

CiViTAS | 2MOVE2

Moving together for a better mobility

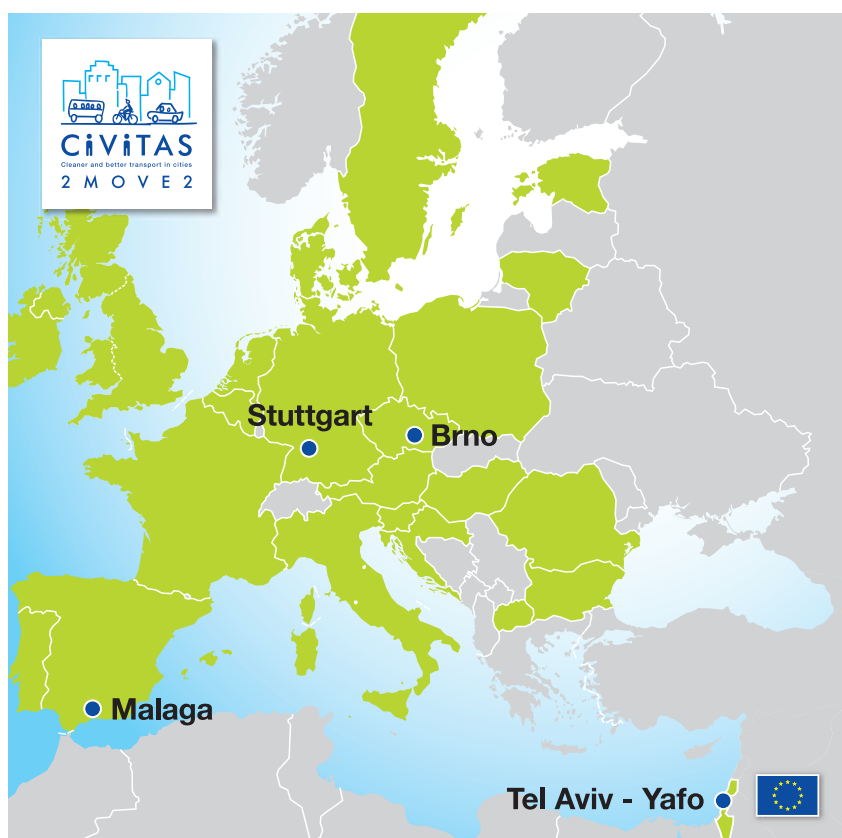
Final project brochure



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Source: CIVITAS Initiative

STUTTGART



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Ayuntamiento
de Málaga



SSP Consult
Beratende Ingenieure GmbH

University of Stuttgart
Germany

DPMB
Dopravní podnik města Brna a.s.

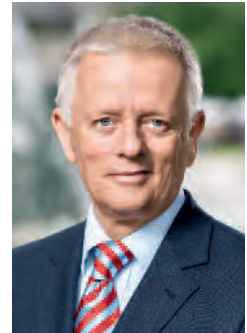


*City of Stuttgart*

Preface

In current political debates in many European countries we can observe a scepticism regarding the need for European institutions. The work carried out in the 2MOVE2 project has proven quite the contrary: European programmes such as the CIVITAS Initiative are an important and adequate platform for the improvement of city strategies. They play a significant role regarding the implementation of measures with a practical and visible impact on the daily life of citizens. Such programmes strengthen the relationship between different cities with similar challenges and they lead to a better understanding of each city's potentials of becoming a sustainable city.

I would like to express my sincere thanks to all partners in the 2MOVE2 project for their support, enthusiasm and cooperation during the last four years. We all can be proud of the results obtained in all partner cities. They provide detailed answers to the challenges we are facing in terms of increasing mobility demands, congestion, air quality and urban space. 2MOVE2 benefited from a strong support at the technical and political level. All our activities in the project were an integral part of the mobility strategy in our cities. Moreover, several results obtained in 2MOVE2 will be utilised in and transferred to other European cities and stakeholders. We have learnt a lot from each other in terms of content and management and I am looking forward to continue strengthening the close relationships that we have built with all our partners.



Fritz Kuhn
Mayor, City of Stuttgart

Introduction

CIVITAS 2MOVE2: Working together to make urban mobility cleaner and more human-friendly

2MOVE2 was a European project under the CIVITAS Plus II Initiative with a total budget of 9 million Euros and four partner cities: Stuttgart (Germany, project coordination), Brno (Czech Republic), Málaga (Spain) and Tel Aviv-Yafo (Israel). The project is supported by the Transport Engineers SSP Consult, the University of Stuttgart, the public transport company of Brno (DPMB) and the Technion - Israel Institute of Technology.

The main aim of 2MOVE2 was to improve urban mobility by implementing sustainable, energy-efficient urban transport systems in the participating cities, for the benefit of all citizens. Based on the idea to learn from each other by developing similar measures, the project also evaluated and compared the impacts and results in the respective city contexts. 2MOVE2 also aimed at increasing knowledge about innovative, integrated urban transport systems, providing networking for cities to assimilate best practices, evaluating impacts and disseminating results.

A special focus was laid on the deployment and validation of innovative mobility solutions for urban passenger and freight transport. Further emphasis was put on mutual exchange of experiences between project partners and the implementation of measures (22 in total), which support and enable the setting up of more sustainable transport systems. Topics addressed by 2MOVE2 range from e-mobility, freight, ITS-based traffic management to sustainable urban mobility planning (SUMP), cycling, public transport and corporate mobility management. Several innovations developed in the project can be adopted by other cities, such as the bus sensors for air quality in Málaga, the e-mobility information events in Stuttgart, the cycle-racks for buses in Brno and the urban transportation 'hackathon' for app development in Tel Aviv-Yafo. In effect, the project successfully contributed to enable the take-up of mobility solutions by local authorities.



2MOVE2 partners during a cycling tour in Tel Aviv-Yafo (2014)



The main pedestrian zone Königstrasse in Stuttgart

Welcome to Stuttgart – Germany

Stuttgart is the capital of the Federal State of Baden-Württemberg and forms with around 600,000 inhabitants the centre of the Stuttgart Region, which has in total 2.7 million inhabitants and employs 1 million people. Europe's strongest region in terms of exports supports its strength through the automotive and mechanical engineering sectors. Companies such as Daimler, Porsche and Bosch enjoy an excellent reputation worldwide. Several universities and numerous research institutions form together a strong research landscape. The city is surrounded by hills, vineyards and forests, and offers citizens and tourists many green areas for leisure, sport and recreation.

A special characteristic of Stuttgart is its international profile. People from over 170 nations live together peacefully. Stuttgart is modern, urban, cosmopolitan, and well known for its innovations. The city is well-acquainted with all its transport-related challenges, which result from high mobility demand of both citizens and the economy, but also with solutions for urban mobility aiming to increase the quality of life and to reduce the negative impact of traffic on the environment. In former decades transport policies in Stuttgart focused on private car transport. Since the 1970s the public transport network has been expanded significantly. Today, Stuttgart boasts an excellent local public transport system which offers high transport standards and is embedded in the regional public transport system.

