



Everyone's a Winner

The First 10 Years of the CIVITAS Awards



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This publication charts the growing prestige of the CIVITAS Initiative Awards over 10 years, from 2004 to 2013, and, more importantly, puts the spotlight on the winning cities and their achievements.

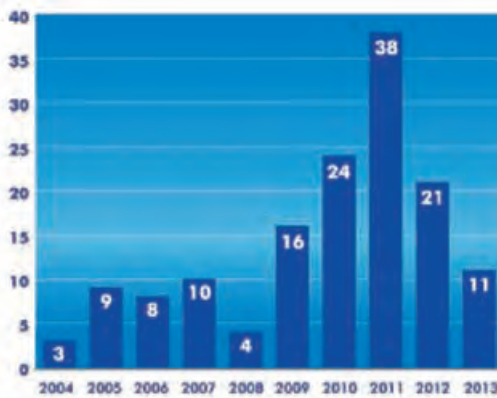
The annual CIVITAS Awards can be considered Europe's highest form of recognition for clean urban transport. The awards honour and highlight the most outstanding, ambitious and innovative city activities in the field of sustainable urban mobility. The awards are currently distributed in three categories:

- **Category I: Technical Innovation.** Applicants are asked to describe how research was put into practice, the level of stakeholder engagement, the extent of measure integration, and the potential for transferring results to other cities.
- **Category II: Public Participation.** Applicants must describe the level of stakeholder engagement in the design and development of sustainable urban mobility measures, focusing on who was involved both before and after the measure.
- **Category III: CIVITAS City of the Year.** Applicant cities are assessed according to the level of ambition of their sustainable urban mobility policy, the level of stakeholder engagement, and the challenges and obstacles that had to be overcome.

These award categories have evolved since the start of the series. Following a strategic evaluation in 2009, the Technical Innovation award was introduced in place of the CIVITAS Demonstration City award for technical excellence; and the Public Participation award replaced the CIVITAS Non-demonstration City award. Both groups of cities subsequently became eligible to apply in all three categories.

Winners are selected by the CIVITAS jury, which includes three permanent members (experts in the field of urban mobility) and two rotating members (representatives of the CIVITAS Forum host city and the previous CIVITAS City of the Year).

Over the years, the prestige of the awards and the number of applicants have grown significantly. The highest number of applications were received in 2011. A full list of applicants during the 10 years can be found in Appendix II.



The aim of the current compendium is to showcase the winning cities' achievements and to highlight progress made in the successful measures since the award was granted. The chapters corre-

spond to the three award categories, and each profiles winning cities in chronological order.

In each case, the city profile is followed by a description of the city's award-winning set of measures, along with contact information, follow-up and images. Winners are tagged according to CIVITAS thematic category and sub-category (see the appendices for details). Appendix I lists the award-winning cities by thematic category and sub-category, while Appendix II summarises award winners and applicants by year.

The content of this publication is based on award applications, jury evaluations, CIVITAS publications, personal e-mail communication and Internet research. The publication was compiled in 2014 at the end of the third phase of the Initiative, under the CIVITAS VANGUARD project. The overall aim is to motivate other cities in Europe and beyond to join the CIVITAS Initiative, implement ambitious urban mobility measures, and participate in future CIVITAS Award competitions.

The CIVITAS Initiative for cleaner and better transport in cities was launched in 2002. Its fundamental aim is to support cities to introduce ambitious transport measures and policies towards sustainable urban mobility. The ultimate goal is to achieve a significant shift in modal split towards sustainable transport by encouraging innovative technology- and policy-based strategies. Members of the CIVITAS Forum Network that have signed the CIVITAS Declaration and committed themselves to sustainable urban mobility are eligible to participate in the CIVITAS Awards.

Csaba Mezei
REC





CATEGORY I Technical Innovation

(Demonstration City category before 2010)





CATEGORY I: TECHNICAL INNOVATION

TRANSPORT TELEMATICS

ITS-based enhancement of public transport

COLLECTIVE PASSENGER TRANSPORT

Service improvements



Aalborg, Denmark (2004)

The third largest city in Denmark, Aalborg has for many years been a pioneer in the field of sustainable development. The city made efforts to put sustainability on the European agenda back in 1994, resulting in the creation of the Aalborg Charter, signed by more than 2,500 municipalities across Europe. This was followed in 2004 by the Aalborg Commitments, a more binding document involving around 640 municipalities. Also in 2004, the CIVITAS Awards were handed out for the first time, with Aalborg adding to its sustainable development credentials by being named one of three winners under that year's theme "New Mobility Culture Leadership".

Ambitious measures

The city of Aalborg made significant efforts to change the image of its public transport system in order to increase its modal share in the city. Implemented measures included providing citizens with service improvements, which resulted in a radical transport plan that transformed the existing star-shaped structure into a network design with radials and ring lines. A new bus terminal was built, and local and regional bus lines and a new local train line were integrated into Aalborg's new public transport structure.

The new elements in the system were fitted with the latest technology: intelligent transport systems (ITS), bus computers, real-time passenger information, electronic message boards and mobility centres. Attractive design was also taken into consideration, and one of the city's new rail stations earned a top award "for elegant construction adapted to the older part of town and for excellent choice of construction materials." As many people associate public transport with inefficiency, dirt and decrepitude, a clean, modern and reliable system goes a long way towards improving how people view public transport in general.



Political support and technical competence

In adopting the Aalborg Commitments, the local authority pledged to select priorities appropriate to local situations and needs, and also to take into account the global impact of its activities. To this end, it initiated a local, participatory process to identify specific targets, as well as timeframes for monitoring progress in achieving them. By gaining strong political support, it was possible to procure larger investments for measures to upscale the installation of bus computers and real-time information.

The city's technical competence led to the introduction of a public-private car-sharing scheme, with a commercial operator assuming the financial risk involved. Based on the number of registered members, the scheme proved a success.

Local culture

The city of Aalborg was able to draw on a long tradition of public involvement in order to implement new measures, as evidenced during the VIVALDI project. Public participation was an important com-

ponent in the introduction of the car-sharing scheme and the new public transport plan. The city's layout and demography were taken into consideration when placing bus stops, with all stops ideally being situated within a reasonable distance of a car-sharing station. Traffic signalling was also used to provide maximum service improvements for users.

