei Kernbereiche, die eine kommunale Fußverkehrsstrategie beachten muss. Erforderlich ist darüber hinaus eine begleitende Kommunikationsstrategie, die zum Zu-Fuß-Gehen motiviert. Der Anteil des Fußverkehrs kann mit vergleichbar geringen Mitteln sehr schnell gesteigert werden, wenn Fußverkehrsstrategien mit einem Budget ausgestattet und systematisch umgesetzt werden. Das zeigen die praktischen Erfahrungen von Städten weltweit.

Mit Fußverkehr Probleme lösen
Städte stehen unter enormen Druck, ihre vielfältigen Verpflichtungen im Rahmen der ihnen zur Verfügung stehenden Haushalte zu erfüllen. Sie müssen sie die Vorgaben der Klimaschutzpolitik sowie die europäischen Grenzwerte für Luftschadstoffe und Lärm einhalten. Die Barrierefreiheit ist umzusetzen und es müssen Maßnahmen ergriffen werden, um die Verkehrsunfälle mit Todesfolge bis 2020 zu halbieren. Zudem sind die UN-Kinderrechtskonvention und die allgemeine Schulpflichtungspflicht in die Praxis umzusetzen. Für alle diese Herausforderungen ist der Fußverkehr ein wesentlicher Teil der Lösung. Schließlich werden beim Gehen keine Klimagasen und Luftschadstoffe freigesetzt sowie kaum Lärm erzeugt. Maßnahmen zur Barrierefreiheit nutzen allen und Fußverkehr verursacht weniger Unfälle. Gute Bedingungen für den Fußverkehr schaffen für unsere Kinder sichere Schulwege. Die Förderung des Fußverkehrs hilft also den Städten ihre Verpflichtungen kostengünstig zu erfüllen.





Gehweg als erweiterter „Lebensraum“ (Weimarer Straße, Berlin)





Platz für Menschen (Bahnhofsvorplatz, Rotterdam)

3.2.11 Transformation of the Cheonggyecheon river area – Seoul, Republic of Korea²⁶

Population: 10,124,579 (2017)

Challenge: The river was covered by an elevated highway for 30 years, which was constructed in the 1970s to handle increasing motorized traffic in the city centre.

Solution: By the removal of the street, the city transformed and developed the 10-kilometre-long area into a park-like, recreational space for the public. Beside the impact on urban traffic, the project enabled a new recreation area as well in the centre of the densely populated mega city Seoul.

Specific walkability issues:

- | | | | |
|------------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input checked="" type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The transformation of the Cheonggyecheon is a river revitalisation project in the (South) Korean capital, Seoul, with impacts on urban mobility and particularly on walkability conditions. The river was covered by an elevated highway for 30 years, which was constructed in the 1970s to handle increasing motorized traffic in the city centre. By the removal of the street, the city transformed and developed the 10-kilometre-long area into a park-like, recreational space for the public. Beside the impact on urban traffic, the project enabled a new recreation area as well in the centre of the densely populated mega city Seoul. Despite the high costs and sceptical voices at the beginning of the project, it became a very popular walkable area for locals and is also an attraction for tourists. The project was started in 2003 and the revitalisation of the river was completed in the following 2 years. However, the river is not as natural as it supposed to be as the water has to be pumped up from the Han river. Beside the removal of the major street, there were other different actions within the scope of an urban renewal strategy which envisioned the revitalisation of the adjacent district. This included the transformation of the areas along the river and the redesign of the river banks. The city also

²⁶ Source:

<https://www.theguardian.com/cities/2016/may/25/story-cities-reclaimed-stream-heart-seoul-cheonggyecheon>

http://www.nytimes.com/2009/07/17/world/asia/17daylight.html?_r=2&pagewanted=all

<https://landscapeperformance.org/case-study-briefs/cheonggyecheon-stream-restoration>

<http://wwf.panda.org/index.cfm?204454/Seoul>

<https://creativecommons.org/licenses/by-sa/2.0/>

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

created park-like areas, which led to improvements and a better environment for pedestrians and encourages walking in the district. Opponents feared that traffic would collapse as the consequence of the highway's removal, but instead of that, other modes of transport gained passengers, especially public transport. New bus lines were introduced in order to compensate the loss of the street and to provide an alternative for the people.

This good practice brought about many beneficial results to citizens and particularly to pedestrians. As the river area creates a comfortable environment, the situation for pedestrians has improved tremendously by less noise, better air quality and enhanced pedestrian-friendly infrastructure, such as wide promenades along the river. There was an increase of biodiversity (plant species: 62 to 308; fish species: 4 to 25, bird species: 6 to 36; insect species: 15 to 192; amphibians: 4 to 8) and an improvement of micro-climate (reducing the urban heat island effect, lower temperatures in summer about 3 to 5 degrees Celsius). The project also successfully reduced air pollution and increased the number of public transport users by 4.3% and pedestrians. Finally, the city enjoys reduced numbers of vehicles by 2.3% in the city centre, increased number of businesses by 3.5% and rising property prices in the area. However, we also need to consider that high costs and massive structural interventions are necessary for the realisation of such a project. Moreover, with the rise of life quality in the district, property prices increased and this leads to the effects of gentrification.

The project shows how policy with a specific objective can effectively use the deconstruction of outdated transport infrastructures to make urban space attractive to pedestrians while improving environmental conditions and quality of life in densely populated areas. In this form, the project has not only local impacts, but can also stimulate changes in other places through its role model character and thus have an effect beyond the actual project. For these reasons, the implementation of this good practice is recommended to other partner cities as well.

The good practice is supported with the following photos:



Project co-funded by European Union funds (ERDF, IPA)

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3.2.12 Mobility Initiatives for Sustainable European Communities – MOBISEC – City of Murcia, Spain²⁷

Population: 443,243 (2017)

Challenge: The project offers an answer, a solution for the problems and challenges that are caused by transport and traffic (e.g. increased CO2 emission of road transport, accidents and congestion).

Solution: The MOBISEC project has more general objectives. Firstly, the promotion of the use of bicycle as a usual transport mode, thus decreasing traffic jams, the consumption of fossil fuels, air pollution, noise and use of land. Secondly, guaranteeing the safety of users on public roads, especially cyclists and pedestrians. Thirdly, intermodality, strategies to promote the intermodality of bicycle with other transport modes have to be launched. Last but not least, promoting citizen participation in the process of the project.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

In relation to the adopted urban and transport European policy, the MOBISEC project (Mobility Initiatives for Sustainable European Communities) started its activities in January 2012 in order to help three European cities – Murcia (Spain), Oldham (UK) and Varna (Bulgaria) – reach their specific goals for greener and environmentally friendly urban transport. The project offers an answer, a solution for the problems and challenges that are caused by transport and traffic (e.g. increased CO2 emission of road transport, accidents and congestion). The MOBISEC project has more general objectives. Firstly, the promotion of the use of bicycle as a usual transport mode, thus decreasing traffic jams, the consumption of fossil fuels, air pollution, noise and use of land. Secondly, guaranteeing the safety of users on public roads, especially cyclists and pedestrians. Thirdly, intermodality, strategies to promote the intermodality of bicycle with other transport modes have to be launched. Last but not least, promoting citizen participation in the process of the project.

There are a number of benefits that can be mentioned in connection with this good practice. At almost all of the dangerous intersections, rubber speed limiters and walking trails with horizontal

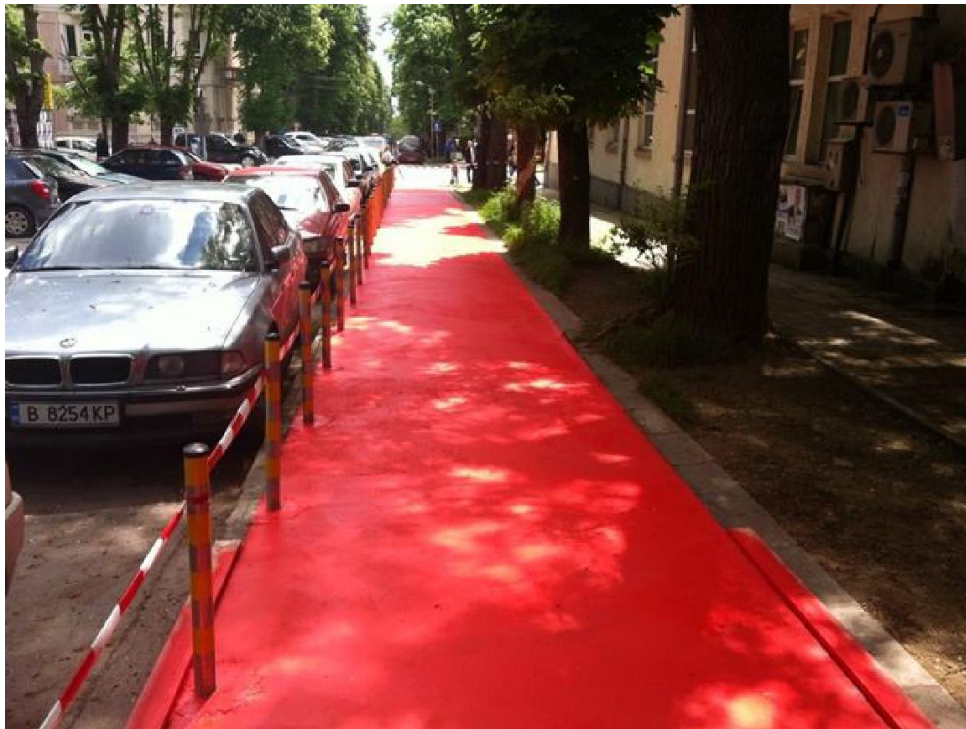
²⁷ Source: Final MOBISEC project report; Official webpage of the MOBISEC project

and vertical markings were placed. The action plan paid particular attention to intersections and access to schools and kindergartens, founded on the basis of statistical data on road traffic accidents involving pedestrians and cyclists, and due to the fact that children are the most vulnerable road users. The safety of pedestrians was increased by interventions around schools. In the framework of the MOBISEC project, two underpasses to be renovated were approved and brought into usable status by pedestrians. Moreover, bike lanes were also extended, an asphalt alley along the beach was built and the quality of bike lanes was improved. During the implementation of the project a specific traffic light for cyclists, a segregated bike lane, specific warning lights and traditional horizontal and vertical lighted signing are advisable.

As there are some similarities between the purpose of the MOBISEC and the CityWalk project – pedestrian safety, walkability planning, improving walking infrastructure, making walking more attractive and comfortable for the citizens and improving cycling facilities –, this good practice can be recommended for implementation in the frames of the CityWalk project.

The good practice is supported with the following photos:





Project co-funded by European Union funds (ERDF, IPA)

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3.2.13 Richland Urban Greenbelt Trail – City of Richland, Washington, United States of America²⁸

Population: 56,243 (2017)

Challenge: In 2003, an urban planning firm took an aerial view of Richland and realised that there were makings of a loop around the city that connected the park system and the central business district.

Solution: Over the next decade, various parts of the loop were completed using existing trails along the river. The goal was to take advantage of the already existing infrastructure to create an environment for experiencing urban walking as well as natural areas.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The Urban Greenbelt Trail was originally part of the Barney and Worth, Richland Central Business District (CBD) Urban Design Plan, prepared in 2005 with the following recommendations: “develop a bicycle/pedestrian trail system or Greenbelt around the CBD perimeter” and “acquire strategic parcels and rights-of-way as needed to complete the loop trail”. In 2003, an urban planning firm took an aerial view of Richland and realised that there were makings of a loop around the city that connected the park system and the central business district. Thanks to the vantage point, they saw the possibility to connect these pieces of the loop to improve the infrastructure for walking. Their goal was to take advantage of the already existing infrastructure to create an environment for experiencing urban walking as well as natural areas. Over the next decade, various parts of the loop were completed using existing trails along the river. Increasing walkability in the city as a goal was set in 2012 by Richland’s Parks and Recreation Commission. The work – fitting to the goal of the city – is still in progress. Funding for the Richland Urban Greenbelt Trail came from private institutions, the government and local contributions.

There are specific walks organised on the trail that promote walking. One development is the tour-like walks with a specific focus on Richland’s history from World War II. Historical pictures are placed

²⁸ Source: <http://richlandwa.swagit.com>

along the walk, comparing the present sites with their historic correspondents. Thanks to these walks, citizens become more aware and appreciative of the city's history. Some other walks are in the development phase, such as a public art walk, and one on mid-century modern homes.

The implementation of this good practice consists of several factors and steps. Constructing an easy and flat round-trip that winds through downtown, along the Columbia River and through some hidden natural areas was the first thing to do. To make the trail appealing for users, it connects diverse areas of the city: the waterfront section, urban areas/employment centres and medical facilities with adjacent workout areas. A transportation corridor for cyclists is also ensured. The city is trying to increase the awareness of the trail through walks once a month, led by the Recreation Division of the City of Richland. A diversity of choices was developed with all abilities in mind: Urban Greenbelt Trail, a Columbia Point South GeoNature Hike, to Stroller Walks for parents and grandparents, Tree Identification Hikes, Sweater Weather Walks (viewing fibre art installations on trees), Bateman Island Hikes, the Chamna Preserve and Park Birding Hikes.

As a summary, it can be reported that this initiative from the United States of America is a great role model to follow.

The good practice is supported with the following photos:





Project co-funded by European Union funds (ERDF, IPA)

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3.2.14 Continuous cycle lanes on the main radial route: Lewes Road – Brighton, United Kingdom²⁹

Population: 585,755 (2016)

Challenge: The most common issues in the traffic system were traffic congestion, inconsiderately parked vehicles and a perception that it is unsafe to cycle.

Solution: Brighton and Hove Council reallocated an entire lane of Lewes Road in each direction from general traffic into a bus and cycle lane to encourage greater use of more sustainable forms of traffic, reduce the speed and volume of traffic, reduce the severity and the number of accidents and provide additional safe crossing places for users.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input checked="" type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input checked="" type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input checked="" type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Lewes Road is an important part of Brighton’s road network as it links the city centre to major employers, universities, schools and a football stadium. It is a busy roadway bearing 25,000 vehicles per day. The most common issues in the traffic system were traffic congestion, inconsiderately parked vehicles and a perception that it is unsafe to cycle. To handle to problem, Brighton and Hove Council reallocated an entire lane of Lewes Road in each direction from general traffic into a bus and cycle lane. The main aims of the change were to encourage greater use of more sustainable forms of traffic, reduce the speed and volume of traffic, reduce the severity and the number of accidents and provide additional safe crossing places for users. ‘Floating’ bus stops have been introduced on Lewes Road. The design of the bus stops was carefully considered to ensure that it is cost effective and could be replicated at all bus stops along the route. In particular, the layout has been fully accommodated within the existing footprint of the previous bus stops, minimising the implementation’s costs and time.

The improvement of the road was successful and popular, particularly among cyclists. According to the monitoring there are some data which support the success of the good practice. Daily cyclists on

²⁹ Source: Department of Transport, United Kingdom. www.gov.uk

the Lewes Road have increased by 34%, the number of bus passengers have increased by 7%; general traffic has reduced by 17%. The journey times in general traffic has also been reduced.

The £1.4 million scheme includes innovative features to maintain continuity for cyclists, such as a dedicated cycle bypass at traffic lights, early start signals for cyclists and 'floating' bus stops where cyclists can pass behind bus stops with no interference from the stopping buses. The individual measures formed a part of an overall corridor improvement scheme providing 2-metres-wide cycle lanes and 3-metres-wide bus lanes along Lewes Road. The bus stop bypasses were provided by reallocating road or verge space. The cycle lanes and the segregated cycle track that allows outbound cyclists to bypass red traffic signals at the junction with Coombe Road were achieved by reallocating road space. A key feature is 14 'floating' bus stops which remove the conflict between buses and cyclists, seen as a significant barrier to cycling in this location. The bus shelters located on the island are the first of their kind in the UK. There was extensive dialogue with citizens in Lewes Road Area and the Brighton & Hove Bus Company who were one of the partners in the project delivery team. This team met regularly and agreed on design details through discussion.

As a conclusion of the previous description, it can be stated that this good practice is worth implementing in the framework of the CityWalk project.

The good practice is supported with the following photos:





Project co-funded by European Union funds (ERDF, IPA)

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3.2.15 Ghent – from city of cars to meeting place of people – Ghent, Belgium

Population: 455,302 (2017)

Challenge: The local authority of Ghent strongly believed that creating a car free zone would have several positive effects on various fields, such as the environment, liveability, economy and tourism, however, there were some opposition from the side of local shops and retail companies.

Solution: Thanks to an intensive information and participation campaign – starting a year before the actual launch – the borders got established and support grew. The establishment of the car free zone went hand in hand with the revaluation of the city centre and the works succeeded. It was the first car free zone in Europe of its size.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The local authority of Ghent strongly believed that creating a car free zone would have several positive effects on various fields, such as the environment, liveability, economy and tourism. The environmental and mobility organizations supported the idea from the beginning, however, there were some opposition from the side of local shops and retail companies. Thanks to an intensive information and participation campaign – starting a year before the actual launch – the borders got established and support grew. The establishment of the car free zone went hand in hand with the revaluation of the city centre and the works succeeded. It was the first car free zone in Europe of its size. The reorganization had a positive effect on the inhabitants and tourists, the downtown area became safer and the squares and riversides turned into popular meeting points. The new system is supported by smart tools: there is a digital parking guide for cars and there are apps to stimulate slow transport. All this leads to an agreeable, safe and tranquil city without cars. Ghent has a pleasant character now, there are shopping opportunities and it is a liveable place.

In terms of the benefits of this good practice, it can be stated that the air quality improved (the amount of black carbon and ultra-fine particles is less, proven by measures), there is a CO2 reduction and less noise. Moreover, the number of pedestrians and cyclists in the car free zone and the underground parking in the city centre has increased. Additionally, the number of restaurants and bars in the city centre is higher, more people shop and consume. Without doubts, there are some disadvantages of this good practice. The success depends on marketing and promotional activities that have certain costs. Furthermore, the political will and support is also decisive.

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

When implementing this good practice emphasis should be put on different aspects: social, economic, ecological, safety, health and comfort. The public space should be agreeable to meet and stay at. The safety of pedestrians and cyclists needs to be taken into consideration. To facilitate the comfort of residents, repair points for bikes, safe storage, bike hiring opportunities and route planners should be ensured.

Taking everything into account, it can be claimed that if there is political support and PR experts, the good practice can be implemented successfully. It is important that the public advocacy needs to be in line with the needs of stakeholders. Educational programs can also contribute to the achievement.