Due to its topography, the city has severe problems with air quality. A lot of initiatives and technical developments have already been established to improve the situation. These measures involve clean air and noise reduction programmes including limited access zones, traffic calming zones, speed reduction on main roads, parking management, public transport priority schemes and traffic management amongst others. To further reduce traffic congestion various incentives are being implemented, such as park and ride stations, corporate mobility management assessment and additional offers in public transport.

On the international level, the City of Stuttgart coordinates the global network Cities for Mobility which gathers over 600 partners in 84 countries. Cities for Mobility is a platform for the exchange of know-how and practical experiences. Stuttgart has a large experience in European programmes, especially in the fields of mobility, environment and urban planning. In the past years, the municipality actively took part in EU funded projects as partner and coordinator.



Light rail in Stuttgart

Ambitions

The 2MOVE2 project was embedded in the mobility strategy of Stuttgart and the overall objective of the municipality to strengthen the city's position as an important European competence center for mobility. Stuttgart was highly motivated to engage in 2MOVE2 since the project allowed the **realization of innovative measures** in the field of sustainable urban mobility, which otherwise could hardly be implemented. Stuttgart's goal when starting 2MOVE2 was to obtain significant and effective progress in areas such as **electric mobility, emission-based traffic control, urban freight traffic and corporate mobility management**.

2MOVE2 represented also the ideal platform for creating new and long lasting cooperation links with European cities and stakeholders from the CIVITAS community. The project was also considered as an important opportunity for the City of Stuttgart to get inspired by innovative ideas and concrete projects carried out by other cities and to share its own experiences with the other cities. When starting 2MOVE2, the municipality determined that the outcomes are used as an **important source for guidance and support** to better understand the set of planning instruments in Stuttgart and to discover their potentials and weaknesses.



Measures and achievements in 2MOVE2

Implementation of a strategic campaign for e-mobility

This measure promoted clean energy-efficient vehicles and transport systems in Stuttgart. Special focus was laid on awareness raising and training activities. To this end, information events in the field of e-mobility were offered in city districts and for specific target groups. Furthermore, a workshop was offered to municipal experts for the inclusion of e-mobility in the development of new urban areas in Stuttgart.

Results

- Information and test events on e-mobility for 100 students and migrants of four language schools and one municipal enterprise, in three city districts, and a cargo bike event for citizens, municipal technicians and participants of the International Cities for Mobility Congress 2016
- Development of a comprehensive concept for the inclusion of e-mobility in urban planning processes
- Creation of a network of stakeholders from private sector and research
- Realisation of an international workshop about the inclusion of e-mobility in urban planning and environmental processes for municipal experts of Stuttgart (with input of experts from Zurich and Vienna)



2MOVE2 partners at site visit in Stuttgart (2013)



HGV priority network map Stuttgart

Priority network for Heavy Good Vehicles (HGV)

A recommended road network for Heavy Good Vehicles (HGV) was developed in Stuttgart, aiming at shorter, more efficient routes for urban HGV and protecting sensitive urban areas from HGV-related impacts. In a selected test corridor the existing dynamic traffic control system was upgraded to guide HGV traffic to alternative routes.

Results

- Creation of a new road map of the recommended HGV network (printed and digital versions) serving as planning tool for authorities and companies
- Traffic survey with dynamic guidance of HGVs showing that about 4.5 % of HGVs could be shifted
- Average analysed travel times on all routes with dynamic guidance shorter than without using the recommendation

Emission-based traffic management

A dynamic speed limit (i.e. responding to weather conditions and traffic volumes) was installed on the federal road B14 to help to reduce air pollutant emissions. The City of Stuttgart developed and implemented in real life a traffic control model for the inner urban area. The measure improved traffic flow, with particular focus on public transport, pedestrians and cyclists, avoiding any negative impacts on these transport modes.

Results

- › Operation of dynamic speed signs along federal road B14 for a better traffic flow and a reduction of stop-and-go traffic
- › Positive response to the measure in the local press
- › Useful tool for the daily operation of the Integrated Traffic Management Centre Stuttgart



Federal road B14 in Stuttgart

SPOTLIGHT MEASURE

Mobility Information and Service Centre Stuttgart

Mobility management assessment was offered by the City of Stuttgart for companies and building ventures in order to change the mobility behaviour of employees towards environmentally-friendly modes. The cooperation included mobility surveys for employees, information days and support in the development of concrete measures at companies. Additionally, the measure promoted activities of 'sharing' for citizens and commuters in the region through an extensive information campaign.

Results

- › Mobility surveys in three automotive companies, a major hospital and the state theatre, reaching approximately 20.000 employees.
- › Implementation of mobility management measures at company locations: Car sharing schemes, bike & scooter leasing, real time information on public transport connections, bike parking facilities, subsidized public transport tickets, and mobility information days
- › Increase of frequency of one bus line in the evening next to the Marienhospital
- › Mobility assessment for six building ventures
- › Media campaign "Travelling together" addressed to citizens and commuters



Advice for other cities

- › Cities need to take into account that during the project period changes on different levels are likely to happen, and they can be managed.
- › Cities have to put a strong focus on the visibility of project activities, giving citizens the chance to participate actively.
- › It is very important to convince companies to play an active role by designing their own mobility concepts.
- › In order to avoid an abrupt end of activities it is essential to create and foster networks of local actors that keep on working also beyond the project life time.

Politically speaking...

” The original role of Stuttgart in 2MOVE2 was defined as a “teaching city”. However, in the past four years Stuttgart has also been a “learning city”. Looking back, I am very grateful about having the opportunity to work together with the project partners and the whole CIVITAS family. Although the project has formally ended, we will use the experience and results to keep moving towards a city with a more human-friendly mobility for all citizens. ”



Dr. Martin Schairer
Deputy Mayor for Public Safety, Order and Sport
City of Stuttgart

What comes next?

Future activities in Stuttgart

Stuttgart has developed several results in 2MOVE2 that will be further exploited, being an integral part of the overall mobility strategy of the municipality. By developing a dynamic “Action Plan for Sustainable Mobility”, Stuttgart has gained a living SUMP instrument that focuses not only on planning but rather on the implementation of concrete actions. The exploitable 2MOVE2 products will be part of the respective “activity fields” of the Action Plan which will be regularly updated.

The standardized mobility survey is planned to be used for a survey among all municipal employees of the City of Stuttgart (19.000). The survey and the experiences in 2MOVE2 will be shared with the 30 biggest companies that regularly meet with the municipality. One important result that was achieved

within 2MOVE2 and which will be transferred to other companies is the successful promotion of the subsidized public transport ticket “FirmenTicket Plus” for employees. The concept for the integration of e-mobility in urban planning processes will be used in several urban development areas in Stuttgart. For this purpose, the municipality created a coordination unit for e-mobility which helps to achieve a closer cooperation between all relevant municipal departments and private stakeholders.