Monitoring

Monitoring and evaluation are an integral part of developing and implementing new measures in Aalborg. An evaluation of the new train line was made just five months after it opened in order to gauge users' acceptance of the new service and to obtain ideas for improvements. The evaluation, which was based on both quantitative and qualitative data, resulted in more information being made available on signs and at stations, and in the rescheduling of some departure and arrival times. The new car-sharing scheme is also monitored closely, and positive changes have been made based on user feedback.

FOLLOWING UP: Travelling Smart

Acknowledged in 2004 for its efforts to improve the image and accessibility of public transport, Aalborg has since tested and introduced an electronic ticketing system on public transport buses to boost its Travel Smart initiative. New ticketing units were installed in April 2011, and a trial involving 45 buses was implemented successfully in May 2011. An information campaign and introductory offers attracted 500 test users within the first month. Users are offered three alternatives: personal, family or anonymous travel cards that provide various discounts and levels of flexibility. In September 2011, the measure was extended to 130 buses in the Aalborg network (80 financed through ARCHIMEDES), and included an education campaign for drivers. A new marketing campaign was implemented the following month for young people and students.

The results illustrate the success of the measures. The first testing week in May 2011, involving 45 buses, showed that 49 active journeys were registered, with a total of 120 smartcard trips. Five weeks later, there were 255 active journeys and 650 smartcard trips. The first 500 test customers were able to purchase the Travel Smart card at a discount, which proved a big success. In a 2011 online survey, 76.6 percent of users stated that they were satisfied with the card; and 31.8 percent said that the card would encourage them to use buses and other public transport more often. The only significant downside was that 28.8 percent of passengers experienced technical problems more than once, although this figure has been decreasing ever since. The latest figures show that 86.3 percent of passengers are satisfied with the fare system, which is based on the idea that the more you travel, the cheaper each journey becomes.



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CATEGORY I: TECHNICAL INNOVATION

COLLECTIVE PASSENGER TRANSPORT

Ticketing and tariffs

Service improvements

Intermodality

Kaunas, Lithuania (2005)

Kaunas is the second biggest city in Lithuania, with a population of 381,000. It has a rich history, beautiful landscape and strong industrial sector. Located at the confluence of the two biggest rivers in Lithuania, the Nemunas and the Neris, Kaunas has a strategic role from both the military and trade perspectives. Under CIVITAS I, Kaunas focused on the development of its urban transport network, in particular on pricing strategies and the stimulation of public transport use. Kaunas was the first city in Lithuania to present minibus schedules along with bus and trolleybus timetables on the public transport website. This form of public transport integration was based on negotiation and the changing of administrative processes, including the gradual integration of minibuses into the general public transport system and the installation of related information at bus stops.

Ambitious measures

Kaunas has carried out several ambitious measures related to improving its public transport system, including modernising the public transport fleet; improving the use of the trolleybus network; promoting the public transport network to international visitors through cooperation with tourism departments and tourist centres; improving the public transport management system to allow greater two-way communication with public users; constructing a network of cycle routes throughout the city; monitoring air quality and reducing pollution levels in the city centre; and actively participating in European Mobility Week since 2001.

Through a public-private partnership, which is unusual in post-Soviet countries, Kaunas approved a municipal plan with private companies who provide micro-taxi (minibus) services around the city — a service that has now been incorporated into the public transport strategy.

Political support and technical competence

The nature and range of the initiatives made available through the VIVALDI project have made it easier to obtain political involvement and support. Because the city's politicians have been able to clearly see the impacts and benefits of VIVALDI measures, the city has been successful in obtaining EU Structural Funds and other EU-based projects. This, in turn, gives the city's technical staff the confidence and

added competence to implement measures successfully. There is also an informal network of mentors and experts from CIVITAS partners on which the municipal authority can rely to help with tricky issues concerning new initiatives and practices.

Local culture

As the industrial centre of Lithuania during the Soviet era, Kaunas faced the greatest challenges following the fall of the Soviet government and the gaining of independence. Large industrial centres experienced a huge fall in production and often had to close or relocate to smaller premises. This happened on quite a large scale across the city, and the new economic situation called for the redesigning of the city's public transport routes, which was carried out with great success.

Public transport has historically been the cheap travel option in Kaunas, thus it was a huge challenge to make technological improvements while at the same time keeping costs for passengers as low as possible. The solution was to introduce a single monthly ticket that allowed travellers to use the services of either of the city's two main transport providers. The single monthly ticket, which cost the equivalent of EUR 16, offered good value for money while at the same time enabling improvements to transport services and vehicles.

The city's public transport management system relies on the careful analysis of traffic flow to ensure that all planning is based on actual vehicle usage,



Monitoring

Kaunas consulted with public users through quantitative research on passenger flows, which enabled the city to make the most of the PIKAS software system for traffic planning and management, the main VIVALDI-funded measure. The city has also monitored air pollution and noise levels since 1993: the information is used in decision making in relation to urban planning, traffic flow optimisation and general environmental regulation. Continuous, automatic air quality monitoring is carried out at three permanent stations, as well as through a mobile monitoring laboratory.

as well as on travel peaks and troughs throughout the day. Also, the city actively encourages members of the public to contact the municipality through its transport website, using the feedback/comments form.

As part of its contract with the public transport service providers, the city of Kaunas completes a customer satisfaction index each year and, based on the results, makes necessary changes and improvements to services and infrastructure.

FOLLOWING UP: Flow management

Through its continuing efforts to improve its public transport system and attract new passengers, Kaunas has modified public transport routes, introduced a new software system to create route and schedule databases, and improved service quality. With a fairly centralised city-based public transport service comprising buses, trolleybuses and over 600 minibuses (with 12 to 16 seats) operating on 46 public transport routes, Kaunas needed to coordinate and optimise the schedules and frequencies of all three service providers.

With the help of the new PIKAS software, timetables were designed taking into account increases and decreases in passenger flows throughout the day. This makes it possible to base timetables not only on interconnecting services but also on variable passenger counts on bus, trolleybus and minibus lines.

Kaunas completed a number of measures towards its ultimate objectives: new ticket validating machines were installed on buses and trolleybuses; new bus shelters were constructed with better information displays; the PIKAS software was introduced to improve public transport management and attract new passengers, as users are now able to access all public transport information via a single website; and public transport routes were reviewed, with some routes cancelled and others better managed. The new system was designed so that trolleybuses serve the central part of the city, buses operate in the industrial and residential districts, and minibus taxis operate in the suburbs (i.e. on the longest routes).

Tangible successes have been achieved: Kaunas is the first city in Lithuania to present timetables for minibus taxis together with bus and trolleybus timetables on its public transport website. The website attracts an average of 700 hits per day. Also, the cancellation of 14 inefficient routes has had a positive effect on air quality through reduced emissions.