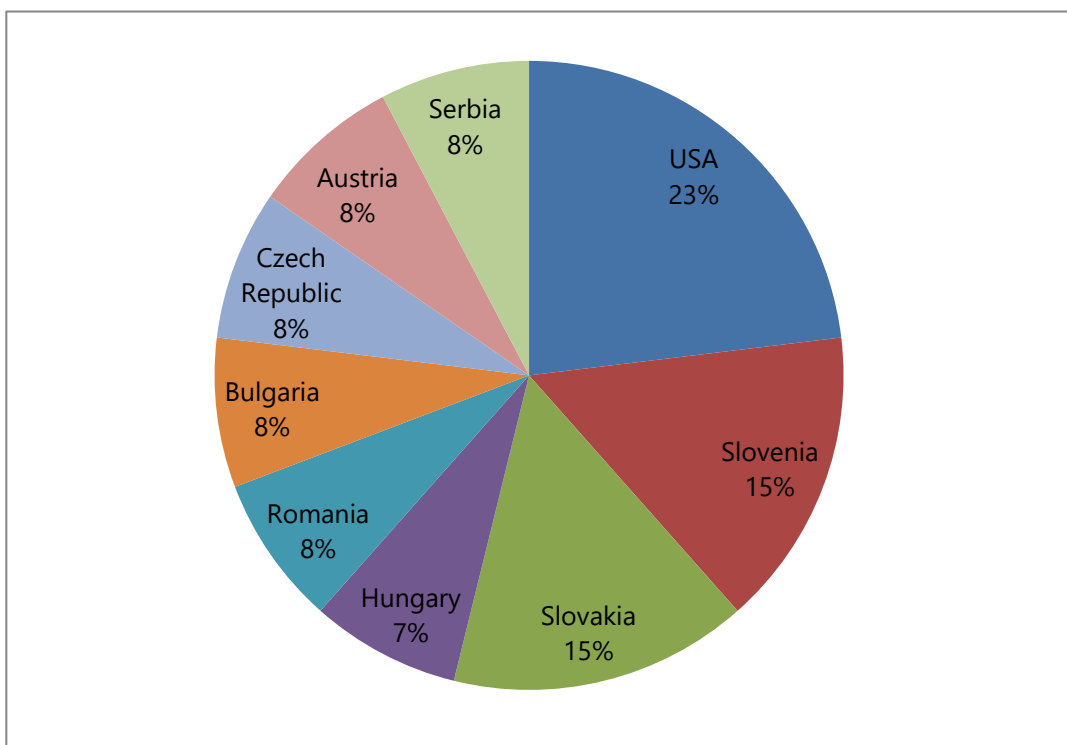
The good practice is supported with the following photo:



4 Individual walkability actions

In the third main chapter of the catalogue the individual walkability interventions are presented, that is, the good practices which are independent initiatives to promote walkability. These individual walkability actions are divided into two groups taking into account the characteristics of the countries of origin: countries of the partnership and countries outside of the partnership. There are 14 individual walkability action good practices from 9 different countries. As it can be seen below, the majority of the individual walkability actions presented are from the USA, Slovenia and Slovakia. However, there are individual walkability action GPs from Romania, Bulgaria, Austria and so on.

2. Figure: Countries of the individual walkability actions



Source: made by the author

4.1 Individual walkability action good practices from the countries of the partnership

In Table 3, all the individual walkability actions from the partner countries are stated; we can see from which country and city they originate from and which project partner provided them. As it can be seen in the table, most of the actions are campaigns promoting walkability and sustainable modes of transport. The specific walkability issues present in the practices are shown, too. From the 10 good practices presented in this subchapter, the majority is dealing with participative planning, street design and awareness raising. Among others, we can find practices for traffic safety and cycling as well.

3. Table: Individual walkability actions from the countries of the partnership

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Dead-end street with passage for pedestrians and cyclers	Ljubljana	Slovenia	PP2	regulation, signage
Bike train and pedibus	Ljubljana	Slovenia	PP2	participative planning, awareness raising
Pedestrian flags	Gödöllő	Hungary	PP3	traffic safety, participative planning
Reconstruction of the Ludovít Štúr Park	Žilina	Slovakia	PP4	street design
Urban Interventions — Ideas for a Better City	Bratislava	Slovakia	PP4	participative planning
Oradea Fall Festival March	Oradea	Romania	PP6	awareness raising
„Bike 2 Work“	several cities	Bulgaria	PP7	awareness raising, cycling
On Green! Safe Routes to School	Liberec	Czech Republic	PP8	traffic safety, awareness raising, participative planning
Walking is enjoyment	several cities	Austria	PP9	awareness raising, traffic safety
Pedestrian zone, Zemun	Belgrade	Serbia	IPA PP2	street design

Source: made by the author

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4.1.1 Dead-end street with passage for pedestrians and cyclers – Ljubljana, Slovenia³⁰

Population: 288,919 (2017)

Challenge: There were only a few (dead-end) pedestrian streets in the city and some of them were not even marked with a traffic sign, so the users of the street didn't know about them.

Solution: A very simple transport measure which disconnects motorized transport and allows cycling and walking, promoted by a traffic sign informing the street users that it is possible to continue the way if they walk or bike.

Specific walkability issues:

parking cycling signage land use
 regulation traffic safety street design
 participative planning transport mode mix awareness raising
 public transport economic motivators

This good practice is a very simple transport measure which disconnects motorized transport and allows cycling and walking. It is important that a traffic sign informs the street users that it is possible to continue the way if they walk or bike. With such an action, the city promotes walking and cycling as more competitive modalities than motorized traffic. In many places, such streets already have a passage, but it is not marked with a traffic sign, so the users of the street don't know about them.

If we want to implement this good practice, we should pay attention to the followings:

1. If we plan a new street, it is very important to plan the "car closure" from the very beginning; this is also the easiest way, since there is no need to inform locals. It must be safe and designed in a way that it doesn't disturb walking and cycling.
2. If the street already exists and there was no closure for motorized traffic at the beginning, it is very important to get a consensus with the inhabitants of the street. They must give the initiative to local authorities to change the traffic regulation.
3. Another very important factor is to provide the signalization of the street at its beginning. Especially if the street is not new and there was a change of traffic regulation, the drivers must

³⁰ Source: Trajnostna mobilnost v praksi, Zbornik dobrih praks, Inštitut za politike prostora, Ljubljana, oktober 2016, page 14 (Peter Prinčič), Inštitut za politike prostora, Ljubljana, oktober 2016; <http://ipop.si/wp/wp-content/uploads/2016/10/Trajnostna-mobilnost-v-praksi.pdf>

be informed soon enough about not entering the street with a purpose of transit. Otherwise, these vehicles can cause traffic congestion and the situation easily can become dangerous.

The implementation of this good practice is highly recommended for other partner cities as it is an easy and cheap solution and local public opinion usually supports it.

The good practice is supported with the following photos:



4.1.2 Bike train and pedibus – Ljubljana, Slovenia³¹

Population: 288,919 (2017)

Challenge: Parents were liable to bring their children to school with a car. This attitude can only reinforce the idea in the minds of the younger population that using motorized traffic is preferable to walking or cycling.

Solution: A pedibus and bike train – organized forms of non-motorized daily commuting to motivate parents and their children to go to school in groups by sustainable means like by walking or bicycle.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The pedibus and bike train are organized forms of non-motorized daily commuting for children to schools – we can call it active ways to school. The aim is to motivate parents and their children to go to school by sustainable means like by walking or bicycle. Pupils go to school daily in a form of organized groups. The walking group is called pedibus and the cycling group is called bike train. Each school day, the group takes the same route; it stops at the same points at the same time (stations) where other pupils can join the group. Each group, depending on the number of pupils, has one or more adults with them who leads the way.

The bike train and pedibus are activities which can provide that pupils spend more time with their friends and also their parents and the parents of their friends. Children are also more physically active, and this practice enables them to develop a spatial orientation of their neighbourhood (a car drive doesn't) and a responsible attitude toward traffic safety. Not to mention that if a young person will get positive experiences about walking and cycling, there is a potential that they will practice it also in their later years. Moreover, thanks to the pedibus and bike train, there is less motorized transport in front of schools which increases traffic safety and the air quality and decreases noise pollution.

³¹ Source: Trajnostna mobilnost v praksi, Zbornik dobrih praks, Inštitut za politike prostora, Ljubljana, oktober 2016, page 22 (Peter Prinčič, Marko Peterlin), Inštitut za politike prostora, Ljubljana, oktober 2016; URL: <http://ipop.si/wp/wp-content/uploads/2016/10/Trajnostna-mobilnost-v-praksi.pdf>; <http://ilsudconsalvini.info/wpcontent/uploads/2017/03/pedibus.jpg>

To implement this good practice, you need to follow these steps:

1. Get in contact with schools that might be interested in the project, then prepare a list of these schools and start the process of informing the parents, local authorities, policy and other possible stakeholders.
2. Determine the date of action, prepare the routes, determine the roles of stakeholders who are involved in the activity; if it is possible, involve the teachers and other school staff, too.
3. Prepare a survey of walkability/mobility habits of children about their way to school and home. The purpose of this is to follow these habits as close as possible in order to make the pedibus and bike train practices sustainable.
4. Implement the activity.
5. Carry out a follow-up survey among children and stakeholders to evaluate the results of the action. Analyse these results to have an understanding on how to continue the practice in the following years (what is the impression, what was good, what could be better...).

This good practice is recommended for implementation among other partner cities. If a local community really wants to improve sustainable mobility (SM), this is a very important activity. Since it involves many different target groups, this good practice can be a very efficient way to achieve much more public awareness about the importance of SM. However, the routes must be organized safely. If safety is not guaranteed, parents will not allow their children to join.

The good practice is supported with the following photos:





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4.1.3 Pedestrian flags – Gödöllő, Hungary³²

Population: 32,408 (2017)

Challenge: Despite regulations, nearly eight hundred people are hit by a car on pedestrian crossings nationwide in every year.

Solution: The introduction of pedestrian flags – at one end of the crosswalk you take a flag with a reflective strip on it, cross the road while waving it, then put it down at the other end which makes drivers more aware of the pedestrians, especially at night.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Despite regulations, nearly eight hundred people are hit by a car on pedestrian crossings nationwide in every year. At the end of last year, there was a fatal collision on a pedestrian crossing in Gödöllő, which sparked a lively debate on Facebook among the locals about who should be blamed for the accident. One of the commentators noted that in order to prevent such tragedies, the introduction of pedestrian flags might be a good idea, which is already a known method in other countries: at one end of the crosswalk you take a flag with a reflective strip on it, cross the road while waving it, then put it down at the other end. This makes drivers more aware of the pedestrians, and – because of the reflective strip – it is especially useful at night. He bought the materials from 125 euros and asked the mother of one of his friends to sew the flags while he made the storage boxes. It was not an expensive, carefully planned project with the government’s blessing, but a tactical urbanist, guerrilla movement. The situation has clearly improved in Gödöllő due to the initiative and several cities implemented the method since then.

One obvious benefit of the GP is that it helps preventing accidents, therefore, pedestrians feel safer when walking because drivers notice them easier. But as a bottom-up initiative, it also offers other perspectives to the issue of walkability: large-scale changes can be difficult to launch in a city for several reasons (financial, administrative, etc.) so demonstration projects like this are valuable tools to test workable solutions and achieve long-term changes with a low cost short-term action. It is a

³² Source: Index (2018): Gödöllőn kézműves zászló az új közlekedési lámpa. In <https://index.hu/video/2018/01/12/zebra-életveszelyes-godollo/>, 07.02.2018.

disadvantage that, depending on the area, the number of flags can fluctuate from time to time, mostly because of children and young people: in Gödöllő, 30 flags have been stolen in one month.

The way of implementing this GP was the following:

- First, the citizen had to gather information about the relevant laws and regulations that could support or impede the project.
- It was important to identify the possible locations (e.g. roads without pedestrian crossings or traffic lights) beforehand to calculate the necessary materials and costs. The cost of a box was about 1,500 HUF (4-5 EUR) and a flag was approximately half of that (all in all, 20 EUR per crosswalk). Drawing from experience, four flags are enough with 1-1 box on each side of the road. The box was made from a PVC pipe cut to size and with two holes on the bottom for rainwater drainage. It had to be fastened to the road columns in a non-destructive and easily undoable manner. The fabric and reflective tape of the flag were available in work safety stores.
- It is important to mention that follow-up is still needed to determine short-term advantages and possible modifications.

Since this approach is low cost, requires few materials and a moderate amount of planning, it is easily adaptable for every project partner and, therefore, its implementation is recommended.

The good practice is supported with the following photos:





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4.1.4 Reconstruction of the Ľudovít Štúr Park – Žilina, Slovakia³³

Population: 81,041 (2016)

Challenge: The three-hectare Ľudovít Štúr Park – despite its obvious goal of attracting people – was not suitable for every age group and had several detrimental factors (noise, bad lighting, etc.) to pedestrian traffic.

Solution: Thanks to its reconstruction, the possibilities of active relaxation will be extended for all age groups of the citizens – they replaced all the reinforced surfaces, electrical and water connections, built a noise barrier gabion wall, refurbished public lighting and added wi-fi and modern furniture.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The three-hectare Ľudovít Štúr Park, founded in 1941, is a favourable place for relaxation. Thanks to the reconstruction, the possibilities of active relaxation will be extended for all age groups of the citizens and also to the visitors of the town. The city decided to renew the park between 2016 and 2018 and they replaced all the reinforced surfaces, electrical and water connections. Moreover, a noise barrier gabion wall was built between the park and the main road and attractive footpaths were also created for pedestrians. At the same time, public lighting was refurbished and wi-fi and modern furniture has been added. They built picnic lawns where people can sit in comfort. A cultural space will also be built which will serve as a cultural node.

There are many advantages of this good practice from different perspectives: there is a lot of greenery and there is silence. The park is a safe place where children can play, youth can sport, or seniors can relax. Certain disadvantages of this solution are also present. The park is situated close to the city centre, so it is necessary to go through the busy streets. This may not be easy for everyone. Just to give a few examples: some older people and parents with several young children could have a problem with this.

³³ Source: <http://www.nadaciakia.sk/en/>; <https://www.youtube.com/watch?v=dKaM7Q1gBgE>; <https://www.zilinsky-kraj.sk/planovana-rekonstrukcia-parku-ludovita-stura-ziline/>

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The implementation of this GP followed these four steps:

1. First, a survey of the views and interests of the citizens is needed. This way we can get to know their requirements.
2. The next step may be to set up an architectural competition when it comes to improving the look of the city centre, considering the needs of the citizens, the city budget, regulations, city planning, sustainability issues, etc.
3. Modern communication and awareness-raising tools are needed nowadays. Therefore, it is also necessary to use electronic instruments (wi-fi) in public spaces. Useful applications, attractive advertising and modern awareness-raising can contribute to a greater use of space.
4. Regarding the arrangement of the city centre, public spaces must be attractive for the inhabitants to choose to go there. It is also recommended to create modern equipment for sports and culture in the park.

Considering the characteristics of this good practice, it can be recommended for other partnership cities. By looking at the previous sections, we can see that the benefits are more pronounced than the disadvantages.

The good practice is supported with the following photos:





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4.1.5 Urban Interventions — Ideas for a Better City – Bratislava, Slovakia³⁴

Population: 425,923 (2016)

Challenge: The project identified certain locations and situations in the city that do not work as they should or fail to provide the inhabitants with what they should. Often, these are places that everyone seems to give up on and nobody sees as a possible source of profit.

Solution: Urban Interventions revealed the potential of locations that we pass by every day and often fail to even notice but also proposed real solutions – even small changes can generate large effects sometimes.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

The main idea of the Urban Interventions project was to identify certain spots, locations and situations in the city that do not work as they should or fail to provide the inhabitants with what they should. Often, these are places that everyone seems to give up on and nobody sees as a possible source of profit. This project showed us what does not work despite the fact that there are solutions that could make them work. Urban Interventions revealed the potential of locations that we pass by every day and often fail to even notice. However, we do not want to stop at identifying these places and spaces; we want to propose real solutions. We believe that in an urban context, even small changes can generate large effects sometimes. The question we get asked most often in Urban Interventions is: how many interventions became real, implemented? Naturally, most people are interested in this result; they wonder if the interventions give them a more beautiful street to walk on, if there are more trees in the city, if they can find a bench where there were no benches earlier, or if there is a new bike path they can ride on. They also wonder if it is possible to move the city forward, and if it is possible to do that from the bottom up. They want to make sure that the effort

³⁴ Source:

<http://www.zasahy.sk/>

<http://mestskezasahy.sk/95/projects/>

http://mestskezasahy.sk/95/portfolio_item/green-old-bridge/

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is not in vain and that we are trying to change something and not giving up – not only for our own sake but for theirs as well.

This project is a place where numerous interests can meet: city officials but also inhabitants, architects, artists, likeable, clever people and top experts. The project should not generate profits and/or bombastic promises; it should try to change something. Also, it is a way of showing city officials what the next steps should be when forming public space. The originally local action changed into a project adopted in and transferred to 15 other towns in Slovakia and the Czech Republic.

The implementation of this good practice is recommended among other partners as its characteristics make it possible to adapt it to any other cities.

The good practice is supported with the following photos:



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4.1.6 Oradea Fall Festival March – Oradea, Romania³⁵

Population: 196,367 (2011)

Challenge: Every year, during autumn, the residents of Oradea city assist with great excitement in the torch retreat of the garrison from Oradea Garrison. At first, the march was regarded as a solemn military practice and the people only watched what happened.

Solution: After the mayor and other officials joined the march, citizens became more motivated to get involved, and the event turned into one of social impact and motivation.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Every year, during autumn, the residents of Oradea city assist with great excitement in the torch retreat of the garrison from Oradea Garrison. This festive moment is part of the military ceremony regulations and represents an honour to the crowd. Usually, the event marks the end of the Autumn Festival. In the past 10 years, this event has become a participative one: the mayor, vice-mayor and other officials joined the march and, along with them, many of the citizens. Therefore, now, to mark the closing of the annual festival, people gather and walk together behind the official military group for approximately 2.5 kilometres.

The process of how this action became a festive event is described in the following points:

- At first, the march was regarded as a solemn military practice and the people only watched what happened.
- After the mayor and other officials joined the march, citizens became more motivated to get involved, and the event turned into one of social impact and motivation.

³⁵ Source:

<http://bihorstiri.ro/torte-de-final-de-toamna-oradeana-video/> <http://www.ebihoreanul.ro/stiri/ultima-or-31-13-20-3/toamna-oradeana-s-a-inceiat-cu-retragerea-cu-torte-si-cu-un-somptuos-foc-de-artificii-123433.html>

<http://bihorstiri.ro/sefii-primariei-au-condus-retragerea-cu-torte-de-la-finalul-toamnei-oradene/>

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There have been several years when the weather was cold and rainy but that did not stop residents from participating. Having role models – like the mayor and vice-mayors – walking at this march could be a significant motivation for people to walk around the city, maintaining the habit and raising the issues of walkability.

The good practice is supported with the following photo:



4.1.7 „Bike 2 Work” – Bulgaria³⁶

Population: not relevant

Challenge: Going to work is a common reason why a lot of people use cars in a city and this tendency has several detrimental effects to their health, productivity (e.g. delays due to congestion) and the environment, among other things.