The HGV priority network map offers an improved basis for planning for freight companies. It also forms the basis for municipal traffic management, the design of traffic facilities as well as urban planning processes in Stuttgart. The municipality created together with chambers, companies and research institutions a working group on logistics which will define the process towards a comprehensive logistics concept of the municipality. The priority network is an important element of this process, a first project for “last mile” delivery will start soon.

The Stuttgart team

Project Coordinator / Measure Leader 5.01:

Wolfgang Forderer

Project Dissemination Manager, project coordination:

Patrick Daude

Project Dissemination Manager, SUMP and project

coordination: Dr. Nicolas Leyva

Site Coordinator: Manfred Wacker (University of Stuttgart)

Technical Management: Michaela Haseleu (SSP Consult)

Local Evaluation Manager: Lothar Neumann

(SSP Consult)

Measure leaders 5.06: Luise Gentès / Arne Seyboth

Measure leader 6.01: Gisa Gaietto

Measure leader 7.01: Regina Lüdert





Trolleybus in Brno

Welcome to Brno – Czech Republic

Brno, the second largest city in the Czech Republic, is simultaneously the major centre of the South Moravia Region. Nearly 400,000 inhabitants live in Brno and another 65,000 commute to Brno to work, study, use services or seek entertainment. Together with a dense network of medium-sized towns and villages (672 in total), Brno offers a well-balanced composition of infrastructure in the region. Its excellent transport infrastructure provides benefits to the whole region.

Brno offers its residents and visitors a high-quality, attractive natural environment for living, business and recreation. The city is a unique cultural centre for the whole region. Brno is as well remarkable for its unique architecture including icons of functionalism such as the Villa Tugendhat which features on the UNESCO World Heritage List.

The public transport infrastructure of Brno consists of 13 tram lines, 13 trolleybus lines, 37 day bus lines, 11 night bus lines and 1 ship route. Service is provided mainly by Dopravní podnik města Brna (Brno Public Transport Company) which is 100% owned by the City of Brno and is the internal operator of the public transport. Public transport is a part of the Integrated Public Transport System of the South Moravia Region (IDS JMK), which also includes local trains. The City of Brno faces the challenge of maintaining its relatively high share of public transport and fostering the use of sustainable transport systems.

The main goal of the municipality is to enable a more sustainable development and to increase the prosperity of the city. With regard to land use, the city needs to make available new housing areas and also developing areas in the new spatial plan. All these areas have to be well served by public transport to ensure that people have access to sustainable modes of transport. Other relevant areas that the municipality is focusing on in the field of mobility are walking and cycling as well as the connection with public transport. The City of Brno is currently in the phase of preparing a Sustainable Urban Mobility Plan (SUMP).



School children in Brno during mobility day

Ambitions

The City of Brno has been involved in European projects in the field of urban mobility from 2008 when the municipality was part of the CIVITAS ELAN project, which focused on the participation of citizens in decision-making processes in the field of mobility. As the City of Brno has one of the largest trolleybus networks, the participation in the Central Europe project TROLLEY was also successful. Sustainable urban mobility planning is one of the most important issues which cities all across Europe are dealing with, and therefore the City of Brno joined the CH4ALLENGE project (Intelligent Energy Europe Programme) which dealt with sustainable urban mobility planning.

Within the CIVITAS 2MOVE2 project the City of Brno has focused on

- › **freight logistics in the city centre**
- › **innovative parking measures** (construction of a Park & Ride parking facility)
- › **a feasibility study of emissions zoning**

The Public Transport Company (DPMB) has worked on

- › **reducing the energy intensity** of public transport vehicles
- › **extending the bicycle transport service** in public transport

All these measures helped to make public transport more attractive, efficient and multimodal.



Measures and achievements in 2MOVE2

Development of electro-mobility and introduction of electric minibuses

The aim of this measure was to introduce electric technologies for private and public transport in the city. In a first step, a feasibility study showed the possibilities to promote electric mobility. In the area of public transport it was planned to replace one bus line operated with conventional diesel buses by electric minibuses as environmentally-friendly solution. Due to institutional and time barriers the aim of this measure was partially not fulfilled.

Results and achievements

- › Development of a concept for the support and use of electro-mobility for private and public transport
- › Feasibility study on e-mobility and the opportunities to improve sustainability in the city
- › Testing of different types of electric buses (AMZ, Stratos, Siemens Rampini, ŠKODA Perun)
- › Support of electric minibuses by more than 80% of Brno passengers (survey during test phase)
- › Technical conditions for electric minibuses in Brno were prepared



Electric bus



City centre of Brno

Optimizing goods logistics in the centre

The city centre of Brno suffers under the permanently increasing traffic caused by supply of shops and business premises, as well as by transport of large shipments. A feasibility study for the optimization of the inner city logistic supply was conducted in order to introduce a more efficient city logistic system with less traffic in the city centre while ensuring the supply of goods.

Results and achievements

- › Cost benefit analysis with environmental indicators suggesting the development of logistic centres in Brno and scenarios for their operation
- › Study revealed that through the implementation of the new city logistic system approximately 120,000 vehicle-km per year could be saved
- › The City Logistics Centre only makes sense with respect to emissions if the big city ring is finished
- › More than 74% of retailers answered the survey – this means that retailers are interested and they perceive the delivery of goods as a problem, which they want to solve.

P&R concept and implementation of city parking system

This measure introduced a new parking system in Brno (P&R) in the framework of the existing city parking system. A new P&R facility next to a public transport station was implemented as part of the municipal strategy to motivate more commuters to use P&R facilities and to reduce traffic in the city centre.

Results

- › Implementation of a P&R facility with 184 parking places (including seven places for disabled people) next to an important tram stop that connects with the city centre
- › A pilot project which shows the need for additional park and rides
- › Analysis of nine locations for additional P&R facilities
- › Support for residential parking



Park & Ride facility in Brno



Traffic management centre in Brno

Central traffic management control centre

A complete operating system was developed providing information on technical infrastructure for all public transport modes in the city of Brno. Moreover, through a database that is accessible to emergency services and city maintenance crews, after the measure implementation it takes less time to conduct clean-ups and to normalize traffic in case of accidents.

Results

- › Improvement of public services by shortening the time necessary for the maintenance of infrastructure
- › Reduction of travel time in Brno under ordinary and extraordinary traffic conditions is by 2-20% (reduction of travel time of up to 20% in some cases)
- › Easier repairs and maintenance of public transport infrastructure without negative effects on other modes of transport
- › Entering data into the database is a continuous process that will be continued after finishing the CIVITAS 2MOVE2 project

Smart Parking in the city of Brno

In this measure the City of Brno improved parking management by providing public information on vacant spaces for the parking facilities and for a selected street in the city centre through advanced ITS and information technology. Real-time information on parking locations is provided into the vehicle to easily locate parking spaces close to its destination.