On the other hand, these measures have been introduced at a time when Lithuanians have a greater disposable income, making the purchase of private cars more attractive to many.



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MOBILITY MANAGEMENT

Mobility marketing and awareness raising

COLLECTIVE PASSENGER TRANSPORT

Service improvements

Preston, United Kingdom (2006)

The ancient town of Preston was granted city status in 2002. With a population of 130,000, Preston is the administrative capital and largest commercial centre in Lancashire, northwest England. The city is strategically located and is an important transport hub in the Trans-European Network between London and Scotland. Key rail and road links include the West Coast Main Line and the M6 motorway.

During its four-year involvement in CIVITAS, the city developed many initiatives to deliver sustainable transport improvements. These included personalised travel planning, which reduced single-occupancy car trips by over 13 percent; a car-pooling initiative; the introduction of clear zones in the city; improved parking at the railway station; and improvements to the availability and quality of passenger transport information.

Ambitious measures

Preston implemented three particularly ambitious measures in a single 12-month period: Preston Orbit, Preston TravelSmart, and an urban design scheme for the city-centre campus of the University of Central Lancashire.

The new Preston Orbit bus service broke the mould of traditional services that follow radial routes into and out of the city. The Orbit service links inner-city and suburban locations without the need for passengers to change buses or even travel via the city centre. Passengers also enjoy an expanded real-time information system and improved waiting facilities.

The TravelSmart project was about changing travel behaviour and promoting a modal shift to walking, cycling and public transport. Thousands of people were contacted by telephone or in person and asked about their interest in making greater use of more sustainable modes of transport. The effects of the campaign were closely monitored through a parallel behavioural research programme.

Preston worked very closely with the University of Central Lancashire to make the campus more accessible to buses, cyclists and pedestrians, while at the same time reducing traffic volumes and introducing a 30 km/h speed limit.

Political support and technical competence

Councillors from Lancashire County Council, Preston City Council and South Ribble Borough Council lent their leadership and support to the CIVITAS project. County councillor Jean Yates, a member of the CIVITAS Political Advisory Committee, took a particularly keen interest in the project and facilitated many meetings. In terms of technical input, the project benefited from the skills of all partners — including the bus operator Preston Bus and the consultancy Transport and Travel Research (TTR). Sustrans, a project subcontractor, also made a significant contribution.

Local culture

The fact that many important facilities are located outside the city centre was a significant challenge in terms of upgrading bus services, as passengers often needed to change vehicles and pay a second fare to make cross-city journeys. Although Preston has relatively good bus and cycling facilities, a lack of knowledge among potential users was a barrier to greater usage. The project aimed to provide individualised travel marketing to those households that were open to making a modal shift for at least some of their weekly journeys.

Monitoring

Preston established an extensive monitoring programme built on what was in place prior to



CIVITAS project implementation. Measure implementation was guided by collected data, comments received from councillors and the public, air quality concerns and public transport accessibility. The design of all measures included an analysis of the available data and, where necessary, the collection of additionally required data.

Exchanges with other cities

Preston arranged visits to other cities that have undertaken similar activities, including Nottingham and Crewe. It also liaised with other CIVITAS cities in the UK (Bristol, Norwich and Winchester). Information was exchanged with CIVITAS SUCCESS partner cities (La Rochelle, Ploiesti), as well as with the UK-based organisations Carplus, the Association of Transport Coordinating Officers (ATCO) and the UK Association for the Promotion of Intelligent Transport Systems (ITS UK).



FOLLOWING UP: Gearing up for cycling

Research carried out in connection with Preston's TravelSmart project suggested that cycling had the greatest potential of any mode to replace car journeys. Cycling is more flexible than public transport, offers comparable journey times to the car for short trips, and enables people to go further than on foot. However, the traffic management system in Preston city centre represented something of a barrier to bike use, and Preston had a high accident rate among cyclists. Prior to measure implementation, cycle use in Preston was declining and was low by European standards. The aim was therefore to increase cycle use in Preston by making conditions more attractive.

Preston adopted a number of proposals to this effect, including the creation of a network of radial cycle routes and a cross-city route in the north of Preston to serve employment areas; the installation of bike parking facilities in a multi-storey car park in partnership with a shopping centre operator; the creation of bike parking facilities in the city centre and at the university; the implementation of the Cycle for Health campaign, including cycling on prescription to combat heart disease, diabetes and obesity; and using sports cycling to promote bike use, based on the university's cycle race track and the city's BMX track and drawing on the country's Olympic cycling success.

The length of cycle routes in Preston increased by 30 percent, from 21 km in 2004 to 28.5 km at the start of 2009. In addition, improvements were made to the canal towpath, providing a new cycle route to the northwest of Preston; a cycle path was extended along an old railway track to Preston's northeast employment area; and new cycle routes were created through riverside parks to the south of the city centre and in outlying areas. A new cycle map of the area was published in summer 2008 and new signs were installed on cycle routes. School travel plans helped to promote cycling among young children, and junior cycle clubs were created.

Initial results from the TravelSmart survey suggested a 35 percent increase in cycle trips in Preston. At the two sites where automatic cycle counters were in place at the start of the project, cycle use increased by 8 percent. Road traffic surveys in the area suggested a 13 percent increase in cycle use. If measures carried out in the CIVITAS project had not been implemented, cycle use in the area would probably have continued to decline.



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CATEGORY I: TECHNICAL INNOVATION

TRANSPORT TELEMATICS

ITS-based enhancement of public transport

DEMAND MANAGEMENT STRATEGIES

Walking and cycling enhancements/services

CLEAN FUELS AND VEHICLES

Cleaner fleets



Ploiesti, Romania (2007)

The city of Ploiesti is located in southern Romania, 60 km north of Bucharest. The city flourished in the 17th and 18th centuries as a centre for crafts and trade, and between the two world wars the local economy was boosted by the advent of the petroleum processing industry. The city experienced an almost five-fold growth in population between 1912 and 2001. By 1939, the 12 refineries in Ploiesti provided 80 percent of the total petroleum processed in Romania. During the Second World War, these refineries suffered intense bombardment, the heaviest in the country, and most of the nearby residential areas, industrial compounds, roads and railways were destroyed.

Ploiesti has been revitalised to become one of the most important economic centres in Romania. The municipal economy is now characterised by a concentration of large businesses. There are plans to make Ploiesti the nucleus of a metropolitan area that will encompass eight nearby villages, adding around 70,000 new inhabitants to the administrative area.