Solution: Bike-to-work campaigns target employers and employees to achieve energy-efficient change of the modal distribution of transport from motorized vehicles to bicycles. It also includes the use of a smartphone application, which reports the mileage travelled during the annual one-month campaign and offers participants motivational awards at every 20 kilometres.

Specific walkability issues:

parking <input type="checkbox"/>	cycling <input checked="" type="checkbox"/>	signage <input type="checkbox"/>	land use <input type="checkbox"/>
regulation <input type="checkbox"/>	traffic safety <input type="checkbox"/>	street design <input type="checkbox"/>	
participative planning <input type="checkbox"/>	transport mode mix <input type="checkbox"/>	awareness raising <input checked="" type="checkbox"/>	
public transport <input type="checkbox"/>	economic motivators <input type="checkbox"/>		

„Bike 2 Work” is an EU co-funded project lead by the European Cyclists' Federation. It has 12 partners from all across Europe, each bringing to the table their unique experiences in bike-to-work campaigns. Bulgaria’s main participants in the federation are the Bulgarian Cycling Association (BCA) and Велоеволюция (Veloevolution). The aim of the project, which targets employers and employees, is to achieve energy-efficient change of the modal distribution of transport from motorized vehicles to bicycles. The „Bike 2 Work” campaign includes the use of a smartphone application, which reports the mileage travelled during the annual one-month campaign and offers participants motivational awards at every 20 kilometres. At the end of the project, the data was gathered by all stakeholders and provided to local authorities to update the bicycle infrastructure and the measures to help change people's behaviour towards sustainable urban transport.

„Bike 2 Work” campaigns have great success in boosting cycling commuter numbers. They are also proven highly effective in achieving sustained behavioural change that continues long after the action. As a result, they achieve extensive energy savings and CO2 reductions. On a personal level, there are many benefits, such as improved health, fitness, weight loss and transport cost savings. Equally, companies get business advantages that include cost savings on infrastructural investments

³⁶ Source: <http://bike2work.bg/>; <http://www.bike2work-project.eu/en/>; <https://cfe-certification.eu/>

and reduced sick leave of employees. Finally, there is no doubt that a modal shift to more cycling both increases the overall quality of life in cities and frees up investments intended for road or public transport expenditure.

„B2W” campaigns, as multilevel activities, have a significant impact on cycling in Bulgaria. The „B2W” concept and statistics are practical approaches to show to national and local authorities the significance of cycling and the need for further multilevel support. Moreover, this good practice has created structures and a mesh of stakeholders who are to be included actively in the CityWalk projects as associates. For these reasons, the implementation of this good practice in other partner cities is recommended. However, the project’s application requires careful consideration. Measures, such as investing in overly complicated tools or working in isolation can lead to possible mistakes and problems. In addition, we should not be discouraged if the first campaign does not bring maximum results.

Objectives for implementing this good practice need to be specified, measurable, acceptable, and realistic. The implementation plan could also include sections of evaluative tasks to explore and analyse the situation and problems of cyclists on the local level. Furthermore, the city should have a dissemination strategy: a good plan for the distribution of results after the campaign, for instance, articles and press releases in the media.

The overall plan for the “Bike 2 Work” project is divided into three sections:

- 1 Public events and campaigns: annual, one-month-long, public events allowing the campaign to run smoothly.
- 2 Consulting bicycle-friendly employers.
- 3 Creating focus groups and seminars: they must involve relevant national key actors (e.g. national, regional, local governments and administrations, health sector, industry, employers’ and employees’ representatives). The aim is to inform the stakeholders and key actors about the planned campaign/actions and the results.

The good practice is supported with the following photos:





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4.1.8 On Green! Safe Routes to School – Liberec, Czech Republic

Population: 103,979 (2018)

Challenge: The city had several locations where children (and their parents) did not feel safe walking to school which usually motivated them to go by car.

Solution: Students – with their parents – plotted their usual route to school and marked places on a map where they did not feel safe; older students processed the thus-obtained data, which was converted into a single map that served as a basis for processing in a transport-engineering study.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input checked="" type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

The aim of the project On Green! Safe Routes to School is to increase the safety of children on their way to school, to increase the number of children going to school by bike, to improve their awareness of traffic behaviour rules, to improve mobility awareness and to stimulate interest in public affairs (education for civil society). The project was inspired by examples from the UK and draws on the experiences of the Prague Mother's Association. The principle of the project is to involve teachers, parents, pupils, staff and representatives of the local government and the police in the transport safety issues.

164 pupils received questionnaires and maps showing the areas around the school. At home, with their parents, they plotted their usual route to school and marked places where they did not feel safe; then, they filled out the questionnaires. In addition, they could propose solutions to problematic places. Under the guidance of a teacher, older students processed the thus-obtained data, which was converted into a single map that served as a basis for processing in a transport-engineering study. This should be the basis (conceptual idea) of talks with the local authority on the implementation of the proposed road measures to increase transport safety.

This good practice proved to be beneficial to both the city of Liberec and its residents. First of all, recommendations for modifications help to increase the safety of pedestrians (pupils on their way to school). Another advantage of this action is the elaboration of quality documents to the next levels of project documentation, focusing on proposed modifications of streets, sidewalks, pedestrian crossings and intersections or the creation of residential zones with a reduced speed-limit of 20 km/h where traffic is mixed. One of the potential disadvantages of the project may be the risk of the

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technical unfeasibility of certain proposals. Moreover, the effects of some proposed measures do not enhance the safety of pupils walking to school.

The way of implementing this good practice was the following:

1. First, the city decided on the size of the project and they took a census of car traffic on the defined streets.
2. In cooperation with the police, they gathered current data on the number of accidents in the relevant area.
3. Then, it was surveyed which mode of transport is used by the pupils on their way to school (55% by walking, 30% by public transit, 15% by car driven by parents). There are currently no available facilities for cyclists to access the school building. The school supports the effort to find suitable and safe routes between the school and the residences, as well as to ensure that the bicycle is secured in a locked indoor space on school grounds.
4. After the pupils filled out the questionnaires, their answers were summed up in a commentary and in a table and their suggestions were evaluated by local researchers to identify possible road safety problems. The output of the project is used for the description of traffic problems and for designing solutions to them.

As the comments and suggestions received from pupils about their ways to school can be very helpful in designing safety-enhancing measures, this good practice is recommended when creating pilot projects within WP5.

The good practice is supported with the following photo:



4.1.9 Walking is enjoyment – several communities in Lower Austria³⁷

Population: not relevant

Challenge: Traffic safety concerns derived from the lack of cooperation between street users are common problems in every country.

Solution: As part of the campaign, three main messages have been given to pedestrians and other road users: “Thank you for walking”, “Thank you for being considerate to pedestrians” and “Thank you for paying more attention to pedestrians in the future”, in the form of small bars of fair trade chocolate. On the wrapping paper there was more information on walking issues, health and safety.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input checked="" type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Aiming to raise the awareness for pedestrians and their safety and to get people to walk more, Walk-space.at – the Austrian association for pedestrians realised during the UN Global Road Safety Week – started a Walking is enjoyment campaign in cooperation with municipalities in Lower Austria, supported by the government of Lower Austria and the Road Safety Agency of Austria. As part of the campaign, three main messages have been given to pedestrians and other road users (such as car drivers, cyclists, etc.): “Thank you for walking”, “Thank you for being considerate to pedestrians” and “Thank you for paying more attention to pedestrians in the future”. The carrier medium of these three messages was a small bar of fair trade chocolate handed out at appropriate localities such as pedestrian crossings, in front of schools and similar places at central locations where an essential interaction between road users take place. On the wrapping paper there was more information on walking issues, health and safety. In order to achieve Vision Zero (to eliminate traffic fatalities and severe injuries while increasing safe, healthy and equitable mobility for all), the objectives of this awareness campaign were:

- an image campaign for walking;
- positive reinforcement of responsible and considerate behaviour toward pedestrians;

³⁷ Source: <http://www.walk-space.at/index.php/71-bewusstsein/154-walking-is-enjoyment>; <http://www.walk-space.at/index.php/bewusstsein/road-safety-week/pilotgemeinden-noe>

- increasing safety for pedestrians with a higher level of attention/concentration by other road users;
- an awareness campaign to protect the most vulnerable road users;
- and increasing the attention for walking.

The campaign was implemented through a cooperation of the government of the federal province Lower Austria and the Austrian Federation of Pedestrians, Walk-space.at and participating municipalities. It was introduced as part of the United Nations International Road Safety Week and the EU Road Safety Day, which is an advantage in order to communicate the project in public and via different media, for instance using certain logos and designs as recognition features.

The benefit of this campaign is the motivation of the people in a positive way to walk more (including health info). Another benefit of this campaign was the increased attention of all road users for the issues of pedestrians, as all people start their routes by walking. It is not only about sanctioning people if they make mistakes – the campaign highlights the travellers' perception aspect which means daily routines should become relevant in the sense of questioning their own behaviour by acting more conscious in traffic. One major challenge of this kind of measure is the aspect of effort: how people internalize the arguments of the campaign and how long they will last, so it is recommended to repeat the campaign regularly, e.g. at the beginning of every school year in different places.

All in all, this GP is recommended because it is easy to implement. Moreover, it is an efficient way to raise the awareness of road users at chosen localities.

The good practice is supported with the following photos:



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4.1.10 Pedestrian zone, Zemun – Belgrade, Serbia

Population: 1,683,962 (2016)

Challenge: Two streets and a square in the city had residents complaining about street barriers that bothered children, elderly and people with disabilities in their smooth movement.

Solution: Soft and hard landscaping was done by the usage of solid natural materials and the construction of new benches, concrete bins and bicycle standpoints. The architects also made anomalies like sewage shafts and basements levelled to the pavement.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In this good practice, two streets and a square are concerned, with floor landscaping: Gospodska Street, Magistrate Square and Lagumsa Street. Soft and hard landscaping was done by the usage of solid natural materials and the construction of new benches, concrete bins and bicycle standpoints. Gospodsky Street is the connection between the Main Street and the peaceful Zemun quay. The street itself has a duality as it links two different ages. On one side, small stone cubes along with facades depict the spirit of old Zemun as well as the framework in which a mat of stone tables of huge size is inserted and arranged in a modern style based on Central European capitals. Granite stone was used during the landscaping since it is a beautiful, durable and economically profitable material on a long run. The minimum shearing of stone tables makes stiffness that reduces the possibility of breaking, abrasion or cracking. By introducing rhythmically arranged street lights and benches, the street becomes a balanced architectural composition as a whole. The different speed of pedestrians on the street is respected and a distinct landscaping is ensured for them. In the middle of the street, the movement of pedestrians is the fastest so stone slabs of the largest format are placed there. The playful boundary between the surfaces of stone slabs and cubes additionally slows the movement of passers-by while animating the relationship between old and new.

One of the numerous advantages of this good practice is that it makes a link between the main pedestrian zone and the river bank which increased the intensity of pedestrian movement and the use of public space. The closure of traffic in this area resulted in the reduction of pollution and encouraged the use of alternative means of transport. At the beginning, negative reactions appeared by citizens who felt that modern architecture doesn't fit in the area. In addition, residents complained about street barriers that bothered children, elderly and people with disabilities in their smooth

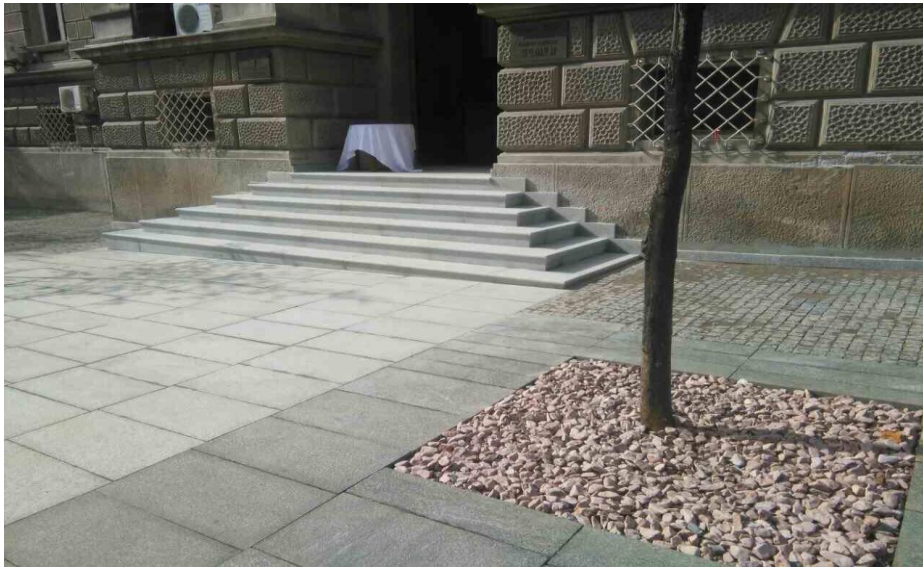
Project co-funded by European Union funds (ERDF, IPA)

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movement. The architects solved this problem by making anomalies like sewage shafts and basements levelled to the pavement.

Due to the characteristics of this good practice, it is recommended for others to implement, among other examples from Belgrade.

The good practice is supported with the following photos:



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4.2 Individual walkability action good practices from countries outside of the partnership

In Table 4, all the individual walkability actions from countries outside of the partnership are stated: we can see which country and city they originate from and which project partner provided them. As it can also be seen, these actions do not have a concrete city of origin: usually, they are present in more than one cities or even countries. The table also states the specific walkability issues present in the practices, so users can check whether it suits to their expectations. All of the four presented GPs in this subchapter are connected to awareness raising.

4. Table: Individual walkability actions from countries outside of the partnership

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Walk (Your City)	cities in the USA and worldwide	USA and other countries	LP	signage, awareness raising, participative planning
Urban Walks, Jane's Walk	cities worldwide	several countries	LP	awareness raising
Walk Score	several cities	United States, Australia, New Zealand and Canada	PP7	awareness raising, economic motivators
America Walks	several cities	USA	IPA PP1	participative planning, awareness raising, regulation

Source: made by the author

4.2.1 Walk (Your City) – North Carolina, Detroit, New Mexico and other cities in the USA and worldwide³⁸

Population: not relevant

Challenge: Studies show that street signs containing the physical distance to certain attractions are less motivating than the perception of distance in time.

Solution: The Walk (Your City) project helps communities make street signs for pedestrians and bikers that show the distance, in minutes, to everyday amenities, encouraging more active transportation choices, making communities healthier, safer and more vibrant.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|---------------------------------------------|----------------------------------------------|-------------------------------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input checked="" type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | | awareness raising <input checked="" type="checkbox"/> |
| public transport <input type="checkbox"/> | | economic motivators <input type="checkbox"/> | |

The Walk (Your City) project helps communities make street signs for pedestrians and bikers that show the distance, in minutes, to everyday amenities. These campaigns encourage more active transportation choices, making communities healthier, safer and more vibrant. Walk (Your City) grew out of a simple question: why don't people walk more? When we began to ask this question in our community, we learned that the perception of distance was often greater than the physical distance itself. Clear, simple signage, reminding the citizens that "it's not too far" to places they visit every day, is one way to break down that misperception and get more feet on the street.

The implementation of the campaign can lead to numerous benefits. First of all, it could encourage a modal shift to decrease vehicle use and it could act as a behavioural nudge for people to make healthier transportation choices. It would also support local businesses and commercial districts, moreover, it would boost social connections and "eyes on the street". It is also very important to consider that the Walk (Your City) project would also show a community's commitment to walking and biking and it could kickstart bigger conversations around walkability. Walk (Your City) helps communities increase their walkability by combining educational pedestrian signage with web-based campaign management and data collection, accessible to both citizens and the city staff. The toolkit includes all of the tips and tools needed for a successful campaign, based on what they have learned

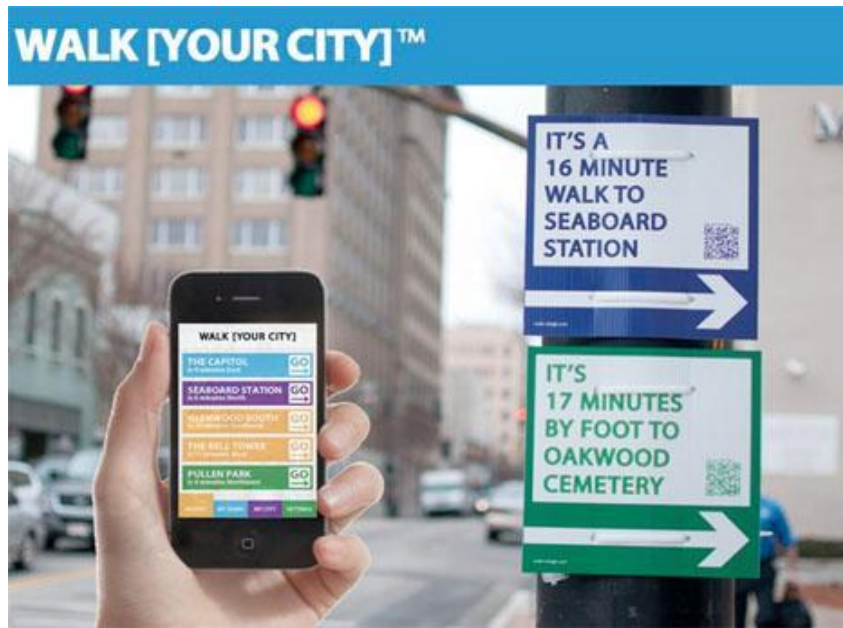
³⁸ Sources: <https://walkyourcity.org/>; <https://www.facebook.com/WalkYourCity/>

from working with communities of all sizes. With the included Campaign Builder, users plan, design, manage and order pedestrian signage which builds street-level guidance into the signs via QR codes; they can also check back in post-install for mapping, feedback and analytics. The Walk (Your City) signage has been carefully designed for legibility and ease of use. Each sign includes the Minutes by Foot component. The distance is calculated using the Google Maps "walk" tool, currently in beta. You can also see the type of destination: whether you are going to a public/open space, a commercial area, a civic landmark or an amusement area. A directional arrow is "leading the way" to your colour-based destination type. Signs also have QR codes on them: these are links to a pre-curated route on Google Maps when scanned with a smartphone.

Taking into consideration the characteristics of the good practice, it can be recommended for other cities of the partnership. First of all, this good practice doesn't mean a significant financial contribution from the cities. Not to mention that it is a very ordinary one with non-specific social and environmental needs, so it can be applied in any partner city. However, countries and cities have different legislative requirements regarding shapes, colours, designations and the placement of signs, so they will first have to comply with those requirements. It is also possible that some local decision-makers – politicians – will not be enthusiastic about the proposed solution. In Ptuj, city planners are planning to place 15 signs with similar inscriptions and these must be coordinated in accordance with the regulations of the local community and the Institute for the Protection of Cultural Heritage of Slovenia.