Results

- › Installation of 73 sensors on Rooseveltova Street which provide real-time information on vacant parking spaces to vehicles
- › Development of mobile application for the navigation to vacant parking spaces
- › Time reduction for finding vacant parking spaces on Rooseveltova Street (after implementation about 20% of drivers find easier vacant parking spaces than before)
- › Reducing the amount of illegal parking in the city centre



Smart parking in the city centre of Brno

SPOTLIGHT MEASURE

Extension of bicycle transport service in public transport

The measure helped to improve the service for public transport passengers in Brno who are interested in combining cycling with public transport. On one bus line connecting a nearby recreation area, buses were equipped with a special backside rack for carrying up to six bikes. It helped also to avoid conflicts with passengers who have baby prams or use wheelchairs as they have priority over other passengers.

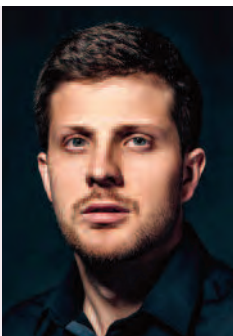


Results

- › Study to improve the service for cyclists in public transport vehicles in Brno
- › Five new buses equipped with backside racks (each one for six bicycles)
- › Implementation of new service for cyclists on one bus line connecting the city centre with a nearby recreation area
- › Report “bicycles on board” on innovative ways in European cities for regulating transport of bicycles in public transport.

Advice for other cities

- › Full support of political representatives is crucial as well as sufficient time and resources for the preparation and implementation of a measure.
- › Involvement of stakeholders during feasibility study is essential for success.
- › Synergies with other measures help to multiply the results.
- › The selection of a suitable location is important. Before the implementation of a P&R facility, it is recommended to carry out a feasibility study about suitable locations with respect to property rights and financial aspects.



Politically speaking...

” The CIVITAS project 2MOVE2 was an excellent opportunity for the City of Brno to cooperate with and learn from partners from Stuttgart, Málaga and Tel-Aviv. We gained valuable experiences in the field of smart parking and we also had the possibility to implement so called cyclobuses (with racks for bikes) whose technical solutions are being adopted also in other Czech cities. ”

Matěj Hollan
Deputy Mayor for Transport
City of Brno

What comes next?

Future activities in Brno

With regards to commuter traffic, one of the most important part of the parking strategy is Park & Ride. The first parking lot is already in service near the Central Cemetery and was built in the framework of 2MOVE2. The Municipality of Brno is currently working on the next six locations for P&R which should be put into service in the coming years. Additionally, the municipality is making progress at several locations that are planned to be made more attractive and liveable through residential parking.

In the field of parking sensors and mobile applications, it is expected that this kind of measure will be

implemented also in other streets of the city. The results could be up-scaled by installing parking sensors in the city centre (historical part) in 2017 and by widening the parking application for new parking garages (owned by the city or private) and installing parking sensors in additional streets.

In relation to bicycle transport, Brno will take further steps to improve the service in public transport. Based on the positive experience with the enlarged service for cyclists on line No. 55 during the summer season of 2015 and 2016, the public transport company DPMB considered the possibility of extending the service to another line from 2017. The new proposed line is No. 57 and connects the hilly part of Brno, which is a very popular tourist and leisure time destination. In 2015 DPMB (from June to October) transported 1006 cyclists, and in 2016 (from April to October) nearly 1600 cyclists.

The Brno team

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Measure Leader B7.02: Jiří Černý

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Tomáš Hebký (BKOM), specialist for EU projects





Port of Málaga

Welcome to Málaga – Spain

Málaga, with nearly 570,000 inhabitants, is the capital of the “Costa del Sol”, a metropolitan area of 1,200,000 people, as well as a worldwide famous tourism destination. The city is characterised by a strong demographic growth in the last 50 years, doubling its population from 1960 to 1980. Currently, innovation and cultural tourism are increasing their importance in the city’s local economy. The objectives of the transport policy in the city of Málaga are focused on getting a friendlier and more sustainable mobility for the urban environment and citizens, by promoting the coexistence and intermodality among the sustainable transport modes and establishing a more efficient and resource-saving mobility based on less pollutant means of transport such as collective public transport and electric vehicles.

In 2008, the city of Málaga initiated a Sustainable Urban Mobility Plan (SUMP), which was formally adopted by the city council committee in February 2011. However, due to the changes in the economic and social circumstances that have occurred in Spain in recent years, and the approval of a new land-use planning in July 2011, the update of both the current situation and the forecasts of mobility in the city of Málaga became essential. The review of the SUMP in Málaga was formally adopted by the city council committee in May 2015. Considered an essential instrument to improve mobility and, consequently, the quality of life in town, Málaga’s SUMP received the support of all the municipality’s political parties.

The Sustainable Urban Mobility Plan is considered to be the key instrument for the whole city planning, which includes the sustainable mobility strategy through concrete measures. Since the approval of its Sustainable Urban Mobility Plan several actions have implemented in Málaga, such as pedestrian and traffic calming areas, dynamic parking information services and priority lanes for public transport and bicycles. These actions, integrated within the general strategy stated in the SUMP, aim to achieve a modal split scenario, which shows the expected transfer of daily trips into sustainable transport modes:

The City of Málaga has a large experience as partner and as coordinator of other European projects in programmes such as HORIZON 2020, MED, SUDOE, INTERREG and URBACT. The municipality is also an active member of different European networks such as: EURO-CITIES and the CAT-MED PLATFORM FOR SUSTAINABLE CITIES, amongst others.



Ambitions

The City of Málaga joined the 2MOVE2 project primarily to make progress with the implementation of the Sustainable Urban Mobility Plan (SUMP) which should contribute to reach Málaga's long term objectives with regard to mobility. More specifically, Málaga aimed to achieve the following objectives over the four years of the project:

- › To **increase the modal share of cycling** from currently 0.4% to 2%, through the implementation of a public bicycle scheme, improving at the same time intermodality between bus and bicycle.
- › To **limit and regulate the presence of Heavy Goods Vehicles** (HGV) within the city, through the design and implementation of a HGV priority network.
- › To **encourage the use of more efficient and sustainable means of transport**, through the implementation of an awareness campaign on electric mobility and safe routes to school, focusing on university and primary school students.
- › To **improve traffic flow and reduce congestions**, through the implementation of an intelligent traffic control system which aims at reducing stop & go traffic as well as greenhouse gas emissions due to transport.
- › To **provide new decision support tools** for future policies linked to sustainable mobility, thanks to the installation of mobile pollutant sensors within the public bus fleet, which will provide detailed air quality information on different areas of the city.



Measures and achievements in 2MOVE2

Priority network for Heavy Goods Vehicles (HGV)

The measure aimed to design and implement a heavy goods vehicles (HGV) priority network in order to limit and regulate their presence within the city area. The network allows HGVs to access the city via a specific route and at certain times of the day, reducing their presence on the rest of the Málaga road network.