Ambitious measures

Ploiesti made great improvements to its public transport service by means of a traffic monitoring system and a unique dispatching centre that con-

tinually tracks the movements of 190 buses and 17 trolleybuses. Thanks to GPS technology, network traffic is now controlled in real time and it has become possible to respond rapidly to unexpected problems. Passenger trips rose from 52 million in 2005 to 58 million in 2006.

The city's bus fleet was upgraded with the introduction of 25 buses equipped with LPG engines, which are less polluting than diesel buses. Ploiesti also implemented measures to develop cycling and walking infrastructure, including the construction of 5 km of bike paths (out of a proposed total of 14 km).



Political support and technical competence

Ploiesti City Hall took the lead in the CIVITAS project and continues to work in close collaboration with the local council, keeping the latter informed at every step. Other partners include the local public transport company (RATP) and the Oil and Gas University, which contribute ideas that have the overwhelming support of all political parties. In promoting implemented measures at annual meetings with the Romanian Municipalities Association (AMR), the City Hall can count on further support from local authorities and stakeholders.

Local culture

The GPS monitoring responds to the needs of Ploiesti's citizens for better and easier mobility. It eliminates traffic congestion while at the same time facilitating access to the cultural centre of the city, which will become more attractive as pollution levels continue to drop with the switch to alternative fuels. The construction of the city's first cycling and walking spaces is creating new opportunities for physical activity and social interaction. Ploiesti's citizens now have the chance to exercise out of

doors, to save money by using public transport, and to keep the urban environment safe and clean.

Monitoring

Monitoring via GPS technology makes possible the collection of data that are used in combination with the results of studies conducted by the Oil and Gas University. Public consultations, in addition to decisions and feedback from the local council, contribute to the appropriate development of new measures and, where necessary, their improvement.

Exchanges with other cities

The AMR periodically organises events that facilitate information exchange at national level. Representatives from Ploiesti have participated in meetings and events organised by other CIVITAS cities in Romania (Suceava and Bucharest), while working together with local actors and international stakeholders. Ploiesti hosted regular CIVITAS SUCCESS meetings, each of which presented good opportunities for exchange within the CIVITAS family. The city also plans to continue building close relationships with the project's international members and other stakeholders.



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FOLLOWING UP: Upgrading the fleet

Buses in Ploiesti's public transport fleet were converted to run on cleaner fuel as part of the city's environmental efforts. At the time of measure implementation, old, heavily polluting buses still made up the majority of the fleet. These Romanian-built buses (produced by a factory then in the process of liquidation) generated huge maintenance and repair costs and were very labour intensive to operate.

Preliminary tests identified liquefied petroleum gas (LPG) as a suitable alternative fuel. The switch to LPG would also lead to modern maintenance facilities and cleaner vehicles. Additionally, LPG is generally available in Romania and has broad public acceptance. These factors were decisive in making the commitment to convert 25 buses (standard and articulated) to run on LPG as a pilot project. Twelve buses were converted during the first project stage, followed by another 13 during the second project stage. The measure also included ensuring the provision of the necessary fuelling infrastructure.

Economically speaking, there was only a slight decrease in fuel costs: LPG is cheaper than diesel, but the fuel consumption of LPG buses is almost double that of diesel buses (56 litres/100 km for LPG compared to 31 litres/100 km for diesel). Questions were also raised about the long-term robustness of older, retrofitted buses, as maintenance costs continued to be high. However, conversion was seen as a good short-term move and public reaction to the overall refurbishment was very positive. More importantly, pollution levels were lowered, and the quality of public transport services rose, as the buses were totally modernised before conversion.



CATEGORY I: TECHNICAL INNOVATION

COLLECTIVE PASSENGER
TRANSPORT

Ticketing and tariffs

Intermodality



La Rochelle, France (2008)

The city of La Rochelle is situated on the Atlantic coast in the Poitou-Charentes region of western France. With a significant number of small and medium-sized enterprises, La Rochelle's economic dynamism is a strong driver for change in a city that promotes quality of life, sustainable transportation and urban ecology.

Ambitious measures

La Rochelle improved the attractiveness of its public transport services by introducing Yélo, a network offer and pricing system that makes it possible to use all transport modes with a single smartcard. Holders of the intermodal Pass'Partout 17, launched under the SUCCESS project, can travel from one town to another and switch seamlessly from one mode to another (bus, train, electric shuttle boat, park and ride) using just one ticket.

Following the first bike-sharing system, launched under SUCCESS in 2005, La Rochelle designed a new generation of bike sharing aimed at improving multimodality, security, comfort and simplicity. Changes included service availability through the intermodal public transport smartcard. Following a trial phase, the full service will comprise 350 bikes available at 55 solar-powered stations.

New, user-friendly services for public transport passengers were introduced in 2008 to boost passenger numbers and improve information access.

La Rochelle introduced a real-time information service, via electronic panels at bus stations and stops. In July 2008, the system was extended to mobile phones (via SMS). Passengers can now find out the exact arrival time of the next two buses at a specific stop simply by sending an SMS.

Political support and technical competence

La Rochelle's political decision makers have long given strong support to efforts to develop urban ecology. Through CIVITAS SUCCESS, political leaders again provided a valuable contribution by helping citizens to change their mobility habits. Through the introduction of the Yélo concept and the adoption of a multimodal smartcard for all public transport services, local decision makers made a strong appeal to inhabitants to use alternative means of transport. Parallel consultations between public bodies and transport operators, including the French railway network SNCF, were critical to the project's successful implementation.



As far as technical added value is concerned, La Rochelle is a relatively small town with limited financial resources. It is therefore essential to find ways to adapt innovative solutions. Engineers from the local authority greatly contributed to the efficient implementation of new measures. Most of the design and development work related to the bike-sharing system, for example, was carried out by the technical staff of the urban community, which meant not having to resort to private advertising.

Local culture

The conurbation of La Rochelle has developed a genuine ethos of urban ecology over the years. A series of initiatives have been implemented, many of them in transport and mobility, taking into account the city's rich historical heritage. For almost 30 years, the inhabitants of La Rochelle have been used to testing new mobility services while paying close attention to sustainable mobility issues.

Monitoring

La Rochelle adopted its urban mobility plan in 2000. The Mobility Observatory was created as a follow-up to analyse mobility behaviour. All partners and operators providing mobility services supply the local authority with accurate data.