The good practice is supported with the following photos:





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4.2.2 Urban Walks, Jane's Walk – cities worldwide³⁹

Population: not relevant

Challenge: Lack of walking can cause a disconnect between the citizens and their neighbourhood, giving them an isolated feeling and thus weakening the community.

Solution: Jane's Walks are intended to connect the inhabitants with the neighbours and the neighbourhood, promote belonging to the area of residence, open an opportunity to discuss the problems that residents face daily and allow them to create initiatives to make the neighbourhood more attractive and pleasant to live in.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Jane's Walk is a series of neighbourhood walking tours. Named after urban activist and writer Jane Jacobs, Jane's Walks are held annually during the first weekend in May to coincide with her birthday. These walks are led by volunteers, anyone who has an interest in the neighbourhood where they live, work or socialise; the walks are offered for free. They are not always about architecture and heritage but offer a more personal take on the local culture, the social history and the planning issues faced by the residents. Since its inception in 2007, Jane's Walk has happened in cities across North America and around the world. In 2014, over 40,000 people took part in a Jane's Walk led by volunteers in 134 cities across 6 continents.

The advantages of Jane's Walk are the following: they are intended to connect the inhabitants with the neighbours and the neighbourhood and to promote belonging to the area of residence. At the same time, walks open an opportunity to discuss the problems that residents face daily and allow them to create initiatives to make the neighbourhood more attractive and pleasant to live in. The benefit of Jane's Walk is also the dissemination of awareness that cities with a vibrant everyday pace, a diverse range of programs in facilities and public space arrangements that encourage people to walk after everyday tasks, enable their inhabitants to live a higher quality of life. The good walkability of cities – the friendliness of the urban environment for hiking – is a very important contributor to

³⁹ Sources: <http://janeswalk.org/>; <http://ipop.si/urbani-sprehodi-janes-walk/>; SRC Bistra Ptuj

the psycho-physical health and safety of the inhabitants and the urban environment. At the same time, a hiking organized city is also promoted by the development of the local economy, such as local stores, services or the creative industries. The city's walkability enables the development of intense and diverse social connections, enriching the daily life of the population and strengthening social capital, which is a key source of the development power of local communities.

All can organize a Jane's Walk in a matter of days. Here's how to lead a Jane's Walk in 5 simple steps:

1. Decide on a topic, theme or neighbourhood to explore. (Think of a place or idea you'd like to explore in your city.)
2. Plan your route and discussion.
3. Consider accessibility. (Try to strike a balance between talking, movement and rest. Think about stops that have access to water fountains, restrooms, benches and shaded areas to recharge.)
4. Get the word out. (Promote the walk, create a Facebook event or share it on Twitter, talk to neighbours, store owners and friends along the route, invite journalists, add it to any community event listings in local newspapers or magazines.)
5. Lead your Walk! (Go for it, share the stories, and don't forget to have fun!)

All in all, this GP is recommended for other cities of the partnership. Jane's Walk does not require a significant financial contribution, moreover, it can be applied easily in any partner cities. Organizers only need to pay attention to one thing: in bad weather, fewer people will gather, as a walk around the city or the planned route (area) is less attractive that way.

The good practice is supported with the following photo:



4.2.3 Walk Score – United States, Australia, New Zealand and Canada⁴⁰

Population: not relevant

Challenge: Living in locations with a high volume of motorized traffic is not conducive to walking and cycling, and often causes dissatisfaction in the citizens since they usually cannot determine this factor before moving in.

Solution: The Walk Score website promotes pedestrian-oriented communities and also serves as a real estate tool for those seeking to reside in neighbourhoods with a high walkability score. It uses Google Maps to compute the distance between residential addresses and nearby destinations.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input checked="" type="checkbox"/> | | |

The Walk Score website is a tool to promote pedestrian-oriented communities in the United States, Australia, New Zealand and Canada and it was inspired by the work of Sightline Institute. The initial goal, when the website was created in 2007, was to promote awareness. It has since expanded into a real estate tool for those seeking to reside in neighbourhoods with a high walkability score. The mission is to encourage buyers to consider less car-centric neighbourhoods. Walk Score uses Google Maps to compute the distance between residential addresses and nearby destinations. The website's algorithm classifies destinations into 13 categories and awards points for each destination. The possible categories are the following: grocery store, restaurant, coffee shop, bar, movie theatre, school, park, library, bookstore, fitness, drug store, hardware store, clothing and music store. Destinations get maximum points if they are one-quarter mile or less from the residence and no points if they are more than one-mile away. Today, more than 2 million Walk Scores are requested each day by all Walk Score partners. In essence, Walk Score is a measure of the proximity of a range of typical goods, services and activities to a particular household. As a result, locations with high Walk Scores are not only more conducive to walking and cycling but they also enable their residents to drive shorter distances when they do choose to travel by car.

⁴⁰ Sources: <https://www.walkscore.com/professional/>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4845902/>

The beneficial effects of this good practice are clearly visible. Instead of determining value by acres of land, we can value our homes by the communities we live in. Walk Score is giving everyday people the resources to make informed decisions about their communities and help promote a more sustainable future for all of us. Walk Score is generally a useful indicator of walkability; however, it also has its limitations. It can be highly inaccurate in sprawling commercial areas when the available and/or input data sources are incorrect, sparse and/or highly generalized. Moreover, it has not yet been determined whether Walk Score relates to other critical components of the physical environment including street connectivity, access to public transit, residential density and/or crime. Another problematic part of this project is that it requires the use of GIS. Obtaining, cleaning, managing and analysing GIS-based data requires trained personnel and time. Additionally, since no standardized method of cataloguing GIS data or creating measures exists, data often vary across locales, limiting comparability.

For the implementation of the GP, there are several important steps to take:

1. First of all, research is needed with a survey about the number of walkable intersection of roads per square kilometre to see which areas in the city are more interconnected than others. The survey should also give insights into the walking distance to transport; the level of mixed land uses within the studied area, as the higher the mix of land uses, the more destinations can be reached by foot; the intensity of shopping opportunities in the city and the household density.
2. The research should be followed up by the preparation of an interactive map of the city or several neighbourhood blocks. The interactive map, together with a rating system, should be implemented into an online tool which will show the different ratings of city zones, according to their walkability.
3. Modern communication tools are very important in order to make any new system successful. Using mobile apps, online tools and good advertisement can contribute to putting the Walk Score into practice.

Despite the fact that it can have disadvantages, Walk Score is the only international measure of walkability and the leading provider of neighbourhood data to the real estate industry. Walk Score has recently been demonstrated as a valid and reliable tool for estimating access to nearby facilities. For these reasons, the implementation of this good practice is recommended among other project partners as well.

The good practice is supported with the following photo:

Walk Score®



Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

4.2.4 America Walks – USA⁴¹

Population: not relevant

Challenge: Despite recent efforts, America still lacks truly walkable communities and has a long way to go in mobilizing everyone to increase walkability and walking.

Solution: America Walks is a non-profit national organization with the aims of making America a great place to walk and providing a voice for walking and walkable communities with federal agencies, strategy support, training, technical assistance and being a convener of the national Every Body Walk! Collaborative.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

America Walks is a non-profit national organization that was established in 1996. It aims at making America a great place to walk and provides a voice for walking and walkable communities with federal agencies, strategy support, training, technical assistance and being a convener of the national Every Body Walk! Collaborative. The organization was founded by groups like Walk Boston, Walk Austin, etc. The initiative expanded and now it offers several services such as sharing best practices across the nation and serving as a forum where members can come together to advocate common goals. America Walks is empowering communities to create safe, accessible and enjoyable walking conditions for all. It is committed to mobilize everyone to increase walkability and walking. Walkable communities help to promote physically, mentally and economically healthy neighbourhoods with studies consistently finding benefits to increase walkability in cities. Expected results by 2030: the streets and neighbourhoods in all American communities are safe and attractive public places that encourage people of all ages, abilities, ethnicities and incomes to walk for transportation, wellness and fun. Community policies and practices promote walkable places that support health, economic vitality, environmental sustainability and social equity.

Nowadays, America Walks and the Every Body Walk! Collaborative have 700 allied organizations who are working to increase walkability in America. The organization makes significant steps towards

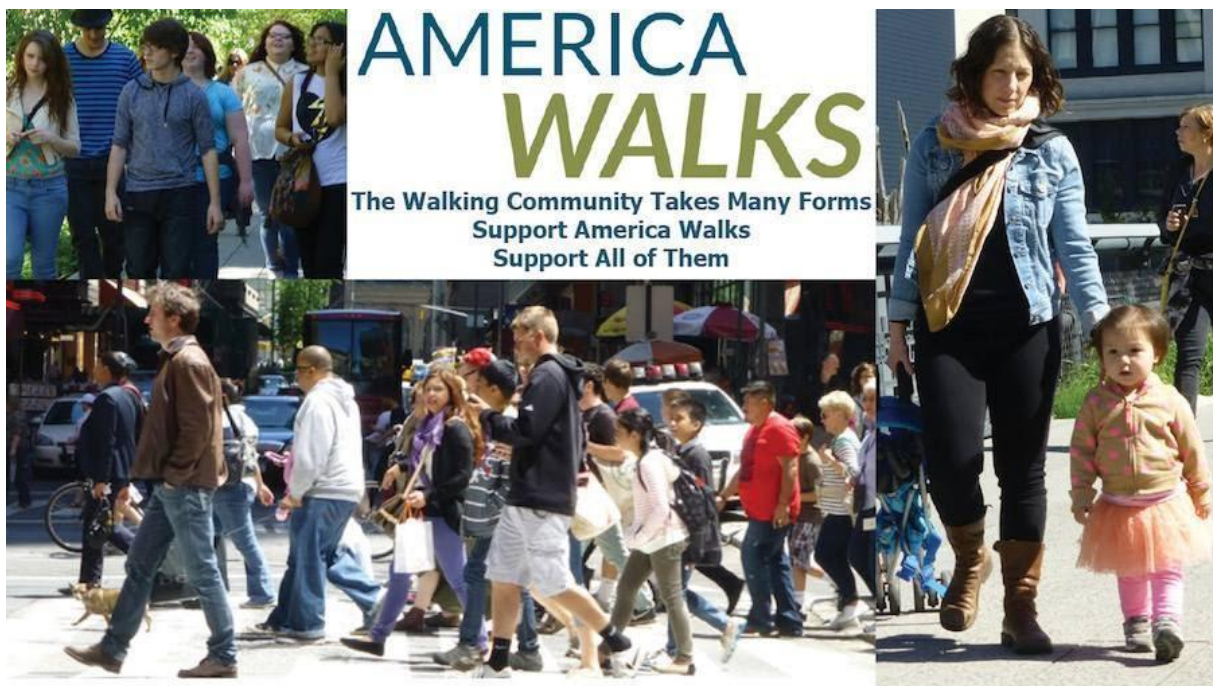
⁴¹ Source: <http://americawalks.org>

promoting safe and accessible walking conditions for every community. It developed and adopted its first federal policy platform that consisted of eight points: recognizing walking as a basic transportation mode, planning for walking, supporting safe routes to schools/transit, reconnecting communities, implementing the Americans with Disabilities Act (ADA) in the public right-of-way, slowing down urban roadways and supporting walking as a key component of public health. The “Pedestrian Advocacy Toolkit” was developed and it provides best practices and case studies on a range of valuable topics (e.g. designing pedestrian infrastructure).

During the implementation of such initiatives it is very crucial to engage and build capacity of advocates, to provide opportunities for organizations to come together and serve as a voice for growing the walking movement and making it a national priority. Moreover, organizing national walking summits and other events, creating publications, training people through interactive walking programs, organizing webinars and workshops are essential parts of the good practice. Developing relationships, partnerships to expand the movement and engage more representatives from different sectors like transit, environment, the disabled community or more is also necessary.

To sum it up briefly, this good practice is suggested to consider as a way to follow.

The good practice is supported with the following photo:



4.3 Conclusion of the good practices

From the previously presented complex walkability interventions and individual walkability actions we can draw a conclusion that there are certain characteristics that contribute to the success of a practice, thus making it a good one.

Based on the description of 47 different good practices, we can assume that the following are the success factors:

1. Positive impact on society

These initiatives facilitate a public space where events, fairs and festivals can take place, spare time can be spent and the living conditions, quality of life are improved. They give opportunity for meetings, communication that are more and more important in our impersonal and rushing days. Furthermore, from a different aspect, it can be mentioned that the increased safety is also an essential part of a good practice. Increased safety includes several aspects such as fewer accidents, children who can play outside without any fear, crosswalk safety, etc. Recreational and sports facilities, greenery are usually highly welcomed by dwellers of different ages. Additionally, in walkable areas people move more, so they become healthier. As we can see from the list below, almost every successful GP includes social benefits, no matter which country it originates from and whether it is a complex walkability intervention or an individual walkability action.

This aspect is supported by the following GPs:

- **Renovation of the city marketplace in Ptuj**
- **Residential neighbourhood JURŠOVKA**
- **Expanding the P+R system in Ljubljana**
- **'Downtown Pedestrian Streets' project**
- **Pedestrian Zone in Ljubljana City Centre**
- **Aesthetization and modernization of major pedestrian zones and areas for public recreation**
- **Step by step to more life – Promotion of walkability through neighbourhood development and meeting zone**
- **Reconstruction of Mara Taceva Str., and major overhaul on Parvi May Blvd, construction of pedestrian passageways, playgrounds, recreation areas, attractions, sports grounds, bay afforestation, bikes in the Asparuhovo area**
- **Intervention in the green area of the narrow center of the city – Reorganization of the park and construction of a fountain in the green zone along Karadjordjeva Street in Valjevo**
- **Intersection of the Mirko Obradovic Street and Sindjeliceva Street**
- **Usce Park – Improving the living conditions and attractiveness of the location**

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- **Walk-only Zones at the Arizona State University**
- **WEGO**
- **Carless district in Vauban**
- **Planning for liveable streets through new mobility and public space strategies**
- **A2 Be Safe**
- **Transformation of the Cheonggyecheon river area**
- **Mobility Initiative for Sustainable European Communities – MOBISEC**
- **Ghent – from city of cars to meeting place of people**
- **Dead-end street with passage for pedestrians and cyclists**
- **Bike train and pedibus**
- **Pedestrian flags**
- **Reconstruction of the Ľudovít Štúr Park**
- **On Green! Safe Routes to School**
- **Walking is enjoyment**
- **Pedestrian zone, Zemun**
- **Walk (Your City)**
- **Urban Walks, Jane’s Walk**
- **America Walks**

2. Detailed planning

The detailed planning of an intervention is essential to make it successful. In several good practices, the works are supported by analysis, surveys and strategic plans. It means counting and recording different factors (e.g. density of pedestrians, pedestrian flow directions, existing network gaps, mobility habits, number of accidents of the relevant area, number of walkable intersections, land use mix) in order to properly satisfy the local needs, considering the given characteristics and circumstances while identifying the main issues. More and more cities and countries develop their own Sustainable Urban Mobility Plans that can ensure guidelines for future developments. It needs to be highlighted that in the case of SUMPs the pedestrians and cyclists are first in the “traffic pyramid”. This aspect can also be found in each kind of good practice, as the list below confirms:

- **Pedestrian area in the city of Maribor**
- **‘Downtown Pedestrian Streets’ project**
- **Sharrows in Zagreb City Centre**
- **Aesthetization and modernization of major pedestrian zones and areas for public recreation**
- **Sustainable Urban Mobility Plan of Pilsen: Plán udržitelné mobility Plzně (PUMP)**
- **Step by step to more life – Promotion of walkability through neighbourhood development and meeting zone**
- **Walk-only Zones at the Arizona State University**

Project co-funded by European Union funds (ERDF, IPA)

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- **WEGO**
- **Carless district in Vauban**
- **Planning for liveable streets through new mobility and public space strategies**
- **A2 Be Safe**
- **Footpath Network Planning, Handbook**
- **National Guideline for walking strategies in German municipalities**
- **Bike train and pedibus**
- **Pedestrian flags**
- **Reconstruction of the Ľudovít Štúr Park**
- **“Bike 2 Work”**
- **On Green! Safe Routes to School**
- **Walk (Your City)**
- **Urban Walks, Jane’s Walk**
- **Walk Score**
- **America Walks**

3. Good communication, awareness raising

Finding the right mode of communication is one of the most important factors to be considered when preparing a walkability intervention. To avoid any disagreements and complaints, proper information toward locals about the plans is essential. Communication and promotion should start from the planning phase and be seen through to the very end. It is advisable to carry out awareness campaigns about the benefits of the project but also about the temporary inconveniences during the construction period. Good marketing ensures durability and operability. When choosing the promotional materials, the characteristics of the target group need to be considered.

This aspect is supported by the following GPs:

- **‘Downtown Pedestrian Streets’ project**
- **Sharrow in Zagreb City Centre**
- **Pedestrian Zone in Ljubljana City Centre**
- **Aesthetization and modernization of major pedestrian zones and areas for public recreation**
- **Walk-only Zones at the Arizona State University**
- **WEGO**
- **Carless district in Vauban**
- **A2 Be Safe**
- **Pedestrian and bicycle master plan**
- **National Guideline for walking strategies in German municipalities**
- **Richland Urban Greenbelt Trail**

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- **Ghent – from city of cars to meeting place of people**
- **Reconstruction of the Ľudovít Štúr Park**
- **“Bike 2 Work”**
- **Walking is enjoyment**
- **Urban Walks, Jane’s Walk**
- **Walk Score**
- **America Walks**

4. Involve stakeholders

Involving stakeholders during the different phases of implementation can boost acceptance from their side and they become more committed and engaged to the question. Such actions can be: carrying out personal surveys, discussions, public dialogues before the implementation; organizing workshops for residents, welcoming their ideas, comments and suggestions; holding public consultations; joint planting; school projects; etc. Among stakeholders, professionals, the public sector (national, regional, local governments), police, NGOs, businesses, the disabled community, the environmental sector and citizens can be involved.

This aspect is supported by the following GPs:

- **Residential neighbourhood JURŠOVKA**
- **Sharrow in Zagreb City Centre**
- **Step by step to more life – Promotion of walkability through neighbourhood development and meeting zone**
- **Walk-only Zones at the Arizona State University**
- **Carless district in Vauban**
- **Planning for liveable streets through new mobility and public space strategies**
- **A2 Be Safe**
- **Chepstow Sustainable Transport Project**
- **National Guideline for walking strategies in German municipalities**
- **Continuous cycle lanes on the main radial route: Lewes Road**
- **Mobility Initiative for Sustainable European Communities – MOBISEC**
- **Ghent – from city of cars to meeting place of people**
- **Oradea Fall Festival March**
- **“Bike 2 Work”**
- **On Green! Safe Routes to School**
- **Urban Walks, Jane’s Walk**
- **America Walks**

5. Manifold economic advantages

Several good practices result in economic advantages, economic growth, such as new jobs after implementation and creating a new place for selling local goods. Moreover, making a neighbourhood more attractive leads to the increase in the number of tourists, that is also beneficial for the economy. The attractive environment means a good marketing for the city, so it appeals to pedestrians and cyclists, who provide a constant source of income for restaurants, cafés, etc. Being in a walkable place, people usually do more physical activity, consequently, their sick leave is less – this is also beneficial for businesses. Not to mention that the value of houses in walkable areas is higher, as more people want to live there. Also, these neighbourhoods are more attractive for investments.