Results

- › Development of specific regulations to limit HGV traffic in the city
- › Successful traffic regulation of around 1,000 heavy vehicles per day within the urban area
- › Access permission during specific time slots to support commercial activity in the port of Málaga



Traffic center MOVIMA in Málaga



View on the port of Málaga

Intelligent traffic control and software development for the Management Centre of Mobility (MOVIMA)

The measure aimed to improve the traffic flow, by means of implementing advanced traffic control tools focused on reducing stop-and-go traffic, reducing and/or adapting average speed, and maximising the reduction of emissions through traffic control (NOx, PM10). The Automatic Incident Detection (AID) is the tool for processing information and creating an incident database.

Results

- › Improvement of the standard AID system for a better detection of traffic incidents
- › Increase of the reliability rate of the AID system
- › Optimisation of the communication procedure regarding traffic incidents
- › An internal set of procedures to manage the different communications that reach the Traffic Control Centre

Dynamic air quality measurement through mobile sensors installed on top of public transport buses

Mobile sensors for air quality measurement have been installed on top of buses of the public transport fleet. The sensors provide reliable real-time information on the evolution of air quality in several areas of the city, which are not covered by the four fixed stations currently existing in Málaga.

Results

- › Implementation of an innovative system for air quality measurement with reliable data from several areas in the city
- › Assessment of air quality levels before and after the measure implementation
- › Important source of information for decision makers for the development of new sustainable mobility measures

Public bicycle scheme

The City of Málaga introduced a public bicycle scheme which is combined with public transport. It contributes to increasing the share of bicycles in the modal split, by complementing the existing bicycle lanes and infrastructure. The system is available not only for citizens of Málaga, but also for tourists through special offers for short term use.

Results

- › Installation of public bicycle system “málagabici” with 39,500 registered users
- › 2,700 trips per day with public bicycles “málagabici”
- › High rate of usage (each bike is used around 8 times per day)

SPOTLIGHT MEASURE

Strategic campaign on electric mobility and safe routes to school

The campaign encouraged the use of more efficient and sustainable means of transport, through the implementation of monitored routes to school by bus, bicycle and by walking; open days have been organized for free testing of electric vehicles with the aim to break the “car culture” tradition, focusing especially on new generations and students.



Results

- › Free parking for electric vehicles in municipal car parks
- › Purchase of a municipal fleet of electric vehicles
- › Practical information for parents and students through trials about advantages of electric vehicles with over 100 visitors
- › 3 Safe Routes to School Campaigns (1 each school year) involving over 500 students
- › Innovative mobile application TRAZEO to monitor the progress of the safe routes and to actively involve parents and teachers

Advice for other cities

- › It is important to involve all the government departments that will have a role in the measure implementation and / or operation from the outset in order to agree on the activities to be undertaken and to guarantee the success of the measure.
- › It is advisable to hold meetings with the stakeholders since the beginning of the project in order to determine the possible affectation to their daily activities.
- › The integration of the SUMP of Málaga into the General Urban Plan of the city makes it a document of mandatory compliance by law, ensuring the implementation of all the measures and sustainable mobility strategies established on it. This integration can be an example to other cities in order to reinforce the mobility commitments.



Politically speaking...

” The experience of participating in the 2MOVE2 CIVITAS project has led the City of Málaga to implement successfully measures related to sustainable mobility as well as it has provided an enrichment by sharing experiences from other cities, opening the vision of sustainable mobility in Málaga towards new solutions, challenges and projects to be undertaken. ”

Elvira Maeso González
Deputy Mayor for Mobility in Málaga City Council
City of Málaga

What comes next?

Future activities in Málaga

After an enriching four years in the CIVITAS 2MOVE2 project, Málaga hopes to build on the success of the five measures that were implemented in the near future. Due to the success of the Public Bicycle Scheme, the City Council plans to extend the system to a total of approximately 123 stations and 1,400 bicycles. Regarding the Safe Routes to school programme, there have been discussions to join the European STARS programme to provide and to implement physical improvements (related to mobility and safety) in the environment surrounding two of the

schools involved in the project with additional funding. The Local regulation on Heavy Goods Vehicles will come into force in the near future after a short period of transition. With regards to the Automatic Incident Detection system, it has already become part of the daily routine of the MOVIMA personnel. This will be combined with the Integrated Control Centre that will be implemented during 2017. Finally, great interest for the Dynamic Air quality management through mobile sensors has been shown from other cities such as Madrid, which borrowed one of the sensors for a short period due to their recent problems with air pollution. At local level, the information from the CIVITAS pilot will be used to install more air quality sensors on public buses and/or on other vehicles in the city (taxis, courier delivers, etc). The future focus will be laid on the collection of real time data.

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Cycling along the Beach Promenade in Tel Aviv-Yafo

Welcome to Tel Aviv-Yafo – Israel

Stretched along a beautiful beach strip of the Mediterranean, Tel Aviv-Yafo is one of Israel's largest cities, a center of innovative and popular culture. The special blend of Mediterranean ambience, a seaside resort with over 1800 cafes, bars and nightclubs is what makes the city a popular tourist destination. Tel Aviv-Yafo's White City is a designated UNESCO heritage site. The 24/7 city, often called the city that never stops, was titled the 'Mediterranean Capital of Cool' by the New York Times.

Tel Aviv-Yafo is the largest and most populous city in the metropolitan area. The city's population numbers 433,000 (2016) and is spread over an area of around 52 km². Over 3.8 million people live in the metropolitan area, which covers an area with a size of 1,519 sq. kilometers. More than 57% of all the jobs in the banking and finance areas are concentrated in the city, which has become one of the top ten hi-tech centres in the world and one of the most innovative according to the Wall Street Journal. The city is also a centre of art and culture, housing three of the major museums in Israel and its four leading theatres.

In order to preserve its predominant role as a major city, Tel Aviv-Yafo strives to improve the quality of all transportation modes and to reduce congestion and the negative environmental impacts of traffic. As a major transportation hub, Tel Aviv-Yafo is served by a comprehensive public transport network, with many of the major national transportation network routes running through the city. Tel Aviv-Yafo is a member of the global network Cities for Mobility as well as a member of ICLEI (Local Governments for Sustainability), and is committed to reduce air pollution.



Cyclists in Tel Aviv-Yafo

Ambitions

The main goal of Tel Aviv-Yafo in the 2MOVE2 project was to promote and enhance sustainable, energy-efficient urban mobility in the city.

The Outline Plan for Tel Aviv Yafo, approved in 2016, is a statutory plan which retains the mission statement set-out in the Strategic Plan of 2005: **Development of a sustainable multi-modal efficient transport system**, which provides accessibility and a high standard of service for residents, commuters and visitors. A system that takes into consideration the **protection of the environment and the urban ecology**, as well as, the city's cultural heritage for the benefit of present and future generations.

One of the characteristics of the city centre is its mixed land use, which contributes to the vitality of the city. The viability of Tel Aviv-Yafo is highly dependent on the efficiency of the transportation system to move labour, consumers and freight between multiple points of origin and destination. Emphasis is laid on achieving and maintaining a more sustainable modal split. The Municipality of Tel Aviv-Yafo aims to achieve this through **innovative use of ITS and ICT** working in partnership with stakeholders and residents as well as promoting mobility as a service.