The Exploitation Support System, operational since late 2004, provides La Rochelle with in-depth data on public transport, making it easier to respond quickly to fluctuations in supply and demand. The system, which combines transport and town planning data, enables the public transport network to expand to new residential areas. In order to facilitate and optimise the management of the public transport network, La Rochelle has been significantly improving its geographical information system.

In the framework of its urban mobility plan, the city regularly carries out qualitative surveys in order to better meet passengers' expectations. Within CIVITAS SUCCESS, a large-scale quantitative survey was carried out among public transport passengers in order to gain in-depth knowledge of citizens' mobility habits. Specific qualitative surveys are also conducted to assess levels of awareness and satisfaction among users and non-users of public transport.

La Rochelle has worked in close collaboration with ATMO Poitou-Charentes, an association that monitors air quality and atmospheric emissions in the urban community. In the framework of European Mobility Week 2008, an on-board emissions measurement system was used on hybrid minibuses to analyse emissions levels and other parameters in real conditions.

Exchanges with other cities

In 2005, La Rochelle took over the leadership of the French CIVITAS Task Force, which unites Toulouse, Nantes, Lille and La Rochelle as well as national networks dealing with mobility, research and transportation issues. The task force provides a platform where French CIVITAS cities can disseminate outcomes and demonstrate the main benefits of the CIVITAS Initiative to other French cities. In 2008, the members of the task force initiated a discussion on the Green Paper "Towards a new culture for urban mobility", which resulted in the sending of a common declaration to the EC.

In May 2008, La Rochelle met with counterparts from Ploiesti to discuss clean zones and walking and cycling infrastructure. La Rochelle hosted a technical exchange with Ploiesti in July, with a focus on real-time information, public transport accessibility, ticketing and multimodality, geographic information systems, and park-and-ride facilities. Nantes also took part in this exchange by welcoming staff from Ploiesti and La Rochelle. This fruitful collaboration enhanced the European dimension and brought added value to the CIVITAS Initiative.

Regular on-site visits took place in La Rochelle in 2008 with French and international delegations: the city of Lucca (Italy) and local authorities from Abbeville, Dax and the French overseas department of Réunion came to visit La Rochelle to tackle topics such as freight deliveries, car sharing, bike sharing, accessibility and park-and-ride facilities.

CIVITAS outcomes in La Rochelle were presented at several international events, including the final conference of the EU LIFE project Centre for Eco-friendly City Freight Distribution (CEDM), which was held in Lucca.



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FOLLOWING UP: Top of the class

Offering multimodal transport services at reduced prices was an effective way to encourage students to use environmentally friendly transport modes instead of private cars. La Rochelle had already introduced a ticketing strategy specifically targeting students prior to CIVITAS, but a study carried out in 2003 revealed that such a scheme would be more successful if it also addressed growing environmental concerns. The eventual CIVITAS measure had the following specific goals: to provide students with multimodal services at reduced prices; to encourage students to use environmentally friendly transport modes as an alternative to private cars for journeys between home and places of study; and to raise awareness among students of alternative modes of transport.

An agreement was made between La Rochelle Urban Community, the university, high schools, transport operators, the student social support service, and the youth information centre. A new transport smartcard for students, the Pass Etudiant 17, was launched in 2005, giving students unlimited access to buses, coaches, the bike-sharing scheme, shuttle boats and park-and-ride facilities on the basis of one return trip per day for an annual subscription of EUR 185 (EUR 18.5 per month, as July and August were free of charge). This represented less than 3 percent of students' average monthly budgets, making the pass good value for money.



Regular information campaigns on the student travel plan have taken place since 2005. In 2006, La Rochelle proposed that students become "mobility ambassadors" — that is, trained to promote all relevant public transport services to students directly at the university. Within five years of its launch, the Pass Etudiant 17 had 65 percent visibility among all students, while a total of 1,377 students had purchased the pass. Among surveyed students, 96 percent were satisfied with the system's practicality and cost.

Within CIVITAS SUCCESS, and since the project ended, La Rochelle has aimed to develop new forms of mobility and new types of services. The city places specific emphasis on cooperative systems, in which ownership is less important than sharing — whether cars or bikes.

- As early as 1976, La Rochelle's non-conformist mayor Michel Crepeau launched the first public bike scheme, known as Velos jaunes (Yellow Bikes). This forward-looking initiative — introduced at a time when access to the city by private car was regarded as a priority — was reinforced within CIVITAS SUCCESS through the design and implementation of a bike-sharing scheme, which today comprises 310 bikes at 47 stations, three of which are accessible with credit card. The scheme has 1,500 subscribers and has shown continuous growth since its launch.
- The first electric car-sharing system in La Rochelle — Liselec — was launched in 1999. The electric vehicles (Peugot 106 and Citroen Saxo models) were available from seven recharging stations near high-use locations in the city, such as the main train station, the bus station and the university. During CIVITAS SUCCESS, service organisation and operation were improved, notably through a long-term public-private partnership, which contributed to the scheme's innovative character. A brand-new fleet of electric vehicles was introduced in June 2011, comprising 30 Citroen C Zero and 20 Mia electric cars. The number of charging stations was almost doubled to 13. Users can leave cars at any charging station, effectively giving them free parking in the city.

These two services — like other means of public transport — can easily be combined for smooth intermodal journeys using the unique smartcard, which makes public transport use easier and more practical.



MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation

Mobility planning

DEMAND MANAGEMENT STRATEGIES

Walking and cycling enhancements/services

COLLECTIVE PASSENGER TRANSPORT

Service improvements

Accessibility

CAR-INDEPENDENT LIFESTYLES

Public bicycles/bicycle sharing

Ghent, Belgium (2009)

Ghent is the third largest city in Belgium, with about 247,000 inhabitants living in an area of 156.18 km². Ghent has made considerable efforts to curb the use of private cars, calm city-centre traffic and improve cycling infrastructure. Within CIVITAS ELAN, Ghent improved its public transport system, and a package of 24 activities was implemented with the aim of bringing Ghent closer to becoming one of the most advanced cities in Belgium.

Successful implementation

Ghent's mobility policy prioritises walking, cycling and the use of public transport, as illustrated by the creation of a large pedestrian area in the heart of the city in 1997. In addition, two-way cycling is permitted in 95 percent of all one-way streets. A bike-rental system was set up to promote cycling among students, and more than 7,000 bikes are rented annually at a very low price. In order to solve the bike parking problem at the main railway station, the city plans to build a garage for over 10,000 bikes. Public transport services are being improved each year through tram line extensions, the conversion of bus lines into tram lines, the construction of park-and-ride facilities, the introduction of park-and-bike systems, the segregation of public transport lanes, longer public transport operating hours and competitive pricing. The city also provides free night buses, free public transport for children under 15, and a taxi service for disabled people.