This aspect is supported by the following GPs:

- **Renovation of the city marketplace in Ptuj**
- **Residential neighbourhood JURŠOVKA**
- **'Downtown Pedestrian Streets' project**
- **Rehabilitation and modernization of Unirii Square in Oradea**
- **Rehabilitation of Vasile Alecsandri Street**
- **Aesthetization and modernization of major pedestrian zones and areas for public recreation**
- **Reconstruction of the Karadjordjeva Street**
- **WEGO**
- **Transformation of the Cheonggyecheon river area**
- **Ghent – from city of cars to meeting place of people**
- **"Bike 2 Work"**
- **Walk (Your City)**
- **Urban Walks, Jane's Walk**
- **America Walks**

6. Environmental factors

The results of the good practices often mean benefits from an environmental point of view: less noise, less air pollution, since congestion and exhaust fumes are reduced. As a result of less motorized transport use, the environmental burdens are decreased. It is interesting that this aspect does not occur in any individual walkability action GPs presented by this catalogue, although almost all of the walkability interventions include positive changes for the environment.

This aspect is supported by the following GPs:

- **Expanding the P+R system in Ljubljana**

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- **'Downtown Pedestrian Streets' project**
- **Urban cycling and walkability**
- **Rehabilitation and modernization of Unirii Square in Oradea**
- **Walk-only Zones at the Arizona State University**
- **WEGO**
- **Carless district in Vauban**
- **Chepstow Sustainable Transport Project**
- **Transformation of the Cheonggyecheon river area**
- **Mobility Initiative for Sustainable European Communities – MOBISEC**
- **Ghent – from city of cars to meeting place of people**
- **Bike train and pedibus**
- **Pedestrian zone, Zemun**

7. Suitable for everyone

Another factor that contributes to the success of a good practice is that it is suitable for different types of users like disabled people, children and elderly. In general, children and elderly are not able to drive, so almost any kind of walkability improvement can be advantageous for them. The life of disabled people can be eased by providing them the needed infrastructure e.g. tactile tape, sound signage at traffic lights, anomalies like sewage shafts and basements levelled to the pavement. Since children are the most vulnerable road users, special attention should be paid at intersections close to schools and kindergartens.

This aspect is supported by the following GPs:

- **Pedestrian area in the city of Maribor**
- **Residential neighbourhood JURŠOVKA**
- **Reconstruction of the Karadjordjeva Street**
- **Pedestrian and bicycle master plan**
- **Chepstow Sustainable Transport Project**
- **Mobility Initiative for Sustainable European Communities – MOBISEC**
- **Richland Urban Greenbelt Trail**
- **Pedestrian zone, Zemun**
- **America Walks**

8. Sustainability

Creating positive change in the urban mobility system is amazing but reaching the objective of maintaining it, thus being sustainable is another achievement. Environmentally friendly energy supply of the new system could be a favourable aspect of sustainability that can be reached by

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applying energy efficient, eco-friendly solutions. Changing people's behaviour towards sustainability continues long after the action.

This aspect is supported by the following GPs:

- **Aesthetization and modernization of major pedestrian zones and areas for public recreation**
- **Step by step to more life – Promotion of walkability through neighbourhood development and meeting zone**
- **Planning for liveable streets through new mobility and public space strategies**
- **Pedestrian and bicycle master plan**
- **Chepstow Sustainable Transport Project**
- **Bike train and pedibus**
- **“Bike 2 Work”**
- **Walk Score**
- **America Walks**

9. Up-to-date, smart solutions

As we live in the 21st century when everything is about digitalization and smart technologies, it is crucial to apply such methods in the sustainable urban mobility interventions as well. Intelligent transport systems could be more appealing and easier to use for everyone; moreover, it makes a good practice future-proof. Some examples for smart, online tools can be digital parking guides, apps to stimulate slow transport and counting the mileage travelled, QR codes on signs, available Wi-Fi in public spaces, etc.

This aspect is supported by the following GPs:

- **Sustainable Urban Mobility Plan of Pilsen: Plán udržitelné mobility Plzně (PUMP)**
- **Smart Mobility Action Programme 2016-2018**
- **Ghent – from city of cars to meeting place of people**
- **Reconstruction of the Ludovít Štúr Park**
- **“Bike 2 Work”**
- **Walk (Your City)**
- **Walk Score**

10. Collecting feedback, monitoring the change

From the beginning of the implementation, it can be reasonable to collect feedback and monitor the changes. In this way, possible errors are easier to handle, and improvements can be done by providing answers to the upcoming issues. Moreover, on-going evaluation ensures that the objectives are being met. As it turns out from the list below, neither of the complex walkability interventions from partner countries mention this factor in the advantages of the GPs.

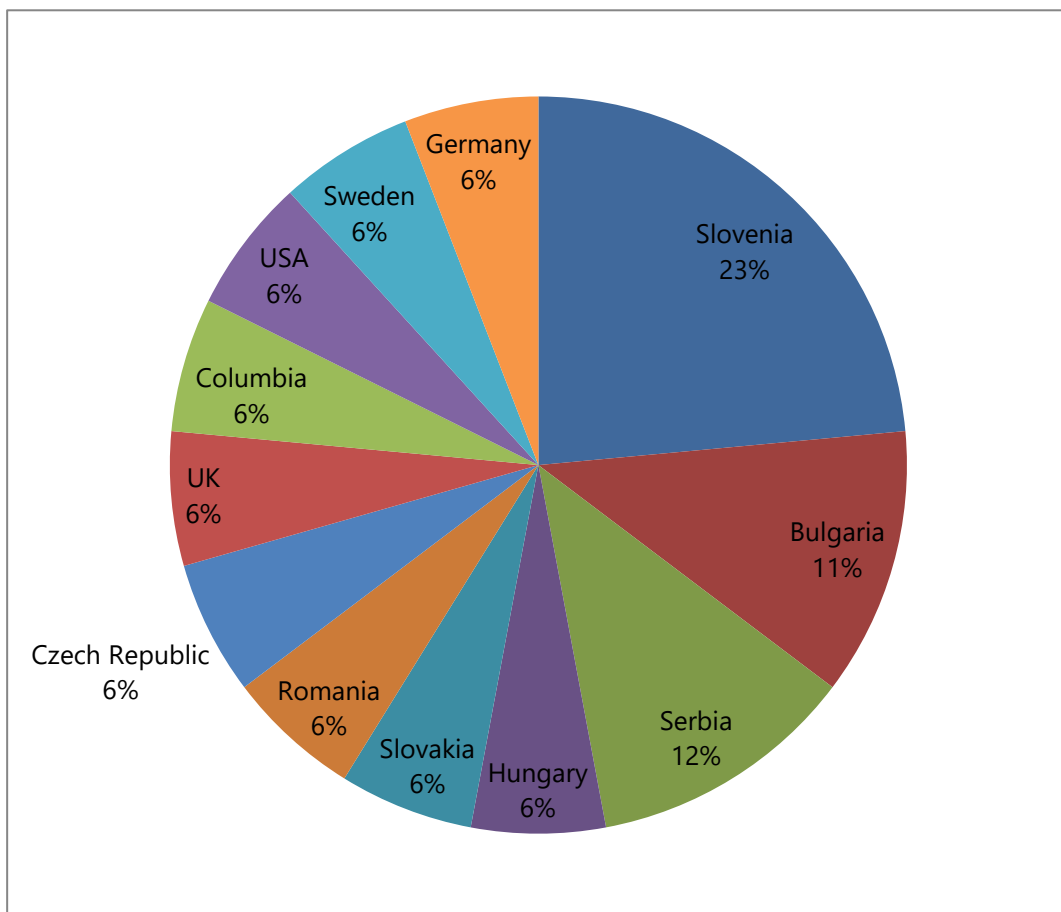
This aspect is supported by the following GPs:

- **Walk-only Zones at the Arizona State University**
- **Planning for liveable streets through new mobility and public space strategies**
- **A2 Be Safe**
- **Bike train and pedibus**
- **Walk (Your City)**

5 Bad practices

In the fourth main chapter of the catalogue, the bad practices are presented, i.e. the measures that aimed at improving walkability but at the end turned out to be unfeasible, unsuccessful, ineffective or unsustainable. The aim of collecting and presenting them is to show examples and possible errors that can occur during sustainable mobility interventions. In this way, developers and implementers can learn from others' mistakes. These bad practices are also divided into two groups taking into account the characteristics of the countries of origin: countries of the partnership and countries outside of the partnership. There are 17 bad practices presented from 12 different countries. As it can be seen below, the majority of the bad practices are from Slovenia, Bulgaria and Serbia. However, there are individual walkability action BPs from the United Kingdom, Columbia, Sweden and so on.

3. Figure: Countries of the bad practices



Source: made by the author

5.1 Bad practices from the countries of the partnership

In Table 5, all bad practices from the countries of the partnership are stated; we can see which country and city they originate from and which project partner provided them. As it can also be seen, most of them are in connection with the reconstruction of a certain city part; however, we can find mobility plans and the behaviour of pedestrians among them. The table also clarifies the specific walkability issues that are present in the practices. With regards to the walkability issues, it can be concluded that almost all of them tries to solve street design issues, but regulation, traffic safety and cycling are also often occurring categories.

5. Table: Bad practices from the countries of the partnership

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Slovenski Square	Ptuj	Slovenia	LP	regulation, street design
Koroška Road	Maribor	Slovenia	LP	street design, awareness raising
Leona Štukelj Square	Maribor	Slovenia	LP	street design
Walking zone at Dugonics Square on weekends	Szeged	Hungary	PP1	regulation, signage
Construction of Fabiani's bridge in Ljubljana	Ljubljana	Slovenia	PP2	traffic safety, cycling
National sport centre Bôrik	Žilina	Slovakia	PP4	street design, participative planning, parking, public transport
Aurel Lazar Street	Oradea	Romania	PP6	regulation, street design, parking
New bicycle lanes of Varna (2014-2015)	Varna	Bulgaria	PP7	cycling, traffic safety
Traffic calming of Americká Street in Pilsen	Pilsen	Czech Republic	PP8	regulation, street design

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
The Mobility Management Plan for the City of Varna	Varna	Bulgaria	PP10	transport mode mix
Reconstruction of the Panticeva Street: bad parking policy	Valjevo	Serbia	IPA PP1	parking, signage
Pedestrian's insufficient knowledge of traffic rules	Belgrade	Serbia	IPA PP2	traffic safety, awareness raising

Source: made by the author

5.1.1 Slovenski Square – Ptuj, Slovenia⁴²

Population: 23,117 (2017)

Challenge: Due to the separation of the pedestrians and vehicles, the place is poorly accessible and unusable for longer periods, therefore, it does not perform its basic purpose, mainly due to traffic noise and the lack of security and sufficient space for users.

Solution: In order to revitalize the area, it is essential to organize a common traffic or a pedestrian zone so that pedestrians can freely move around the square as well as the places for sitting around and shade so that they can stay for a longer time.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Slovenski Square in Ptuj is one of the central areas of the city, framed by bourgeois houses, the church bell tower and the theatre building. The funnel with a stoned paved square is dynamic and interesting. On two sides, it is surrounded by traffic areas – streets (one is partially closed and operates as a parking place). The square in front of the theatre is limited by a road with stone pillars and along the edge of the square pedestrian sidewalks are arranged. Due to the separation of the pedestrians and vehicles, the place is poorly accessible and unusable for longer periods, therefore, it does not perform its basic purpose, mainly due to traffic noise and the lack of security and sufficient space for users. The urban equipment present is placed inappropriately and hinders pedestrian movement.

In order to revitalize the area, it is essential to organize a common traffic or a pedestrian zone so that pedestrians can freely move around the square as well as the places for sitting around and shade so that they can stay for a longer time. This will give the possibility of further developments of the ground-floor buildings and increased attractiveness of the pedestrian zone and visitors to the city.

This bad practice has some advantages for residents and bars that have the opportunity to get to the driveway of a residential building or business premises and some parking spaces near the square.

⁴² Source: ZUM d.o.o.

However, due to the privileges of some, this urban space is not an effective representation of the medieval Ptuj. Its look resembles a parking lot and it is mostly empty.

The bad practice is supported with the following photos:



5.1.2 Koroška Road – Maribor, Slovenia⁴³

Population: 111,079 (2017)

Challenge: The reorganization of Koroška cesta into a common traffic area was foreseen in the SUMP. Despite the fact that the project follows the objectives of sustainable mobility, it is an example of bad practice due to an inappropriate process of implementation and the failure to communicate with both the general public and the experts.

Solution: The management of this project has shown that communication with the general public (public debates and information), the experts (workshops, exchanges of views, round tables, debates) and the stakeholders is crucial in the implementation of such measures.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Koroška cesta lies in the inner-city centre and it is mainly intended for motor transport, which passes through the area of transit. In 2010, a competition was held for the reorganization of Koroška cesta. The reorganization of Koroška cesta into a common traffic area was – as a measure – also foreseen in the SUMP. The implemented solution from the end of 2015 represents a temporary, interim arrangement, which led to numerous discussions in the general and professional public.

Despite the fact that the project follows the objectives of sustainable mobility, it is an example of bad practice due to an inappropriate process of implementation and the failure to communicate with both the general public (there were no public debates and information) and the experts (there were no workshops, exchanges of views, round tables, debates, etc.). Since the process of public inclusion was not carried out, neither the public nor the various stakeholders were presented the possible alternatives or the accompanied developments for the rearrangement of Koroška cesta. The management of this project has shown that communication with the general public, the experts and the stakeholders is crucial in the implementation of such measures.

The bad practice is supported with the following photos:

⁴³ Source: Municipality of Maribor; <https://mariborinfo.com/novica/lokalno>



Before



After

Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk



Project co-funded by European Union funds (ERDF, IPA)

The project is co-financed by the European Union (ERDF) and the Hungarian State through the Danube Transnational Programme. www.interreg-danube.eu/citywalk

5.1.3 Leona Štukelj Square – Maribor, Slovenia⁴⁴

Population: 111,079 (2017)

Challenge: The city authorities have decided to extend the pedestrian zone to the area of the street and create a square as a new public area, however, the design and content of the market does not contribute to the retention of people in this area – it is designed and planted more like an avenue and still has a transient nature.

Solution: In order to revitalize the market, the active ground floor of the peripheral buildings is essential as catering establishments, commercial and service activities there can attract people for longer and eliminate the sense of transiency.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Since 2011, Leona Štukelj Square is an open market which is the largest Slovenian market with its 9,000 square meters. The area where Leona Štukelj Square is located was a busy street in the past that represented an important transport corridor for passengers and the city’s bus transport. As a connection between the Drava embankment and the rest of the city, it was less used, since the main pedestrian connection was established by the western pedestrian zone. For a long time, this area was never interesting, mainly due to traffic noise and the lack of proper activities on the ground floors of the peripheral buildings and also the orientation of those buildings.

The city authorities have decided to extend the pedestrian zone to the area of the street and create a square as a new public area. This idea was potentially good as the city has acquired a new suitable event space. However, the design and content of the market does not contribute to the retention of people in this area. Little has been done to attract people to the square: it is designed and planted more like an avenue and still has a transient nature.

⁴⁴ Source: Municipality of Maribor; <http://kraji.eu/slovenija>

In order to revitalize the market, the active ground floor of the peripheral buildings is essential as catering establishments, commercial and service activities there can attract people for longer and eliminate the sense of transiency.

The bad practice is supported with the following photos:



5.1.4 Walking zone at Dugonics Square on weekends – Szeged, Hungary

Population: 161,137 (2017)

Challenge: In March 2013, traffic management adjusted the traffic order of the square and its surroundings to the principle of the pedestrian downtown, which means that inside the Tisza Lajos Boulevard, pedestrian and cyclist traffic is favoured. They had to inform the citizens about these changes.

Solution: The warning traffic signs about the weekend traffic order are placed too high, out of the drivers' range of vision. The signs are also in a text format, written only in Hungarian, and there is not enough time to read them in a busy roundabout. Moreover, drivers need to take quite long bypasses to get to the other end of the closed-down section.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|------------------------------------------------|---------------------------------------------|----------------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input checked="" type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In March 2013, parallel with the renovation of the Dugonics Square and its surroundings in Szeged, the traffic order of the territory also changed. Traffic management adjusted the traffic order of the square and its surroundings to the principle of the pedestrian downtown, which means that inside the Tisza Lajos Boulevard, pedestrian and cyclist traffic is favoured. In the renovated Dugonics and Árpád Square, car traffic is completely displaced, only pedestrians and cyclists can enter. Automobiles can use a section of the Somogyi Street, between the Tisza Lajos Boulevard and Kárász Street, only on weekdays. On weekends and holidays, it is forbidden to drive in, the only exceptions are individuals with express permission. The Somogyi Street is only usable from the direction of the Zrínyi Street until the crossing of the Kárász Street as a dead-end.

For drivers, the regulation is clearly disturbing. First of all, the warning traffic signs about the weekend traffic order are placed too high, out of the drivers' range of vision. The signs are also in a text format, written only in Hungarian, and there is not enough time to read them in a busy roundabout. The closed down section is practically the main road for people heading to the bridge at the city centre, so it concerns the majority of people living in Újszeged. Moreover, this closed down section cannot be substituted with a one or two blocks-long bypass because of the traffic order of the downtown area. The drivers need to take quite long bypasses to get to the other end of the closed-down section.

The “Délmagyarország” newspaper surveyed the current situation on 10 February 2018 and found that on a Saturday afternoon nearly twenty cars disregarded the regulation within half an hour. As a result of this, pedestrians do not use this section on weekends at all, since there are a certain number of drivers – mostly foreigners – who don’t recognise the prohibition, which means that approximately in every 1.5 minutes there is a car passing by on the territory.

The bad practice is supported with the following photos:





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5.1.5 Construction of Fabiani’s bridge in Ljubljana – Ljubljana, Slovenia⁴⁵

Population: 288,919 (2017)

Challenge: Fabiani’s bridge in Ljubljana was built to complete an inner traffic circle by connecting two main traffic lanes in the centre of Ljubljana. The cycling lane is constructed underneath the upper surface in a much longer, more dangerous and unpleasant route. It is also very narrow on some parts and – with its combined pedestrian surface – a possible location for accidents due to bad visibility.