Measures and achievements in 2MOVE2

Electro mobility – charging stations study and electro-motorcycles pilot

Tel Aviv-Yafo is constantly looking at ways for reducing pollution and greenhouse emissions. To this end the municipality is spearheading a gradual transition to new automotive technologies, and foremost among them e-vehicles. Tel Aviv-Yafo took a two-pronged approach to e-vehicles: a feasibility study on deployment of charging stations and charging infrastructure; and the adoption of e-motorcycles into the municipality's motorcycle fleet. This was a top-down approach to raise awareness to the use of clean and energy efficient vehicles.

Results

- › Incorporation of 15 e-motorcycles into the municipality's fleet as part of a pilot
- › Positive cost benefit analysis of e-motorcycles
- › Greater understanding of the municipality regarding charging infrastructure and deployment requirements
- › As part of the municipality's bylaw regulating green building a code was approved mandating preparation for charging points for e-vehicles. The number of charging points will be a minimum of 5% of the parking spaces in each new build in the city. The regulations were published prior to a public hearing and came into force at the beginning of September 2016.



Electric scooter of Tel Aviv-Yafo Municipality



Logistics Forum in Tel Aviv-Yafo

Development of organizational and technical frameworks for facilitating an ongoing process of implementation of goods logistics strategies

Planning for mobility includes more than just moving people - it means moving freight and services as well. This measure focused on encouraging the involvement of logistical stakeholders and developing effective partnerships in order to achieve more sustainable goods distribution and to reduce the environmental impacts of freight transportation.

Results

- › Establishment of a Logistics Forum bringing together leading companies, suppliers and all relevant municipal bodies
- › The municipality gained valuable insight into goods logistics in the city
- › Development of a roadmap of tools in partnership with the stakeholders to create more efficient freight movement and goods distribution in the city centre

Public transport priority traffic management strategy

This measure enabled utilising innovative ITS methodology in the promotion of “Road User Hierarchy”. Traffic management strategies were implemented to achieve public transport priority while maintaining an appropriate level of service for other road users, in particular pedestrians and cyclists. A further aim consisted of increasing the attractiveness of sustainable modes of transport.

Results

- › Implementation of a new public transport priority regime in the Ibn Gvirol arterial
- › Key performance indicators (KPIs) showed that a balance was maintained between non-motorised preference and public transport priority
- › Reduction achieved in the variance of public transport travel time in the afternoon in the Ibn Gvirol arterial: 15% southbound travel and 47% northbound travel
- › Reduction of average travel time in the afternoon in the Ibn Gvirol arterial by 3.2% southbound and 6.7% northbound



Main street in the city centre of Tel Aviv-Yafo



Urban transport Hackathon in Tel Aviv-Yafo

ITS based transportation information provision

This measure provided a unified picture of traffic conditions incorporating data regarding events that may delay or slowdown traffic. An open-data platform, which is open and free of charge for all users, was developed to provide this unified picture and to act as a decision support system for both the individual traveller and the traffic operator.

Results

- › Over a million individual users through Waze
- › A saving in travel time for individual users of over 15% for routes indirectly impacted by an event and a choice of either changing departure time or mode of transport for routes directly impacted by an event.
- › The ability to plan so that the flow of traffic is maintained in the case of routes directly impacted by an event or the speed even better for routes indirectly impacted by an event.
- › A very successful urban transport Hackathon that produced transport related apps. The winning app, Alternativ, was used for the SUMP measure.

Raising the awareness to green arteries as part of a synergy of land use and transport planning and promotion of non-motorized transport modes

This measure focused on raising awareness to green arteries and increasing their utilisation. Green arteries represent linking elements that provide for continuity. They connect activity nodes (circuses, local parks etc.), with linear components (boulevards, esplanades, pedestrian streets, major shopping streets etc.), forming a continuous system of pedestrian and cycle paths and building up to an Urban Green Network. An awareness campaign and community event was used to promote a car-independent lifestyle and the use of a recently completed green artery.

Results

- A large community event was held in the selected green artery on the 24th of April, 2014, to coincide with World Earth Day, as part of the green agenda of the event and the philosophy behind implementation of the Green Network. The event was attended by over 500 people, as well as the mayor of Tel Aviv-Yafo
- 74% of the people surveyed at the community event stated they would use the green artery more
- Average increase of 13% in the number of pedestrians in the demo area
- Average increase of 6% in the number of cyclists in the demo area



Green artery in Tel Aviv-Yafo

The effectiveness of non-financial incentives in promoting the use of sustainable transport modes

This measure dealt with the effectiveness of non-financial incentives as a tool to change behaviour towards sustainable transport modes. A group of participants were given access to AlterNativ, a journey planner enabling the selection of desired transport mode based on travel time, cost, and calorie consumption or emission levels.

Results

- An innovative algorithm for enabling the selection of transport mode based on various criteria was embedded in the journey planner AlterNativ
- Another algorithm, separate to the journey planner, determined the transport mode actually taken based on geographic monitoring.
- Analysis of participants' activities within the Facebook group carried out based on performance indicators that were developed for this task
- Analysis was also carried out regarding reciprocity between level of engagement in the Facebook group & AlterNativ and the change in attitudes and travel habits associated with sustainable transport.



Journey planner AlterNativ

SPOTLIGHT MEASURE

Innovative transport solutions for high density employment areas

The main aim of the measure was to increase sustainable mobility through a change in the modal split in favour of collective transport modes. The activities involved the provision of tailor-made transport services to and from transport hubs to areas of high density employment. The measure helped to realise the potential such services have for solving the problem of the "last mile".

Results

- Development of tailored collective transit solutions in consultation with stakeholders
- Introduction of an improved shuttle service with both increased capacity and frequency leading to an increase in use of the shuttle service of 20% in the morning hours and 13% in the afternoon
- 84% of the users, after the service was improved, use the shuttle daily and 76% were satisfied or very satisfied with the (improved) service.
- Modal-split: Decrease of 6% in the use of private cars and an overall increase of 7% in the use of the new shuttle service
- In addition to the improved shuttle service a trip sharing app dedicated to Atidim Park employees was also launched. The app was not a success during the trial period, however it may be that successful penetration of the app requires a longer period of time. The Atidim Park management decided to continue the use of the app.



Advice for other cities

The success of the 2MOVE2 project in Tel Aviv-Yafo was due in large part to the willingness of the various municipal departments to commit to the project.

This willingness was enabled by the strong political backing the project received throughout the four years. Yearly, conferences held for municipal employees and other relevant stakeholders on the measures provided a wide forum to disseminate the activities carried out as part of 2MOVE2.



Politically speaking...

“ The CIVITAS 2MOVE2 project enhanced our understanding of mobility as a concept and as an arena for concrete actions. The experience of successfully implementing measures that advance sustainable mobility in the city was unparalleled. Our vision of what could be achieved was enriched by sharing ideas and practical solutions with our partner cities, Stuttgart, Malaga and Brno. There is no doubt that we will take everything we have gained in the project and continue forward to the challenges remaining with eyes open to new and creative solutions and a rethinking of what mobility in the city should and could be.” ”

Meital Lehavi
Deputy Mayor for Transport, City of Tel Aviv-Yafo
City of Tel Aviv-Yafo

What comes next?