Political support and technical competence

The bicycle service created in 1994 now has over 15 years' experience in shaping the city's cycling policy. In parallel with the development of a mobility plan for the city centre, a mobility department was created in 1998. By 2009, the department had become a highly developed, specialised group of about 45 people. Together with the municipal parking company, the department addresses complex mobility-related problems. The creation of such a specialised department would not have been possible without political vision and support, and it is this political and administrative involvement that is behind the success of mobility planning in the city.

Local culture

Public participation has been a vital part of decision making in Ghent for more than 15 years. Community-based planning cells have been set up in each



of Ghent's 25 boroughs. One to three people are responsible for each borough and interact regularly and intensively with local residents. This results in a bottom-up approach to setting priorities and finding solutions. Mobility is an important issue when it comes to hearing people's views. Ghent has developed a coherent mobility vision, but citizens also want to voice their opinions. In terms of transport planning and infrastructure, regular consultations take place on important infrastructure projects, urban transport and land-use planning. Citizens' participation and feedback are ensured by means of project presentations in local institutions, surveys, workshops, conferences and marketing campaigns.

Monitoring

The mobility department includes a traffic research cell (TRC) that continuously collects traffic data. The TRC analyses the impact of implemented policies by using traffic models, traffic analysis tools and GIS. The mobility department carries out three surveys each year, working closely with the data analysis and GIS cell to learn more about liveability factors and modal splits. The TRC also carries out long-term traffic and strategic mobility planning with other institutions and monitoring stations, such as the public transport company De Lijn.

Exchanges with other cities

Besides taking part in CIVITAS Plus, Ghent has participated in several other European programmes and projects in order to identify best practices and obtain valuable knowledge. It has been involved in the EC's LIFE Programme; the Operational Project for Integrated Urban Management (OPIUM); the EU Joint Urban Project in Transport Energy Reduction (Jupiter), phases 1 and 2; and the EU-funded Bicycle Policy Audit project (BYPAD). The city also hosted the Velocity 2009 cycling planning conference. Ghent also takes part in several INTERREG programmes and thematic networks such as the LUCI Association (for sustainable urban lighting), the European Festivals Association (EFA) and the European quality network Q-Cities. In 2002, Ghent organised the European Conference on Mobility Management (ECOMM), and the city won the European Road Safety Award for Technological Innovation in 2004 for its determination to test, use and promote the new intelligent speed adaptation technology. Ghent welcomes visitors wanting to learn about mobility, and Ghent City Council encourages its own employees to visit other European cities implementing interesting mobility solutions.



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FOLLOWING UP: Traceable bikes

Ghent offers rental bikes to students at the very low price of EUR 40 per year. A lot of these bikes get stolen or go missing. In order to reduce the number of bike thefts, an IT-based anti-theft system has been developed. StudentENMobilititeit (SM) is a non-profit organisation that rents more than 5,000 bicycles to students.

Firstly, a proposal was developed and tested for a unique frame for rental bikes and a hand-held computer to screen parked bikes. The computers check the status of registered bikes and can determine whether or not a bike has been stolen. The specially developed frames of the SM rental bikes cannot be used elsewhere. The organisation invested in a computer numerical control (CNC) device that engraves all new bicycles in-house: the main tube of the frame is engraved with a raised, indelible number 4.5 cm in height. A further step was to install secure sheds for rental bikes. Two covered bicycle sheds were built on the premises of the university with the aim of protecting the bikes of students who are away from the university.

Advocates of the initiative predicted that the measure would increase the number of recovered rental bikes by 10 percent; increase rental bike use by 5 percent; and increase the number of visitors travelling by bicycle in the city centre. The measure has in fact led to a slight decrease (2 percent) in bike thefts, and an increase in the number of stolen bikes recovered. In 2011, a total of 327 bikes were stolen, and 156 of them were recovered; and in 2012, out of the 320 bikes stolen, 210 were recovered.

The pilot period is now over, but in the meantime the police also launched a pilot period for traceable bikes.



Bologna, Italy (2010)

Bologna has a population of 373,000 and is the capital of the Emilia-Romagna region in central Italy. The city is surrounded by beautiful plains, hills, woods and the Apennine Mountains. Its central location, prestigious university and numerous enterprises require a high level of varied mobility options. A big challenge for Bologna is to reconcile the currently high demand for transport services with the low capacity of the narrow streets in the medieval city centre — which remains the focus of public, commercial and cultural life.

In the past, the low traffic capacity in the city centre often led to heavy congestion that compromised quality of life. The progressive introduction of traffic restrictions, which started with the designation of the historic city centre as a limited traffic zone (LTZ) in 1989, has considerably improved the situation. Air quality has improved, and the city centre's attractiveness has been preserved. In addition to access restrictions, intelligent transport systems (ITS) have further improved conditions in the city centre.

In June 2007, the city approved its new Master Plan for Urban Traffic (PGTU), which focuses on reducing pollution, noise, accidents and congestion, while at the same time saving energy. The interlinked developments under the PGTU are aimed at ensuring sustainable mobility and access to all parts of the city through enhanced public transport and cycle lanes, while safeguarding the most valuable environmental and architectural features.

The city hopes that the completion of large-scale public works, together with the reorganisation of the public transport network, will help to achieve a modal split for public transport of 33 percent, balancing the share of car usage (between 28 and 33 percent). At the same time, the ambitious goal is to increase bicycle usage from 7 to 9 percent, which would make the modal share comparable to the sustainability standards of other major European cities.

In CIVITAS MIMOSA, Bologna acted as a pilot site for testing innovative activities to help the city improve its urban transport system. It was also a valuable model for other medium-sized cities across Europe. The city's efforts were recognised during European Mobility Week (EMW) in 2011, when Bologna won the EMW Award for its efforts to promote and invest in sustainable modes of transport.



Bologna also won the CIVITAS Award for Technological Innovation in 2010 for the design of an ITS that integrates traffic monitoring and rule enforcement.

Innovative mobility solution

Bologna introduced an ITS to support electronic enforcement and traffic monitoring. The system integrates the two features, improving overall performance and controlling real-time traffic conditions. It receives online traffic data from sensors and calculates optimal algorithms for traffic-light phases and bus prioritisation, while taking into account congestion events or accidents. Everything is stored in a statistical database, which gives municipal technicians the best means to study traffic evolution and elaborate future urban policy.