Solution: Before building such surfaces and roads, the planners should obey the city’s transport policy and they also need to pay attention to the interests of other transport stakeholders, not only car users.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Fabiani’s bridge in Ljubljana is a very unpleasant and dangerous new infrastructure for cyclers and pedestrians. It was built to complete an inner traffic circle by connecting two main traffic lanes in the centre of Ljubljana and it was finished in 2012. It was built only four years before Ljubljana won the *Green Capital of Europe* title. The upper surface of the bridge is entirely constructed for motorized transport in the length of 147 meters, which provides vehicles the shortest and the easiest way to cross the Ljubljanica river. On the other hand, the cycling lane is constructed underneath the upper surface in a much longer, more dangerous and unpleasant route. The cycling lane is very narrow on some parts and – with its combined pedestrian surface – it is also a possible location for accidents due to bad visibility. Moreover, as it is unpleasant to walk and cycle on its surface for too long, cyclers need to use the road and drive illegally over the bridge. The initial problem was/is, that non-motorised transport is not recognized as an important or at least equal modality to car transport which signals a very bad mindset of Ljubljana’s transport policy. There may be possible advantages, if any, for public transport users who use the road surface of the bridge. Another potential advantage

⁴⁵ Sources: https://sl.wikipedia.org/wiki/Fabianijev_most; https://www.youtube.com/watch?v=elax_wwmoQM; https://www.google.si/search?q=fabianijev+most&source=lnms&tbm=isch&sa=X&ved=0ahUKewjqp8HA5pnZAhUECywKHfmCCWwQ_AUICigB&biw=1188&bih=497#imgrc=gpM99TP6yixHsM:&spf=1518212574782

for cyclers and pedestrians could be that they are separated from motorized transport, however, the way it is organized now, using that part of the bridge is everything but safe and comfortable.

What went wrong? The planners are obviously not cyclers and walkers and when such people plan cycling and walking infrastructure, the results are very car-oriented. Before building such surfaces and roads, the planners should obey the city's transport policy and they also need to pay attention to the interests of other transport stakeholders, not only car users.

The bad practice is supported with the following photo:



5.1.6 National sport centre Bôrik – Žilina, Slovakia⁴⁶

Population: 81,041 (2016)

Challenge: The original intention of the planned reconstruction of the sports hall, which is a unique wooden structure, was the construction of a modern sports complex. However, the project has not been realized due to still on-going disagreements between the city and the owner of the premises (the investor). Direct transport connections are also a major problem – the location of the sports hall does not allow these.

Solution: It would be possible to resolve the problem by third party involvement which would actually help citizens in the city. To the problem of transport connections, a solution is offered in the construction of a parking garage and the possibility of shuttle transport at the time of significant sporting events.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

The original intention of the planned reconstruction of the sports hall, which is a unique wooden structure, was the construction of a modern sports complex. This project should have been complemented by additional business and parking facilities. The restored sports hall was planned for 3,000 spectators and facilities for athletes on the second underground floor. There should have been separate leasable spaces in the sports hall. The first floor was planned for wheelchair entrances to the sports section. There should also have been spaces for shops and services. The second and third floors were planned as a multifunctional complex. The planned National Sports Center is located in the area between the Ľudovít Štúr Park, the swimming pool and the municipal forest park. The reconstruction would have created a new, interesting area near the city centre. However, the project has not been realized due to still on-going disagreements between the city and the owner of the premises (the investor). In case of realization, the territory would be used for sports, cultural and relaxation activities. Green areas around the sports hall would not be used at all. Moreover, the reconstruction of the hall would require the partial adaptation of access roads and public transport

⁴⁶ Sources: <https://www.asb.sk/architektura/projekty/narodne-sportove-centrum-v-ziline>; https://sk.wikipedia.org/wiki/%C5%A0portov%C3%A1_hala_v_%C5%BDiline

lines (needed for major sports events). The presented hall is an 'organic' part of Žilina. It is already connected to the infrastructure and with appropriate operation it could be the part of the expanded city centre.

What else can be done now? It would be possible to resolve the problem by third party involvement which would actually help citizens in the city. Direct transport connections are also a major problem – the location of the sports hall does not allow these. However, a solution is offered in the construction of a parking garage and the possibility of shuttle transport at the time of significant sporting events.

The bad practice is supported with the following photos:

Obr. č. 1: Športová hala Bôrik – súčasny stav



Obr. č. 2: NŠC Bôrik, Žilina – hala 1 – objekt po rekonštrukcii



Obr. č. 3: Športová hala Bôrik – súčasny stav



Obr. č. 4: NŠC Bôrik, Žilina – hala 1 – objekt po rekonštrukcii



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5.1.7 Aurel Lazar Street – Oradea, Romania

Population: 196,367 (2011)

Challenge: Although the intention was to stimulate walking in the area, this street has an improper street and land design with narrow sidewalks that are almost always occupied by parked cars.

Solution: Given a proper land and street redesign, this street could be transformed into a pleasant and attractive space for both pedestrians and cyclists. This could be achieved through reducing or eliminating the parking spaces and allowing car access only occasionally to residents in the area and the improvement of the surroundings by creating green zones.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input checked="" type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

Aurel Lazar Street is situated in the city center, in the vicinity of the main pedestrian street coming from the city center (Republicii) and it is nearby two of the most important central parks. Although the intention was to stimulate walking in the area, this street has an improper street and land design with narrow sidewalks that are almost always occupied by parked cars. The pedestrian flow, arriving from Republicii street, finds itself crossing a very narrow space between the buildings and cars. This street represents a truly bad example from the aspects of mobility and walkability.

However, given a proper land and street redesign, this street could be transformed into a pleasant and attractive space for both pedestrians and cyclists. This could be achieved through reducing or eliminating the parking spaces and allowing car access only occasionally to residents in the area. In addition, the improvement of the surroundings by creating green zones could be to the benefit of all citizens.

The bad practice is supported with the following photos:



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5.1.8 New bicycle lanes of Varna (2014-2015) – Varna, Bulgaria

Population: 343,991 (2016)

Challenge: Until 2014, bicycle lanes in Varna did not really exist, except for a very short, rather promotional section in the city centre. In order to solve the problem, the Municipality of Varna ordered the design and construction of a network of bicycle paths along the main boulevards. However, the municipal administration did not prepare the necessary regulatory and street transformation plans, and instead of being built as separate lanes, taking space from cars, they had to be planned and built on the sidewalks of the main boulevards.

Solution: Both the general public and the local administration learned that all transport modes are important and urban design should not be neglected: bicycle lanes should reduce car access to the city, not the capacity of pedestrian sidewalks.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|---------------------------------------------|----------------------------------------------------|--------------------------------------------|
| parking <input type="checkbox"/> | cycling <input checked="" type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input type="checkbox"/> | traffic safety <input checked="" type="checkbox"/> | street design <input type="checkbox"/> |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | | awareness raising <input type="checkbox"/> |
| public transport <input type="checkbox"/> | | economic motivators <input type="checkbox"/> | |

Until 2014, bicycle lanes in Varna did not really exist, except for a very short, rather promotional section in the city centre. This situation led to accidents, as cyclists either had to roll between cars or pedestrians. In order to solve the problem, the Municipality of Varna ordered the design and construction of a network of bicycle paths along the main boulevards. Between 2014 and 2015, the first bicycle network with a total length of approximately 16 km was realized in the city. Initially, the idea was to create two-way lanes that are 2.5 metres wide. However, the municipal administration did not prepare the necessary regulatory and street transformation plans, and instead of being built as separate lanes, taking space from cars, they had to be planned and built on the sidewalks of the main boulevards. The main problem was that bicycle lanes did not reduce car access to the city but the capacity of pedestrian sidewalks. At the same time, the new bicycle lanes were even more dangerous than the original ones, since they were circling around urban obstacles such as pavilions. The bicycle lanes all over Bulgaria proved the misunderstanding of local authorities on why and how we design bicycle lanes, and this particular measure is described as Varna’s own bad practice experience.

This bad practice brought about many disadvantages in Varna. First of all, the sidewalks of the main boulevards in Varna got narrower; some smaller ones even disappeared, and this led to a less walkable city. As cyclists are forced to circle around urban obstacles and dozens of underpasses

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interrupt the narrow bicycle roads, using them is considered very dangerous. However, as the good side of all this, both the general public and the local administration learned that all transport modes are important and urban design should not be neglected.

The bad practice is supported with the following photos:



5.1.9 Traffic calming of Americká Street in Pilsen – Pilsen, Czech Republic⁴⁷

Population: 170,936 (2018)

Challenge: After the reconstruction of Americká Street was completed, it was proposed that only buses and trolleybuses would drive on it with the exclusion of individual car traffic. Despite the implemented reconstruction and the campaign promises, city leaders repeatedly rejected the proposal of traffic calming, probably because of the upcoming municipal elections of 2014.

Solution: The public transport users could benefit from a smoother operation of public transport vehicles without congestion and subsequent delays. The pedestrians could benefit from significantly reduced traffic, noise and emissions, while also making better use of the street space. At the same time, it would be possible to expect a renewal and revitalization of the public space, by creating resting areas for pedestrians on the calmed streets and by the extension of gastronomic services in front gardens.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

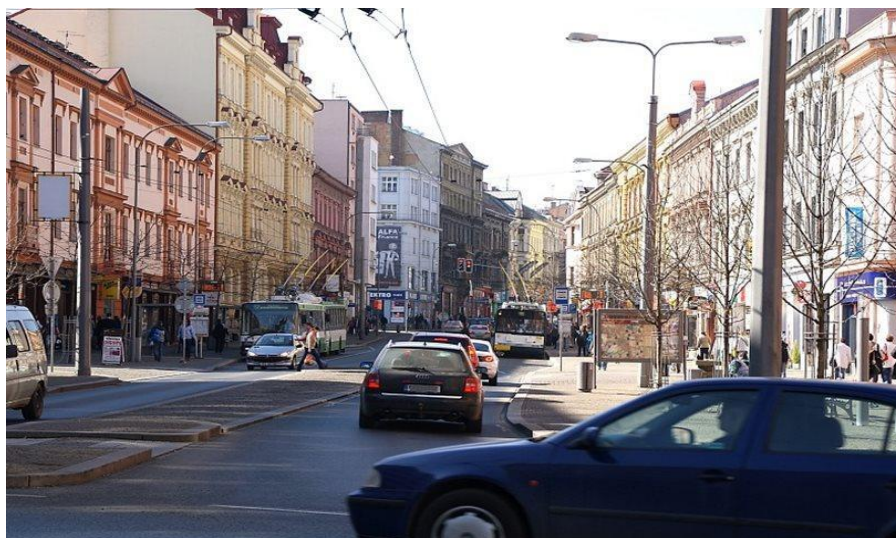
The traffic calming of Americká Street in the city centre of Pilsen had appeared in the programs of political parties for 20 years. In 2008, the city reconstructed the street by narrowing the road, extending the sidewalks, and planting trees and greenery. At the same time, a parallel road with big capacity was built, which diverted part of the transit traffic from the city centre. After the reconstruction of Americká Street was completed, it was proposed that only buses and trolleybuses would drive on it with the exclusion of individual car traffic. The reason for the supposed traffic calming was the high intensity of individual car traffic, congestions and the increasing delays of urban public transit. Despite the implemented reconstruction and the campaign promises, city leaders repeatedly rejected the proposal of traffic calming, probably because of the upcoming municipal

⁴⁷ Sources: https://plzen.idnes.cz/na-americke-klesl-provoz-089-/plzen-zpravy.aspx?c=A131220_104345_plzenzpravy_ban; https://plzen.idnes.cz/doprava-americka-zastupitelstvo-dgg-/plzen-zpravy.aspx?c=A140228_104408_plzenzpravy_pp; https://plzen.idnes.cz/zklidneni-dopravy-na-americke-ulici-v-plzni-fer-/plzenzpravy.aspx?c=A141003_2104935_plzen-zpravy_kol

elections of 2014 and the politicians' concern about the impact of this essential transport policy decision.

In this situation, the current congestion and the delays of urban public transport vehicles remained. Pedestrians are bothered by the intense individual car traffic with limited opportunities to cross the street. There is also a long waiting time for pedestrians on traffic lights at some intersections. In case of the approval of the proposal, congestion would be eliminated, and the noise would be significantly reduced. The public transport users could benefit from a smoother operation of public transport vehicles without congestion and subsequent delays. The pedestrians could benefit from significantly reduced traffic, noise and emissions, while also making better use of the street space. At the same time, it would be possible to expect a renewal and revitalization of the public space, by creating resting areas for pedestrians on the calmed streets and by the extension of gastronomic services in front gardens.

The bad practice is supported with the following photos:



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5.1.10 The Mobility Management Plan for the City of Varna – Varna, Bulgaria⁴⁸

Population: 343,991 (2016)

Challenge: The management and effective use of the city of Varna’s and its suburbs’ road network is the key to the development of an integrated and sustainable transport system. However, the municipal administration has no special transport directorate or department; the issues of public transport are included in the responsibilities of the Directorate of Economics with economic development activities.

Solution: The purpose of the Mobility Management Plan is to introduce a series of measures in Varna which will improve the attractiveness of using public transport, cycling and walking, and car-sharing, thus combating traffic congestion in the city with associated environmental benefits. The project would become more effective combined with other initiatives to provide a structured and balanced approach to achieve improved mobility within the city areas.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

The purpose of the Mobility Management Plan is to introduce a series of measures in Varna which will improve the attractiveness of using public transport, cycling and walking, and car-sharing, thus combating traffic congestion in the city with associated environmental benefits in relation to noise and air quality, as well as shortening the travelling time to work or leisure and resort areas. Improvements in the traffic management, the upgrade of existing infrastructure in Varna and the provision of new infrastructure are proposed to achieve improved circulation of traffic within the city and its neighbouring areas and provide additional facilities for pedestrians and cyclists. The management and effective use of the city of Varna’s and its suburbs’ road network is the key to the development of an integrated and sustainable transport system. Whilst the scope for the provision of new infrastructure or expanding the existing network can be limited and difficult to provide within an established port city environment, the provision of additional infrastructure may be necessary to enable other projects to be realized. These projects typically become more effective when combined with other initiatives to provide a structured and balanced approach to achieve improved mobility

⁴⁸ Source: Report from the implementation of the project

within the city areas. Particularly, when the demands of private development are considered, a mobility management framework is essential to manage the demands of individual developments and the overall requirements of the city.

The City Council is mainly responsible for the funding/provision and implementation of the development strategy in the mid- and long term, while the municipal administration is engaged in the direct management, monitoring and control of public transportation. The municipal administration has no special transport directorate or department; the issues of public transport are included in the responsibilities of the Directorate of Economics with economic development activities. For historical reasons, 100% of the Urban Transport company is owned by the Municipality of Varna.

This BP has both advantages and disadvantages. As for the benefits, it can be stated that due to the intervention the share of non-motorized types of transport is increased. The development of the city centre and some residential areas are focused on major public transport corridors, thus minimizing the necessity for investments in extending the existing network. The municipality actively works towards the development of professional capacity for planning a sustainable transport system and controls the implementation of this policy. The plan of the city, the terrain and the climate conditions provide opportunities for cycling as a form of transport. Considering the disadvantages, the regulations at different levels are outdated, conflicting with the regulations of the European Union or contradicting the national strategy. The project did not improve the situation and had no sustainability after its execution. The mobility centre is not located on an acceptable place, and it is difficult for the citizens to gain benefits from its operation. On the other hand, it is not even working anymore due to the lack of experts who could be useful for maintenance and its proper operation. Varna is working on developing a Sustainable Urban Mobility Plan which would be handled by experts in the transport field and could manage to fulfil its long-term goal to bring sustainability in the mobility within the city.

5.1.11 Reconstruction of the Panticeva Street: bad parking policy – Valjevo, Serbia⁴⁹

Population: 90,312 (2011)

Challenge: The biggest disadvantage is the bad parking policy. The length of the sidewalk is left with the possibility of parking, so the paths for pedestrians are inadequately accessible, uncomfortable, inconsistent and unsatisfactory.

Solution: Parking spaces should be marked with leaving a corridor for pedestrians which is suitable for comfortable walking and cycling.

Specific walkability issues:

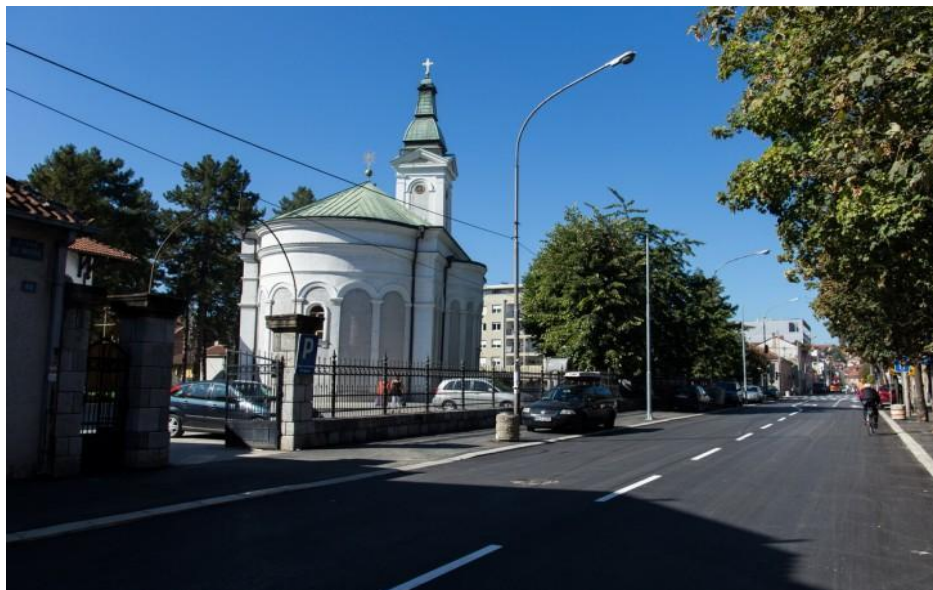
- parking cycling signage land use
- regulation traffic safety street design
- participative planning transport mode mix awareness raising
- public transport economic motivators

Panticeva Street is in the administrative centre of Valjevo. The street was frequented by cars and pedestrian traffic. The General Regulation Plan Center foresaw the extension of the pedestrian zone/sidewalk, and the shift of construction lines from the regular lines, because the inherited structure is such that it does not meet the needs of the 21st century. Recently, the reconstruction of the main parts and infrastructure of this street has been finished, but its main potential has remained unused. The biggest disadvantage is the bad parking policy. The length of the sidewalk is left with the possibility of parking, so the paths for pedestrians are inadequately accessible, uncomfortable, inconsistent and unsatisfactory: Panticeva Street is only used reluctantly by pedestrians and cyclists. It is true that the intervention had some advantages such as the large number of parking places in the city centre that enables higher revenues for the parking company. The reconstruction of this street also made and enhanced the horizontal and vertical signage on the road and pedestrian crossings which increased traffic safety. Parking spaces are marked – there is a corridor for pedestrians, but it is not suitable for comfortable walking. Consequently, the attractiveness of this route and the facilities that are disabled due to the parking places on the pedestrian area has been reduced. The wrong parking policy on this street made it impossible for all categories of citizens to safely and comfortably move through sidewalks or pedestrian areas, which reduced the attractiveness of the street as an administrative and business centre. For this reason, many business

⁴⁹ Source: General Regulation Plan Center (Official Gazette of RS No. 9/2014) <http://www.valjevo.rs/pgr-centar>

premises have been moved to a more attractive zone, and the market value of business premises has decreased compared to other central city streets.