Future activities in Tel Aviv-Yafo

In order to ensure that the 2MOVE2 project results are mainstreamed and sustained well beyond the project period, Tel Aviv- Yafo will stimulate the continuity and transfer of outputs to further initiatives. The Municipality will further engage its stakeholders so as to enhance the understanding of the importance of what was achieved during the project. For example, one of the findings of the goods logistics measure carried out was the need to incorporate logistics into the work of many of the municipal departments. Therefore, dissemination of the understandings reached from the Logistics Forum will be undertaken through a series of workshops. The first workshop was held in July, 2016.

As part of its policy of encouraging the use of non-motorised modes of transport, the municipality aims

to incorporate elements of the green artery approach in any street undergoing refurbishment. Building up the green arteries into a green network with the hope being that it is expanded into the neighbouring cities. However, this expansion into neighbouring cities requires agreement of these cities and statutory approval. Therefore, there is no guarantee that it will be possible to achieve this second level of up-scaling. At present the relevant principals within the municipality (at deputy mayor level) are carrying out an open dialogue with their counterparts in the neighbouring cities. Tel-O-Fun, the bicycle rental scheme network, has been expanded into five additional cities within the metropolitan area. A continuation of the work on parking standards policies - determining complementary transport solutions for areas where the search time for a parking space and the congestion levels - is expected to increase significantly. Waze which regularly uses the information provided by Rav Aviv, entered into a further collaboration with the municipality and provides traffic speed data for 20 selected arteries. The traffic speeds are retained and provide historical analysis.

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Deputy Mayors of the four 2MOVE2 cities at signature ceremony of the 2MOVE2 Charta at CIVITAS Forum 2016

Sustainable Urban Mobility Plans in 2MOVE2

Sustainable Urban Mobility Plans (SUMP) played in all four cities a key role to develop the future transport strategy. While Brno developed a completely new SUMP the other three cities improved and expanded their existing mobility plans by closing gaps identified in comparison with the SUMP guidelines of the European Commission. A careful analysis of the existing plans was done. The strong political commitment in all four cities was emphasized through the signature of the “Charta of 2MOVE2” on SUMP by political representatives of all four cities during the CIVITAS Forum in Gdynia in September 2016.

Results

- New SUMP developed in Brno
- Improvements of existing mobility plans in Málaga, Stuttgart and Tel Aviv-Yafo
- Self-assessment of the four 2MOVE2 cities based on the EU guidelines on SUMP, confirming that already the existing mobility plans in all four 2MOVE2 cities are equivalent to excellent SUMP
- Cooperation and exchange on the development of SUMP and related topics between the four 2MOVE cities.
- Signature of the “Charta of 2MOVE2” on SUMP



Why dissemination and evaluation matter

Dissemination

The partner cities of 2MOVE2 implemented a great number of innovative technology and mobility policy solutions, which can be replicated in other cities all over Europe and beyond facing similar challenges. For this reason, one relevant task within the project was the dissemination of experience and knowledge obtained thanks to the 2MOVE2 measures.

The dissemination and communication approach in 2MOVE2 aimed at demonstrating the importance of mobility research for our everyday lives. For this reason, the **Dissemination Plan** included information campaigns, workshops and other events with the participation of citizens and other relevant stakeholders. The results obtained were spread among decision-makers, the private sector and the scientific community. A great number of dedicated actions have been undertaken to achieve this goal, for example:

- › Four international technical workshops targeted at interested experts and other stakeholder
- › International 2MOVE2 events such as the European Parking Conference in Brno, the Cargo Bike road-show at the Cities for Mobility Congress in Stuttgart, and the active participation at the POLIS and ECOMM Conferences
- › Signature of the 2MOVE2 Charta by political representatives of all cities in the framework of the CIVITAS Forum 2016 in Gdynia, Poland

The Dissemination Plan is closely linked to the **Exploitation Plan**, which was produced at the end of the project. For this, an assessment of the added value and the exploitation possibilities of the outcomes was carried out summarising the main exploitable knowledge acquired in 2MOVE2. In total, 20 exploitable products were developed by the partner cities, covering a broad range of topics in the field of urban mobility. These descriptions provide a good and concise overview of the project products (e.g. bike rental system, air sensors, mobility surveys, traffic management software) that can be transferred to other cities.



Evaluation

In most countries it is common sense to assess mobility projects, especially when such projects are of regional or national importance or when competing with each other in view of scarce resources. On the local level evaluation of mobility actions is not common, except an assessment is required to receive grants. The CIVITAS approach strengthens the systematic evaluation of the investigated measures. These systematic evaluations differ by measure, but they follow a general structure:

- › Clear definition and description of each measure at the beginning.
- › Formulation of specific objectives for each measure, if possible by quantitative terms (e.g. reduction of vehicle energy consumption by 2%, number of users on a new cycling path).
- › Identification of measure-specific impacts to be investigated as well as of the methods to get this information (e.g. countings, surveys, traffic modelling). This step is supported by guidelines from previous CIVITAS programmes which have been adapted.
- › Detailed plan for evaluation for each measure including time plan, specific assessment activities, responsibilities).
- › Collection of data and information of measure-specific relevance before start of the measure, during the implementation of the measure and during normal operation.
- › Experiences of the measure implementation (e.g. modifications, problems, public and stakeholder involvement, supporting or obstructive elements, lessons learnt, recommendations).
- › Description of each measure and its evaluation in an autonomous document (MERS = Measure Evaluation Results Sheet).

Finally, a summary Evaluation Report was produced in 2MOVE2 to give an overview on the assessment results. This overview includes also recommendations and helps the CIVITAS community to learn from the experiences made in 2MOVE2. For more details of a specific measure, interested persons can use the specific MERS which are available for the public on the CIVITAS website www.civitas.eu. Results of the evaluation are also used for dissemination and exploitation in other documents.

The practical work on evaluation involved the responsible measure leader of each measure, an evaluation manager for each site, an evaluation manager for the whole 2MOVE2 project, and others (e.g. civil servants, subcontractors). The work within this group as well as the cooperation on evaluation with the sister project DYN@MO and the supporting project WIKI was very convenient and fruitful.

Conclusions and recommendations

The experience made within 2MOVE2 – especially on measure level – constitutes an important basis for the implementation of future measures in the field of sustainable mobility at the local level. Members of the CIVITAS community and many other stakeholders can also profit from the transfer of knowledge and experience produced in the framework of the project. Therefore, the following general conclusions and specific recommendations have been drawn from 2MOVE2 in different action fields:

Collective passenger transport

- It is possible to create **public transport priority** using signal programme planning. However, the priority given is limited due to the need to maintain an adequate level of service for other road users and the traffic from minor crossings.
- An **Open Data Platform** is a useful tool for disseminating transport and mobility related information, but its effectiveness is enhanced when used in conjunction with other means. This is for example the case in Tel Aviv-Yafo, where the application programme Waze brought the information provided by the Open Data to millions of users.
- Scheduling and shortening of waiting times improve the **attractiveness and extent of use of public transport** and complementary services, such as the shuttles in the Atidim Business Park in Tel Aviv-Yafo.