Technical competence

The new platform is the result of years of research in traffic management and algorithms, carried out by technicians from the municipality and from the University of Bologna. This scientific approach led



to a detailed definition of all software requirements and the careful adaptation of the technological features to the characteristics of the local traffic situation. Traffic monitoring is carried out continuously to allow the storage of performance indicators. Within the CIVITAS MIMOSA project, a cost/benefit analysis was carried out in order to integrate social and other external costs and to detect the benefit indicators generated by the system.

Stakeholder involvement

Bologna uses modern technology to assess the social acceptance of mobility initiatives and aims to establish dialogue and debate between stakeholders with differing points of view. The issue of LTZ access regulation, for example, pitted those in favour of maximum access to the city centre against those who supported strict restrictions on access. The municipality participated through media coverage and public meetings and decided to introduce a three-month test period in which access was made easier for two hours each day.

Hallmark of innovation

The integration of enforcement and traffic monitoring is the main innovative feature of the system. The technology allows a better understanding of the evolution of the urban mobility scenario as a whole, and provides citizens with easy access to regulations, permit requirements and information on the use of the facilities. The municipality, the public transport company and IT associations worked together closely to finalise data, protocols and the integration of the technologies.

Long-term implementation and the promotion of results

Information technology coverage has been extended to all urban areas in Bologna. The next steps will involve further integration and new capabilities in data mining and the geographical analysis of traffic phenomena. A new live traffic website will be launched (www.cisium.it), and a Google traffic function has also been introduced in Bologna.

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FOLLOWING UP: Central intelligence

With the aim of improving the efficiency of its transport offer by integrating various ITS features in order to facilitate optimal real-time traffic management, Bologna developed a new traffic control centre, CISIUM, which will eventually manage traffic in the entire metropolitan area. The main objectives of the measure were to improve traffic control in the urban area; provide real-time traffic information to citizens through different channels; and provide the municipality's technicians with better traffic planning tools.

The control centre underwent an extensive testing period, during which bugs and other issues were addressed and the algorithm was fine-tuned. Parameter tuning remains an ongoing task. Municipal technicians designed a project to integrate data on traffic flows from the traffic control centre into Google maps. The necessary software has been developed and the city has signed an agreement with Google. Bologna was one of the first cities in Italy to provide a traffic service on Google maps with information coming directly from the municipality.

On the basis of an agreement signed with Bologna airport, information on traffic and ongoing roadworks in the city is displayed on panels at the airport arrivals terminal through a communication system based on a traffic message channel (TMC) protocol. In September 2011, a public bid for the development of a third congestion indicator was awarded, outside MIMOSA, in the framework of the Italian project Simone. This new indicator is based on floating car data (FCD). The new traffic control centre now connects and integrates the municipality's ITS, controls almost all the traffic lights in the city, and helps improve communication related to traffic conditions across the entire metropolitan area.

In 2012, a new dedicated webpage <<http://cisium.webhop.net/home.do>> was also made available in order to obtain real-time information on traffic conditions and events. The updated CISIUM features were illustrated and disseminated at several mobility-themed conferences.



URBAN FREIGHT LOGISTICS

Distribution schemes

MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation

Utrecht, The Netherlands (2011)

Utrecht is the fourth largest city in the Netherlands, with a population of 300,000 and growing. Due to its central location, tens of thousands of commuters travel through the city every day. Utrecht is expanding and currently undergoing major construction works that are putting a strain on the city's accessibility and jamming the centre with cars. Utrecht is a node at which major roads and railways intersect. The number of passengers handled by Utrecht central station is projected to double in the next 20 years, reaching up to 100 million travellers a year. Together with the Ministry of Transport, the Ministry of Spatial Planning and several private companies, Utrecht is working on a complete makeover of the central station, including a new station terminal. While good accessibility is crucial to the economy, as well as to the people who live and work there, the city of Utrecht also wants to ensure a pleasant living environment. The continuous growth in traffic and the development of the city call for an integrated approach to improve air quality.

In CIVITAS MIMOSA, Utrecht focused on the area of the city most affected by the developments. This area, lying between the large-scale constructions, is an important traffic artery connecting the city centre with major national motorways. While ensuring accessibility, the city of Utrecht also wants to use this period of redevelopment to embrace new and more sustainable approaches to transport. The aim is to curb the growing levels of car use in the city by improving the quality and effectiveness of

public transport, providing good cycling infrastructure, and ensuring attractive transfer facilities on the outskirts of the city. The MIMOSA project offered Utrecht the possibility to experiment with, and evaluate the effectiveness of, an approach where it is no longer necessary to go into the city centre by car for major purchases, but goods can be collected instead at pick-up points. Utrecht aims for a 100 percent increase in urban delivery trips made through local distribution centres.



Innovative mobility solution

An electric multi-purpose delivery vessel, the Beer Boat, was introduced in 2010. Another innovative city delivery service, the Cargohopper electric freight vehicle, was also introduced in 1996 to relieve road traffic congestion and facilitate deliveries in the city's narrow streets. On the basis of its success, Utrecht shopkeepers and transporters introduced a second Cargohopper for the smart, green delivery of packages in the city. The vehicle can carry up to 10 pallets, travels at speeds of up to 50 km/h, and can go 250 km without recharging. Following Utrecht's lead, three other cities will also introduce Cargohoppers.

Technical competence

The Beer Boat collects products from distribution centres outside the centre of Utrecht and delivers them to restaurants and businesses along the city's canals. The boat runs on an electric motor and can be used for eight to nine hours on one charge. It can carry up to 20 tonnes of cargo and has an electric hydraulic crane with an arm that can be extended up to 14 metres. Since the boat has additional compartments for chilled and deep-frozen products, it can supply a wide range of products to restaurants and businesses. Distances between customers are an important factor, since the closer they are together the more efficient the distribution service becomes.

The Cargohopper officially came into service during the first year of CIVITAS MIMOSA. The electric Cargohopper is a freight vehicle with trailers, 16 metres in length and 1.25 metres wide. It has pneumatic tyres and runs on solar and battery power. The solar panels operate for seven to eight

months in the year. Between April 2009 and April 2011, the Cargohopper made more than 18,500 deliveries (85,185 parcels), saving 40,000 litres of fuel and 60 tonnes of CO₂ emissions compared to conventional transport.