The bad practice is supported with the following photos:



5.1.12 Pedestrian's insufficient knowledge of traffic rules – Belgrade, Serbia

Population: 1,683,962 (2016)

Challenge: In general, pedestrians in Serbia lack the sufficient knowledge of traffic rules and the awareness of the importance of using public infrastructure in a proper way. Due to this phenomenon, the statistics are very bad which gives an unfavourable account of walking. So, people tend to believe that walking is generally unsafe.

Solution: There should be more educational projects present in the country, and also public advocacy to make people more responsible.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input type="checkbox"/> | traffic safety <input checked="" type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In general, pedestrians in Serbia lack the sufficient knowledge of traffic rules and the awareness of the importance of using public infrastructure in a proper way. As a consequence, 25% of people involved in traffic accidents as pedestrians die. The pedestrians don't take care while walking and they usually violate the rules: they cross the roads but not on pedestrian crossings, use phones while crossing the streets, walk during the night without any visible marking, walk alone on the main road or cross the street when the light is red – these are common acts. Due to this phenomenon, the statistics are very bad which gives an unfavourable account of walking. So, people tend to believe that walking is generally unsafe. There are some educational projects present in the country, but the public advocacy is still not enough to make people more responsible.

This situation only has disadvantages since the issue is very dangerous, which fact is supported by statistical data. Every year, an average 150 people die in traffic accidents, and 850 are severely injured in those same accidents. Half of the people died in traffic accidents and 22% of the severely injured are older than 65. The majority of people dying in traffic accidents are male. 29% of pedestrians are fatally hurt between 18 and 21 p.m.

The bad practice is supported with the following photo:



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5.2 Bad practices from countries outside of the partnership

In Table 6, all bad practices from countries outside of the partnership are stated: we can see which country and city they originate from and which project partner provided them. As it can be seen, there are only five bad practices in this category. The table shows the specific walkability issues present in the practice, too. As a conclusion, it can be claimed that the following issues are touched upon (among others): regulation, land use, street design, transport mode mix, awareness raising, etc.

6. Table: Bad practices from countries outside of the partnership

Title of the practice	City of origin	Country of origin	Partner	Specific walkability issues present
Unregulated pedestrians	Birmingham	United Kingdom	PP1	regulation, awareness raising
Bus Rapid Transit implementation in Bogotá without integrative planning approach brings some failed pedestrian measures	Bogotá	Columbia	PP2	public transport
Candler Road walkability investment	South Dekalb County, Georgia	USA	PP3	land use, street design, traffic safety
Stockholm Congestion Charge	Stockholm	Sweden	PP5	regulation, economic motivators, participative planning, awareness raising
Shared space Maaßenstraße	Berlin	Germany	PP9	transport mode mix, regulation, street design

Source: made by the author

5.2.1 Unregulated pedestrians – Birmingham, United Kingdom

Population: 1,124,569 (2016)

Challenge: In the UK, especially in Birmingham, the transport habits are really unregulated – mainly in the case of the pedestrians. They cross the road without paying any attention to the lights.

Solution: The city should avoid giving so much power into the hands of the pedestrians. Instead of that, it should motivate them to follow the rules as it is the pedestrians who should be more cautious and not the other members of traffic.

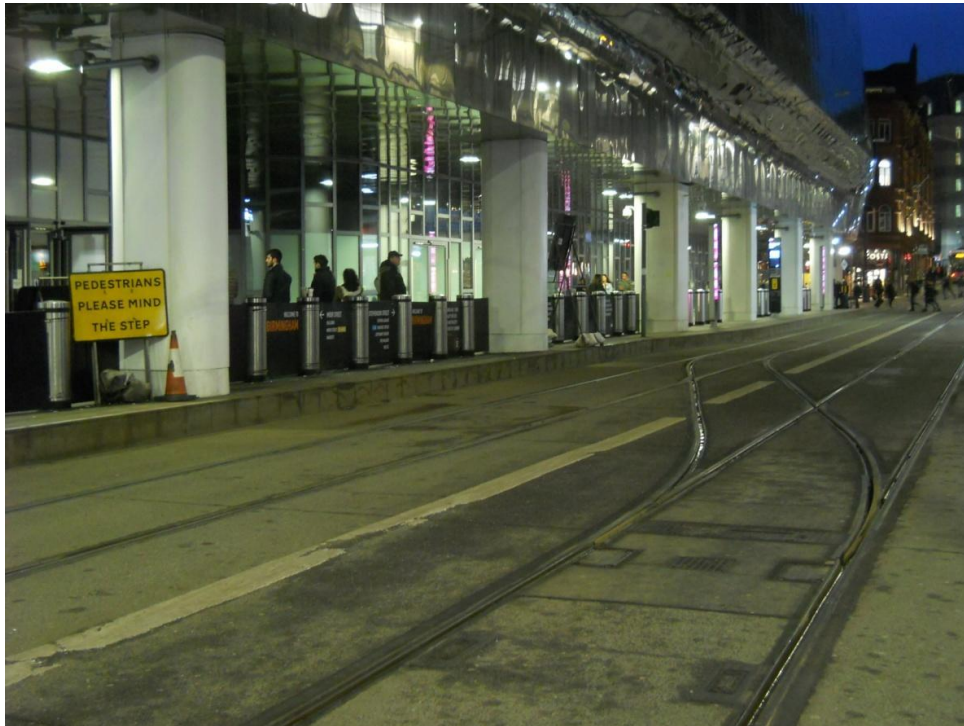
Specific walkability issues:

- | | | | |
|-------------------------------------------------|----------------------------------------------|-------------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input type="checkbox"/> | awareness raising <input checked="" type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

In the UK, especially in Birmingham, the transport habits are really unregulated – mainly in the case of the pedestrians. They cross the road without paying any attention to the lights. If there is no car on the road, they cross it – even on highways. The police do not intervene, in fact, it seems that they got used to this situation. There are no possible advantages of this bad practice. It is highly risky and dangerous for all actors of traffic and it requires much more attention, otherwise, accidents will happen. The ones who will suffer more in the case of accidents are the more vulnerable pedestrians, of course. As pedestrians could not be regulated, the other members of transport adjusted to them. For example, the bus drivers pay more attention on the roads, or there are new signs for the pedestrians to be careful (and these signs are only a few meters from the street-crossing). In this case, the city should have avoided giving so much power into the hands of the pedestrians. Instead of that, the city should have tried to motivate them to follow the rules as it is the pedestrians who should be more cautious and not the other members of traffic.

This photo was taken in front of the Birmingham New Street Station – the largest railway station of the city. The sign raises the attention of the pedestrians that they have to pay attention to their steps when they cross the road. However, 10 meters away (at the back of the picture) there is an official pedestrian crossing.

The bad practice is supported with the following photo:



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5.2.2 Bus Rapid Transit implementation in Bogotá without integrative planning approach brings some failed pedestrian measures – Bogotá, Columbia⁵⁰

Population: 8,080,734 (2017)

Challenge: While Bogotá’s TransMilenio is a substantial, widely celebrated BRT investment, able to carry some 45,000 passengers per direction per hour, reshaping urban form and land-use patterns was not a primary objective in its design: building the system quickly and enhancing affordable transport for the poor was. The visually prominent skywalks that connect to BRT stops create lengthy, circuitous walks, can be noisy and are difficult for the elderly and disabled individuals to negotiate.

Solution: Bogotá’s experiences further show that planning matters. Any urban design should give more weight to the pedestrian experience.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

Bogotá, the capital of Colombia and home to 7.6 million inhabitants, has gained a reputation as one of the world’s most progressive cities, underscored by the 2000 opening of what has been called the gold standard of BRT (Bus Rapid Transit), the 110 km long TransMilenio system. Delegations of officials and dignitaries from around the world visit Bogotá to marvel at the system. Operating on a two-lane dedicated carriageway, TransMilenio carries upwards of 40,000 passengers per hour per direction, which matches the passenger-throughputs of most metros. The system also boasts enhanced stations (accessible by networks of skyways), smart card-based fare collection, advanced control systems, distinctive images and affordable fares. TransMilenio’s patronage is growing at a healthy pace of around 10 percent annually, from 800,000 daily riders when it opened in 2001 to around 1.7 million today, accounting for 74 percent of public transit trips in the city. The financial policy has played a role in TransMilenio’s success. In 2000, a 20% surcharge was tacked onto all gasoline sales in Bogotá, with half the revenues earmarked for TransMilenio’s infrastructure. As a cross-subsidy from the 19% of Bogotá’s population that owned cars to transit-dependents, the policy promoted social as well as environmental sustainability. While Bogotá’s TransMilenio is a substantial, widely celebrated BRT investment, able to carry some 45,000 passengers per direction per hour,

⁵⁰ Source: <https://iurd.berkeley.edu/wp/2013-03.pdf>

reshaping urban form and land-use patterns was not a primary objective in its design: building the system quickly and enhancing affordable transport for the poor was. The placement of the BRT lines in mostly economically stagnant zones has suppressed land development, just like placing the BRT stations in busy roadway medians which limits joint development opportunities and creates unattractive pedestrian environments around stations. Minimal proactive station area planning and a dearth of incentives for private property owners to redevelop parcels have also tempered transport-oriented development activities. Since TransMilenio's 2000 opening, Bogotá's population has grown by 21%. Building densities have increased throughout the city, but mostly in areas away from the TransMilenio corridors. The initial TransMilenio lines were built quickly in response to worsening traffic congestion but also to build political momentum and curry political favour for future expansions.

Placing stops in the medians of active roadways inevitably means a poor-quality pedestrian access environment and thus little commercial development near the stations themselves. TransMilenio's design gave little weight to the pedestrian experience. The visually prominent skywalks that connect to BRT stops create lengthy, circuitous walks, can be noisy (resonating like steel drums during peak traffic conditions, by some accounts), and are difficult for the elderly and disabled individuals to negotiate. Bogotá's experiences further show that planning matters.

The bad practice is supported with the following photo:



5.2.3 Candler Road walkability investment – South Dekalb County, GA, USA⁵¹

Population: not relevant

Challenge: The idea was to develop pedestrian infrastructure (new sidewalks, landscaping, street lamps, etc.). The initiative – on the surface – was about inducing walkability, but it had almost nothing to do with it in practice: it fails to meet even one of the ten factors Jeff Speck, an American walkability expert identified in his book, *Walkable City* – the real goal was to use walkability as a disguise to secure new economic investments and an increased tax base.

Solution: If we make all these efforts in a location where there are interesting destination points for pedestrians but the infrastructure surrounding them is not attractive or convenient, we can achieve significant results and our money will be well spent.

Specific walkability issues:

- parking
- cycling
- signage
- land use
- regulation
- traffic safety
- street design
- participative planning
- transport mode mix
- awareness raising
- public transport
- economic motivators

South Dekalb County, Georgia, a previously rural and agricultural area began developing after World War II but in the 60s it endured white flight – the large-scale migration of people with European ancestries from racially mixed urban regions to homogeneous ones – and has been dealing with disinvestment ever since. Property owners were even offered money to construct new buildings or renovate near Candler Road, for example, but still the area struggled. Local officials decided that a 7.2-million-dollar investment is needed to make the area more walkable and inviting. The idea was to develop pedestrian infrastructure (new sidewalks, landscaping, street lamps, etc.) but the aftermath of the project showed that this does not necessarily mean the same thing as making the place more walkable. The initiative – on the surface – was about inducing walkability, but it had almost nothing to do with it in practice: it fails to meet even one of the ten factors Jeff Speck, an American walkability expert identified in his book, *Walkable City*. At the core of this failure there is an obvious reason: the real goal was to use walkability as a disguise to secure new economic investments and an increased tax base.

⁵¹ Sources: Scott Doyon (2015): *Walkability. Good money after bad*. In <http://www.placemakers.com/2015/11/23/walkability-good-money-after-bad/>, 07.02.2018.; Jeff Speck (2012): *Walkable City. How Downtown Can Save America, One Step at a Time*. North Point Press, New York

The BP did not address properly any of the 4 ingredients of walkability:

- Useful: the area is still single-use (commercial) in nature, it is over-parked, and although it features a bus route, none of the upgrades included bus stops or other methods of improving public transit.
- Safe: the plan contained new crosswalks but otherwise offered no privileges to pedestrians. The road's configuration stayed the same which means no bicycle facilities were added.
- Comfortable: some landscaping has been done using ground-level plants, but the designers did not apply this idea to the pedestrian level (e.g. trees serving as a protective barrier between the sidewalk and the road).
- Interesting: there are no pedestrian-oriented buildings near the road.

However, it is important to see that this BP could be easily converted into a GP – the key to success is the location. On Candler Road, there is not much that can attract pedestrians, and this does not have to be changed, since it was built with a different goal in mind. However, if we make all these efforts in a location where there are interesting destination points for pedestrians but the infrastructure surrounding them is not attractive or convenient, we can achieve significant results and our money will be well spent.

The bad practice is supported with the following photo:



5.2.4 Stockholm Congestion Charge – Stockholm, Sweden⁵²

Population: 949,761 (2017)

Challenge: Stockholm’s city centre faced the problem of a large number of daily vehicle commuters who contribute to air pollution, noise and congestion problems. To discourage the drivers, a “congestion tax” was implemented, requiring the drivers of most vehicles entering the city centre to pay a fee between certain hours. All the tax income is returned to the Stockholm region for investments in public transport and road improvements, however, there were no simultaneous measures envisaged or implemented to strengthen the use of active mobility modes (walking and cycling).

Solution: A more comprehensive approach should be taken in order to achieve a sustainable modal shift with a focus on all sustainable modes and their combination, not just public transport.

Specific walkability issues:

- | | | | |
|------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| | regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input type="checkbox"/> |
| participative planning <input checked="" type="checkbox"/> | transport mode mix <input type="checkbox"/> | | awareness raising <input checked="" type="checkbox"/> |
| public transport <input type="checkbox"/> | | economic motivators <input checked="" type="checkbox"/> | |

Stockholm’s city centre faced the problem of a large number of daily vehicle commuters who contribute to air pollution, noise and congestion problems. To discourage the drivers, a “congestion tax” was implemented, requiring the drivers of most vehicles entering the city centre to pay a fee between certain hours. The measure included the installation of automatic license plate recognition cameras. With these procedures, the city managed to decrease overall traffic to and from the city centre by 10-15% and the worst queues in and near the city centre were also declined by 30% or more. Moreover, there was a 14% reduction in vehicle miles travelled (VMT) in the charged zone and a 1% reduction in VMT outside the zone. There was an increase in travel time reliability and traffic volumes on most congested roads dropped by 20-25%. In addition, public transportation use increased by 6-9% though this increase could not be entirely attributed to congestion charges. However, no significant increase was observed in cycling or carsharing.

There are three evident advantages of this BP. The regulatory measure to discourage drivers from using cars to reach the city centre is beneficial in terms of congestion and the environment. All the

⁵² Source:

http://h2020-flow.eu/uploads/tx_news/FLOW_REPORT_Portfolio_of_Measures_v_06_web.pdf

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tax income is returned to the Stockholm region for investments in public transport and road improvements and the role of public transport as a more sustainable mode to reach the city centre is strengthened. The Stockholm congestion charging programme consisted not only of the congestion charges but also of an extension of public transit services and a 4-5% increase was achieved in the number of public transport users. However, there were no simultaneous measures envisaged or implemented to strengthen the use of active mobility modes (walking and cycling) which would definitely yield more economic, social and environmental benefits. A more comprehensive approach should be taken in order to achieve a sustainable modal shift with a focus on all sustainable modes and their combination, not just public transport.

The bad practice is supported with the following photo:



5.2.5 Shared space Maaßenstraße – Berlin, Germany⁵³

Population: 3,670,622 (2016)

Challenge: The main purpose of the project was to give equal status to every road user regardless of the mode of transport, with simultaneous improvements for walking; for example, in the form of larger walking areas and an improved quality of stay. One of the major problems with the project is that the design of the "shared space" is often not recognized by the users due to the small difference compared to the situation before remodelling.

Solution: Despite all the criticisms, a before-and-after evaluation shows that the project's main objectives have been achieved – the main reason that led to the unsuccessful implementation is primarily the fact that this is the first "shared space" in the city, a kind of beacon project. Involving and informing the citizens in a more participative manner would prevent the lack of knowledge and recognition.

Specific walkability issues:

- | | | | |
|-------------------------------------------------|--------------------------------------------------------|---------------------------------------------------|-----------------------------------|
| parking <input type="checkbox"/> | cycling <input type="checkbox"/> | signage <input type="checkbox"/> | land use <input type="checkbox"/> |
| regulation <input checked="" type="checkbox"/> | traffic safety <input type="checkbox"/> | street design <input checked="" type="checkbox"/> | |
| participative planning <input type="checkbox"/> | transport mode mix <input checked="" type="checkbox"/> | awareness raising <input type="checkbox"/> | |
| public transport <input type="checkbox"/> | economic motivators <input type="checkbox"/> | | |

As part of the urban walking strategy in Berlin, measures to promote walking were developed in the form of model projects. In the process, the implementation of a "shared space" was planned to test the future organization of streets in the city. The main purpose of the project was to give equal status to every road user regardless of the mode of transport, with simultaneous improvements for walking; for example, in the form of larger walking areas and an improved quality of stay. The objectives of the project included reducing motorised traffic, reducing vehicle speed, avoiding conflicts on the pavement, increasing the attractiveness of walking, increasing safety as well as increasing the space available for pedestrians. In order to achieve this, the city narrowed the road, created barrier-free

⁵³ Sources:

http://www.berlin.de/senuvk/verkehr/politik_planung/fussgaenger/strategie/de/begegnungszone_maassenstrasse.shtml

http://www.berlin.de/senuvk/verkehr/politik_planung/fussgaenger/strategie/download/begleituntersuchung_maassenstr_verkehr.pdf <https://www.morgenpost.de/berlin/article213098935/Die-Maassenstrasse-kommt-nicht-zurRuhe.html>

http://www.walkspace.at/images/stories/projekte/seminare/CD_Fachkonferenz_2011_Salzburg.pdf

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crossing points and shifted the bicycle traffic to the roadway. Moreover, additional accommodations in the form of street furniture were created and parking spaces were reduced (only allowed for delivery traffic). As the German traffic regulation (code of conduct) does not know the term „shared space“, the redesign of Maaßenstraße can be seen as a pilot project to introduce it in the form of street organisation.