Car-independent lifestyles

- › **Changing the behaviour of road users** through non-financial incentives requires a significant length of time. In accordance with the purposes of the experiment carried out in Tel Aviv-Yafo, active participation affected positions taken and the behaviour of the participants. The use of smart phones opens up many possibilities with regards to dissemination of travel information and adapting the message to the participants as well as spatial monitoring of mobility patterns.
- › The **free registration to the public bicycle scheme in Málaga** during the first year has allowed a high number of citizens to enjoy the system. It is advisable to establish an annual fee per member, as insurance to cover civil liability and accidents' expenses that may result from its use.
- › It is advisable to carry out **safe routes to school programmes with sufficient frequency** so that school children become familiar with them, becoming a habit and helping to improve the state of the surroundings of the schools, as they influence the willingness of parents to let their children participate.
- › It is recommended to **avoid dates close to holidays or exams** when holding awareness campaigns that focus on university and schools communities.
- › **Choosing the easiest solution for transporting bicycles in public transport:**
Loading and unloading bikes is a process which needs to be carefully organized in the time schedule of public transport. A possible way to avoid delays, is to have only a few important stops on the route (e.g. intermodal terminals). The stops used for loading and unloading bikes should be marked with a bicycle symbol in the timetables. Other stops can be used only by passengers without bicycles.





The public transport company of Brno (DPMB) chose the easiest and fastest way of hanging of bicycles on buses without delaying traffic. The experience showed that the standard bus (2,5m width) can comfortably carry six bicycles on the backside rack. If the public transport provider wants to buy a trailer or backside rack, all technical details of the vehicle (bus) must be taken into account (if technically feasible). The best way is to discuss these issues with the bus manufacturers before the vehicle is produced.

- › **Security of bicycles in public transport:** It is recommended to use a simple lock to secure the bicycles and it is also very convenient to equip a bus with backside rack with a rear camera and LCD display inside the bus; this way the driver and the passenger can see the bikes on the rack during the journey in the bus.
- › **Careful selections of lines and locations for implementation of cycle-buses:** It is highly recommended to make a careful study of suitable lines before deciding the implementation. The line should link suburban recreation areas with the central part of the city or intermodal terminals.
- › **Good insurance in case of accidents:** A good insurance that covers also damages of bicycles caused by wrong handling, human factor, traffic accidents caused by the driver of the PT vehicle and other unforeseen events (for example natural disasters) is highly recommended.
- › **Raising public awareness:** Campaigns and similar activities to promote the new service of bicycle transport in buses are strongly recommended.

Mobility management

- It is important to motivate **companies to play an active role** in the promotion of sustainable mobility by developing mobility concepts.
- Mobility managers should invest **enough time for motivating companies** to engage in corporate mobility management. Good practices from other companies as well as concrete facts and figures showing the benefits for companies that introduce mobility management are very helpful.
- An additional objective should be to **bring together companies** in a defined structure (working groups, conferences) in order to promote the mutual exchange and a close cooperation among them.
- **Awareness campaigns** informing on alternative transport services (such as car pooling and car sharing) are an important instrument to sensitize citizens and commuters and to facilitate the shift towards environmentally-friendly urban transport.





Parking

- › The decision support tool for parking in Tel Aviv-Yafo produced a **methodological framework**, which can be embedded in a wider framework of the city's land use planning and parking policies. The tool was used to take better decisions related to the location of employment and parking supply. When new solutions are introduced and the results monitored, the decision support tool can serve as an evaluation mechanism and thus provide a basis for further policy maintenance and refinement.
- › The selection of a **suitable area for Park & Ride** facilities is of great importance. Based on the experiences in 2MOVE2, the City of Brno recommends to realize a feasibility study about suitable locations with respect to property rights and financial aspects before the implementation of the Park & Ride facility. In addition to this, the support of political bodies is necessary for a smooth decision making process and the implementation of Park & Ride facilities.
- › Careful selections of locations for the implementation of Park & Ride. It is recommended to define more than one suitable location for Park & Ride facilities in order to avoid that **unexpected circumstances** impede the smooth implementation of the measure within a specific time frame.
- › **Mobile parking applications** can contribute to reduce parking search traffic in cities. The process of tendering, choosing a supplier and implementing the system can be a long process. It is therefore important to ensure that adjustments can be made with the supplier, especially at the beginning of operation.

Feasibility studies

- › **Feasibility studies and background data collection:** An intensive data collection phase is required in order to clearly understand the rationale behind urban goods delivery activities and to produce a comprehensive action plan based on it.
- › **Involvement of stakeholders** during the development of the feasibility study is essential for its success.
- › **Synergies with other measures** multiply the results. The feasibility study on goods logistics was used in the analytical part of the Brno SUMP and served as important source of information for the Municipality.



Urban freight logistics

- › Freight logistics: This is a sensitive subject where conflicts between different stakeholders are common; therefore a **careful handling of the needs and interests** by the municipality is important. Working in partnership and with a continuous exchange with the relevant stakeholders is a crucial element to improve freight delivery in cities.
- › With the aim of minimising the impacts of the HGV traffic regulation (due to the restrictions proposed by affected companies/carriers) all relevant actors should be involved in early phases of the process. The collected information can be used to redefine the restrictions and **reduce the negative effects** on the local commercial activities.



Clean fuels and vehicles

- › Electric mobility: Soft measures (e.g. campaigns, networking events, action days) should not be neglected by cities when it comes to promote the use of electric vehicles. A **target oriented approach** is necessary to get the full support from relevant stakeholders (such as retailers, car dealers, chambers of commerce) that are necessary for the successful promotion of e-mobility.



Management of European projects

- › Take into account that during the project period **changes on different levels** are likely to happen, and they can be managed.
- › Cities have to put a strong **focus on the visibility** of project activities, widely disseminating the achievements and giving citizens the chance to participate actively.
- › Leave enough **time for implementation** of measures. Unforeseeable events are common.
- › Check the needed **number of employees** for your measures and clarify in advance the necessary procedures for hiring additional staff.
- › When using subcontracts, make sure there is enough time for the **tendering process** as these can take a lot of time.
- › In order to avoid an abrupt end of activities, it is essential to **create and foster networks** of local actors that continue to work also beyond the project life time.



CiViTAS | 2MOVE2

in numbers

4 cities

4 consortium meetings

8 partners

10 thematic workshops

20 exploitable products

20 different brochures and flyers

22 measures implemented

7.000 completed questionnaires from mobility survey

20.000 employees surveyed for corporate mobility management

1.970.000 inhabitants benefit from the measures

9.100.000 million Euros total budget of the project



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Moving together for a better mobility

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