Despite all the criticisms, a before-and-after evaluation shows that the project's main objectives have been achieved. The number of pedestrians increased by 30% while waiting times to cross the area for motorised traffic lessened on average. In addition, the speed of motorized traffic and the amount of it was also significantly reduced. One of the major problems with the project is that the design of the "shared space" is often not recognized by the users due to the small difference compared to the situation before remodelling. This leads to, for instance, parking cars in places where no parking spaces are provided which causes problems for the motorised traffic. The project's costs are not the most relevant reason for the failure of the project: the main reason that led to the unsuccessful implementation is primarily the fact that this is the first "shared space" in the city, a kind of beacon project. Unfortunately, political opponents want to end all the other proposed shared-space projects.

The bad practice is supported with the following photos:





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5.3 Conclusion of the bad practices

From the previously presented bad practices we can draw a conclusion that there are certain characteristics that contribute to the failure of a practice, thus making it a bad one. Without doubts, not corresponding to the success factors – listed and elaborated in **Chapter 3.3** – can lead to mistakes. This chapter aims at highlighting the basic features that should be avoided when making sustainable urban mobility interventions based on the collected and demonstrated bad practices.

According to our collection of 17 different bad practices, we can assume that the following are the failure factors:

1. Scarcity of rules

Preparing rules and regulations for the proposed initiative is crucial from the point of view of success. If there are no or not enough rules, sooner or later the action will face its limitations. Regulations should be created for all kind of users. Without a doubt, the lack of rules can lead to dangerous situations and disagreements. One of the most common issue is parked cars that do not respect the space of pedestrians.

This factor is supported by the following BPs:

- **Aurel Lazar Street**
- **The Mobility Management Plan for the City of Varna**
- **Reconstruction of the Panticeva Street: bad parking policy**
- **Unregulated pedestrians**
- **Candler Road walkability investment**
- **Shared space Maaßenstraße**

2. Not putting pedestrians at the first place

Though it would be obvious, in many cases there is little weight given to pedestrians when developing such interventions, actions. They do not receive privileges, their thoughts, ideas are not considered. It also needs to be highlighted that walking and cycling should not be favoured at each other's expense.

This factor is supported by the following BPs:

- **Construction of Fabiani's bridge in Ljubljana**
- **New bicycle lanes of Varna (2014-2015)**
- **Bus Rapid Transit implementation in Bogotá without integrative planning approach brings some failed pedestrian measures**
- **Candler Road walkability investment**

Project co-funded by European Union funds (ERDF, IPA)

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3. Lack of communication

Even if there is a really beneficial intervention, a possibility for failing exists if there is not enough and proper communication towards stakeholders, the general public or experts. When people do not receive enough information about the changes, they are more likely to be reluctant. Moreover, awareness-raising is essential to share knowledge about the action and make people responsible about their attitude and behaviour.

This factor is supported by the following BPs:

- **Koroška Road**
- **Walking zone at Dugonics Square on weekends**
- **Pedestrian's insufficient knowledge of traffic rules**
- **Stockholm Congestion Charge**

4. Inappropriate location

If the urban equipment, the newly constructed area is hard to access, and pedestrian movement is hindered, then the intervention is possible to fail. The needs of the elderly, disabled and children have to be taken into consideration during the planning phase. It is advisable to choose an area which is connected with other modes of transport as well.

This factor is supported by the following BPs:

- **Slovenski Square**
- **National sport centre Bôrik**
- **Bus Rapid Transit implementation in Bogotá without integrative planning approach brings some failed pedestrian measures**

5. Unattractive public spaces

Citizens tend to spend more time at walkable places if they enjoy being there which can be achieved by building attractive places with a welcoming environment. It is important to provide activity opportunities for users, such as services, commercial facilities, catering establishments, etc.

This factor is supported by the following BPs:

- **Leona Štukelj Square**
- **Reconstruction of the Panticeva Street: bad parking policy**
- **Candler Road walkability investment**

6. Safety issues

The lack of security, dangerous places and situations can lead to the negative evaluation of any investment, initiative or action. Inappropriate conditions and circumstances can result in accidents due to bad visibility, shared lanes, the presence of disturbing obstacles, etc.

This factor is supported by the following BPs:

- **Slovenski Square**
- **Construction of Fabiani's bridge in Ljubljana**
- **New bicycle lanes of Varna (2014-2015)**

6 Good and bad practices of walkability from the aspects of responsible innovation

Walkability has become a key term in city planning. This catalogue summarized 47 good practices and 17 bad practices from numerous countries in the world. These practices highlighted that interventions and/or city development is in close relation with innovation – in order to minimize their possible negative consequences, we should investigate them in terms of responsible innovation. Thus, this chapter gives an overview how walkability practices (and thus, city planning) can be responsible.

6.1 Overview of responsible innovation

Responsible research and innovation (RRI) in today's sense appeared in the United States at the beginning of the 21st century and was adopted by the European Union a few years later (Fisher and Rip [2013]⁵⁴). RRI is a multidisciplinary concept – its roots are found in management, technology assessment, science and technology studies (Inzelt–Csonka [2014]⁵⁵; Owen et al. [2012]⁵⁶). As a result, RRI has numerous definitions (Buzás–Lukovics [2015]⁵⁷; Chorus et al. [2012]⁵⁸; Fisher and Rip [2013]; Owen et al. [2012]; Sutcliffe [2013]⁵⁹). In all definitions, social responsibility can be found, but environmental, ethical and political aspects are defined differently, and only a few definitions address the importance of open, transparent and accountable research and innovation (Buzás and Lukovics [2015]).

Despite this diversity, the definition of Schomberg [2011, p. 60]⁶⁰ appears to be the most widely accepted, thus we also use this one to analyse walkability good and bad practices from the aspects

⁵⁴ Fisher, E. – Rip, A. [2013]. Responsible Innovation: Multi-Level Dynamics and Soft Intervention Practices. *Responsible innovation: Managing the responsible emergence of science and innovation in society*, pp. 165-183.

⁵⁵ Inzelt, A. – Csonka, L. [2014]: Responsible Science in Societies In Buzás, N. – Lukovics, M. (eds.): *Responsible innovation*. University of Szeged, Szeged, pp. 57–72.

⁵⁶ Owen, R. – Macnaghten, P. – Stilgoe, J. [2012]: Responsible research and innovation: from science in society to science for society, with society. *Science and Public Policy*, Vol. 39, No. 6, pp. 751–760.

⁵⁷ Buzás N. – Lukovics M. [2015]: A felelősségteljes innovációról. *Közgazdasági Szemle*, Vol. 62, No. 4, pp. 438–456.

⁵⁸ Chorus, C. – van Wee, B. – Zwart, S. [2012]: TPM Catalogue. Concepts, Theories, Methods. Delft University of Technology: Delft.

⁵⁹ Sutcliffe, H. [2013]: *A Report on Responsible Research and Innovation*. Matter, London.

⁶⁰ Schomberg, R von. [2011]: Prospects for technology assessment in a framework of responsible research and innovation. In Beecroft, M. – Dusseldorp, R. (eds.): *Technikfolgen Abschätzen Lehren: Bildungspotenziale Transdisziplinärer*, Wiesbaden: Vs Verlag, pp. 39–61.

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of responsible research and innovation. According to this definition, RRI is *“a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society).”* This definition highlights the important role of cooperation between the actors of innovation. Besides the risks and benefits of a product and other foreseeable societal dimensions, we must also be able to adequately address issues about how to integrate existing standards, how to define and measure impacts, who is responsible when something goes wrong and who is responsible for performing checks. Answers are also required concerning the purpose of the research, the transparency of motivations, the beneficiaries of the innovation and selection among existing alternatives (Stilgoe et al. [2013]⁶¹).

For this relatively complex analysis of how to be responsible, the four dimensions of responsible research and innovation can support us. These dimensions are as follows (Buzás and Lukovics [2015]; Owen et al. [2013]; Stilgoe et al. [2013]):

1. **Anticipation** refers to the continuous asking of the “What if?” question. Taking uncertainty, complexity and contingency in mind significantly increases our ability to identify and mitigate potential societal risks and harms.
2. **Reflexivity** examines the assumptions that limit technical experts’ ability to identify and anticipate the possible repercussions of their decisions, objectives and motivations. In essence, it provides a mirror for the research process.
3. **Inclusion** refers to genuinely listening not only to the opinion of direct stakeholders, but to that of diverse and wider publics – whether through large or local public forums and discussions.
4. **Responsiveness** is closely related to the previous three items but has to do with taking actions that take into account during research, development and innovation processes the values, concerns and opinions of diverse stakeholders regarding hazards and risks by adjusting the course of research, development and commercialization accordingly.

In addition to these principles, the European Commission has listed six key elements of responsible innovation (RRI keys) (EC [2014]⁶²). They overlap with the four dimensions to some extent:

⁶¹ Stilgoe, J. – Owen, R. – Macnaghten, P. [2013]: Developing a framework for responsible innovation. *Research Policy*, Vol. 42, No. 9, pp. 1568–1580.

⁶² EC [2014]: Responsible Research and Innovation. Europe’s ability to respond to societal challenges. European Commission, Brussels. Available online: https://ec.europa.eu/research/swafs/pdf/pub_rri/KI0214595ENC.pdf Downloaded: June 11, 2016

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1. **Public engagement in innovation** ensures the wider acceptance of outputs. It mainly refers to the dimension of inclusion.
2. **Gender equality** aims to improve the opportunities of women and the under-representation of women researchers, which is closely related to the dimensions of reflexivity and responsiveness.
3. **Scientific education** aims to broaden the knowledge of future researchers and other societal actors in order to ensure that they would be effectively engaged (including participating in public engagement).
4. **Ethics:** respect and adherence to the shared values of the European Union (basic human rights and ethical standards). This is in line with the dimensions of anticipation and responsiveness.
5. **Open access** seeks to ensure the availability of research results to everyone.
6. **Governance:** both the formal regulatory environment and the informal interactions among innovation actors greatly influences the outcomes of innovation processes and therefore can make the final difference in terms of whether these outcomes harmonize with the RRI dimensions of responsiveness and reflexivity.

These six key elements have shifted the emphasis towards the practical implementation of RRI, and the EU is also committed to integrate RRI into the daily activity of research institutes (Arnaldi et al. [2015]⁶³; Forsberg et al. [2015]⁶⁴). During our research we have found no analysis on the inclusion possibility of RRI into walkability plans. In the next two subchapters we analyse how RRI keys and dimensions can be interpreted in the good and bad practices that are analysed in this catalogue.

Since RRI is a concept in the academic sphere and considers basic research, while walkability is mainly real innovation, we use the term *responsible innovation* in the followings.

⁶³ Arnaldi, S. – Quaglio, G. – Ladikas, M. – O’Kane, H. – Karapiperis, T. – Srinivas, K. R. – Zhao, Y. [2015]: Responsible governance in science and technology policy: Reflections from Europe, China and India. *Technology in Society*, Vol. 42, No. August, pp. 81–92.

⁶⁴ Forsberg, E-M. – Quaglio, G. – O’Kane, H. – Karapiperis, T. – Woensel, L. von – Arnaldi, S. [2015]: Assessment of science and technologies: Advising for and with responsibility. *Technology in Society*, Vol. 42, No. August, pp. 21–27.

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6.2 Walkability good practices in terms of RI

Looking at the good practices and the conclusion why they can be considered as good practices, the followings can be emphasized in terms of responsible innovation. The table below summarizes the connections between the strengths of good practices, RI dimensions and keys. Analysing the table, one can see that the main emphasis is on the inclusion dimension (i.e. the public engagement key) – it refers to that in walkability aspects, the more people are involved in the decision-making process, the higher the social acceptance is, and the larger impact it has on the society.

On the other hand, in terms of responsible innovation we missed the existence of the governance key (i.e. responsiveness dimension). The reason for this is that if there is no accepted rule what to do in case of misuse, it can be in a wrong hand, and social acceptance will decrease. We assume that collecting feedback and regular monitoring can be such kind of measures but there should be a top-down law, as well. Furthermore, collecting feedbacks and monitoring are key elements in the case of only a few good practices (out of the 18, only 5 mentioned them).

7. Table: Walkability good practices and responsible innovation

Strengths of good practices	RI dimension	RI keys
Positive impact on society	not relevant	not relevant
Detailed planning	anticipation, reflexivity, inclusion	public engagement
Good communication, awareness raising	inclusion, reflexivity	public engagement
Involvement of stakeholders	inclusion	public engagement, gender equality
Economic advantages	not relevant	not relevant
Environmental factors, sustainability	anticipation, reflexivity	ethics
Suitable for everyone	inclusion	gender equality, ethics
Smart solutions	reflexivity, inclusion	inclusion
Collecting feedback, monitoring	responsiveness	governance

Source: made by the author

As for the positive impact on society, “not relevant” is mentioned since in the framework of responsible innovation the positive impact on society is a must but it is a consequence of being a responsible innovator. We also marked the economic advantages as “not relevant”, as the framework of responsible innovation does not emphasize the economic advantages.

6.3 Walkability bad practices in terms of RI

Concerning the bad practices and the reasons why different walkability plans became unsuccessful, we can also analyse them in the terms of responsible innovation. In the case of bad practices, the positive impacts on society did not appear. Analysing the weaknesses of these practices and their connections to RI dimensions and keys (Table 8), the main concern is the lack of inclusion (public engagement), and – as we mentioned above – the lack of responsiveness (or governance). Without asking the people and citizens concerned, there could not be an innovative solution in a responsible way. As for the other problems identified, the anticipation appeared to be completely missing.

8. Table: Walkability bad practices and responsible innovation

Weakness of bad practices	RI dimension	RI keys
Scarcity of rules	responsiveness	governance
Not putting pedestrians at the first place	anticipation, reflexivity, inclusion	public engagement
Lack of communication	inclusion, reflexivity	public engagement
Inappropriate location	anticipation	public engagement
Unattractive public spaces	anticipation, reflexivity	public engagement
Safety issues	anticipation, reflexivity	ethics

Source: made by the author

All in all, inclusion (public engagement), anticipation (e.g. ethics) and responsiveness (governance) are key elements to ensure sustainable and socially accepted walkability practices. These practices highlighted that without the citizens and other stakeholders concerned there is no opportunity to implement a walkability plan in a good way.

7 Summary

The main objective of this Good Practice Catalogue was to collect, process and present good and bad practices from the field of sustainable urban mobility and walkability. The good practices serve as a role model for experts, developers and implementers, while demonstrating the bad practices facilitates learning from others' mistakes, thus avoiding the failure of interventions and actions. In this document, there are 47 good practices and 17 bad practices presented from a wide variety of countries.

As for the structure of the catalogue, there are three main chapters listing all the collected good and bad practices: complex walkability intervention good practices, individual walkability action good practices and bad practices. Each chapter includes subchapters, too, in order to group the practices taking into consideration which country they originate from: countries of the partnership of the CityWalk project or countries outside of the partnership of the CityWalk project. Every good practice description consists of the presentation of the main characteristics, benefits and advantages of the GP and implementation guidelines. Moreover, they are supported by photos. Obviously, in the case of the bad practices there are no implementation guidelines, since they are examples of what to avoid. Conclusions from the good and also from the bad practice presentations are drawn, so success and failure factors were determined based on the content of this catalogue.

Taking into consideration the characteristics of the presented complex walkability interventions and individual walkability actions from countries of the partnership and countries outside of the partnership, ten success factors have been phrased. It is important that the investment, intervention or action possesses a positive impact on society that is increasing safety, providing public spaces, etc. Detailed planning is also a crucial aspect: for example, preparing action plans and conducting surveys. Nowadays, good communication and awareness raising campaigns are also essential when making changes, since such actions contribute to a higher acceptance probability. Implementing interventions and actions can't happen without involving the relevant stakeholders, as the effects will concern them significantly and the whole process is about to better their lives. Based on the presented GPs, economic advantages and environmental benefits are also present at successful interventions and actions. It is at the utmost importance to respect all kinds of users when creating changes in the transport system, that is, we need to count with the characteristics of disabled people, elderly and children, too. The aspect of sustainability was also highlighted in various GPs. Furthermore, up-to-date, smart solutions are success factors in today's life, too. Last but not least, collecting feedback and monitoring the change is necessary.

In case of the bad practices, six failure factors were determined. These factors can increase the probability of not being successful when implementing an initiative, investment, intervention or action. Firstly, it turned out that the scarcity of rules is a significant risk; it leads to dangerous situations and a false judgement of walkability. Sadly, in not all walkability interventions and actions

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it is obvious that the most vulnerable participants of traffic (pedestrians and cyclists) should be at the first place. The lack of communication is another important failure factor: if a proper communication and promotion campaign and similar activities are not organized than there are more chances for failing. Moreover, we need to avoid inappropriate locations for interventions: the accessibility for all users is crucial. Unattractive public spaces are also possible to fall short of success, since if there is nothing to do and the environment is not welcoming, people will choose other places to meet and spend their free time. Last but not least, safety issues can decrease the number of users in a new intervention/action.

After the presentation of the good and bad practices and the conclusions drawn from them, there was a chapter about responsible innovation and its connection to the presented good and bad practices. The term of responsible research and innovation was clarified in this chapter, giving information about the main dimensions (anticipation, reflexivity, inclusion and responsiveness) and keys (public engagement, gender equality, scientific education, ethics, open access and governance). The success and failure factors of the good and bad practices were analysed from these points of views. As a summary, it was concluded that inclusion (public engagement), anticipation (e.g. ethics) and responsiveness (governance) are key elements to ensure sustainable and socially accepted walkability practices. The practices proved that without the citizens and other stakeholders concerned there is no opportunity to implement a walkability plan in a good way.

8 Annex

In the framework of the annex, we propose advisable communication actions, suggestions that can serve as the base of promotional materials. In accordance with this Good Practice Catalogue, there are several options to create valuable content that can raise the attention of relevant stakeholders and the wider public. We highlight two possible actions that can be done in order to communicate the results of this deliverable of the CityWalk project.

First of all, as all the good practices are supported by eye-catching photos, a video can be created presenting the majority or all of the good practices collected by this catalogue. If we take into account that there are forty-seven good practices, including all of them would result in an approximately 4-minutes long video (counting with 5 seconds per each GP). On the pictures, the title of the GP, the city and the country of origin could be indicated.

Secondly, the main findings of this catalogue – the success factors of complex walkability interventions and individual walkability actions – could be communicated in the form of an animation. If we count with 10 seconds per each success factor, the animation will be around 2 minutes long. The style can be educational as we phrase suggestions and guidelines for pilot cities and anyone who is interested to implement a successful complex walkability intervention or individual walkability action. The scenes of each factor should be in accordance with the main message; concrete examples can be added to ease understanding.