Stakeholder involvement and local culture

When preparing its action plan for freight traffic, Utrecht consulted with and involved all stakeholders: water, road and rail freight companies, shops and restaurants, businesses and consumers, waste collection services and goods suppliers. Innovations are regularly developed together with local companies. For example, due to the presence of an additional 250 trucks per day over three years carrying construction materials to the new railway station, the city built a logistics centre on the outskirts of the city that is run by the council in partnership with the Hoek transport company. Materials are combined at the centre so that only completely full trucks make deliveries to the construction site.

Hallmarks of innovation

Utrecht won the national award for Best Sustainable City Distribution in 2009, and in the same year earned a EUROCITIES award in the Innovation category. In May 2011, the city won the Lean and Green Award from Connexxion, an independent network of companies and governments who unite initiatives, people and organisations working on sustainable mobility in the Netherlands.

The most significant measure is Utrecht's ambitious Action Plan for Sustainable Freight Traffic. The goal





is to bundle, innovate and optimise freight traffic in Utrecht in order to make it greener. The city has invested EUR 23 million to realise this integrated package of measures and technical innovations.

Future plans and the promotion of results

Since the action plan contains measures to be implemented through 2015, a longer-term scheme is also under preparation. Thanks to the publicity provided via CIVITAS, Utrecht's results are being shared throughout Europe. In October 2010,

Utrecht hosted a workshop on urban freight transport, jointly organised by CIVITAS MIMOSA and EURO CITIES. Over 120 people from 17 European countries attended the meeting and participated in the accompanying political debate.

Utrecht's progress and results are frequently mentioned in national newspapers, websites and technical journals. Winning the Lean and Green Award and the National Distribution Award in 2009 provided further promotion, and other Dutch cities have started to replicate some of Utrecht's most successful measures.



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FOLLOWING UP: A fresh perspective

Eager to reduce road freight transport into the city centre, Utrecht explored new possibilities for distribution centres for fresh and perishable goods. A clean and accessible city centre requires well-organised freight logistics, and the development of the local economy depends on the efficient supply of goods. The measure aimed to reduce road freight transport and the resulting emissions of PM10, NOx and CO₂ by deploying cleaner vehicles and achieving a considerable increase in the bundling of the perishable goods delivered to catering companies in the city centre.

In autumn 2010, Utrecht organised an exploratory roundtable with retailers, wholesalers, transport companies and the Chamber of Commerce in order to establish market potential and needs. This was followed by a second roundtable later in the year, where various practical solutions were presented to stakeholders. These two rounds of consultation resulted in a business plan for the bundling of fresh and perishable goods, which was finalised at the end of 2010.

A subsequent report outlined the most promising options for Utrecht. The first option would be "cross-docking", a system in place elsewhere in the Netherlands, where large suppliers take cargo with them from small suppliers. The second option would be an online selling system that bundles the stock of small and medium-sized suppliers and is facilitated by the infrastructure of an independent professional transporter. Catering businesses are able to order food products from various suppliers through a website, and products are collected from various suppliers at a central location and then delivered in one package to the catering business.

The Mariaplaats district in the centre of Utrecht was selected as the implementation area for the pilot project. Unfortunately, interest in the measure among stakeholders in Mariaplaats was insufficient to get the pilot project started. As a result, the process evaluation was based on standardised forms.

The main barrier to implementing the measure was the major changes required in the individual organisation of the catering companies in order to create a bundled goods delivery system. In addition, many catering companies were focusing on other priorities due to the economic crisis. They believe that delivery regulations are the responsibility of the municipality. However, awareness among catering providers of the negative impacts of freight traffic in the inner city was a driver for the measure. Reducing freight traffic contributes to improving quality of life in the inner city, which has direct positive impacts on the catering business. Catering providers are aware of the pressing need to improve the sustainability of freight transport. As a pioneering measure in the Netherlands, the outcomes of the field research highlighted the challenges inherent in a shift from a traditional delivery system towards a bundled delivery service. They also make possible critical recommendations for the design of similar measures in the Netherlands and other European countries.



CATEGORY I: TECHNICAL INNOVATION

TRANSPORT TELEMATICS

ITS-based enhancement of public transport

MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation



Porto, Portugal (2012)

Porto lies on the Atlantic coast. It is Portugal's second largest city and is home to 263,000 people. The serious congestion caused by the high number of private cars needs to be addressed by making fundamental improvements to the public transport system and by altering people's travel habits towards sustainable modes.

A city of history, culture and architecture, famous for its port wine and characterised by friendly people and a mild climate, Porto was granted UNESCO World Heritage status in 1996. It is known as the city of bridges due to the six structures that connect the banks of the Douro River. Home to 60,000 university students, the city is also the hub of a highly industrialised region.

As people have increasingly moved from the centre of the city to the suburbs in recent years, new mobility patterns have emerged, characterised by longer trips made mostly by private car. This has led to serious congestion problems at the city's main entry and exit points. The car is the most popular mode of transport, with a share of 43 percent compared to a modal share of 25 percent for public transport and 32 percent for walking. While in the past the city's transport policy focused primarily on extending the capacity of the roads, today it is increasingly concerned with improving the public transport system. The new metro system in particu-

lar is seen as an important element in the mix. The city has a mobility plan in place that takes a participatory approach to transport planning.

Innovative mobility solution

The MOVE-ME mobile phone application provides access to diversified and comprehensive information about the public transport services available in Porto. An innovation in Portugal, the system provides detailed information from various public transport operators, allowing users to plan their journeys in real time. Passengers using MOVE-ME receive updated information about the next service available from their present location (or from another selected location), waiting times, transport stops and the main points of interest in the vicinity. The system also allows passengers to plan routes and journeys for the coming three days using intermediate points defined by the user.



Technical competence

This innovative and dynamic application supports transport planning in real time. Research and development were the most demanding aspects of the project, which required the availability of a high-performance system with intuitive user interfaces for mobile devices. Adapting the use of planning algorithms to a dynamic situation in real time, while indicating the quality attributes associated with the various proposals, required using algorithms that allow for planning with timetables that are permanently changing, based on a stable timetable and scheduled situations. This technical work allowed the system to provide services such as route definition. Taking into account the actual position of the vehicles, the system provides information regarding the best route at that particular moment, the schedule at each defined stop, transfer opportunities at transport stops, and the walking routes between stops.

Local stakeholder involvement

The main project stakeholders were the direct partners — operators, local institutions, media contacts and designers, the Porto tourist office and the passengers themselves. Because this project was fully dedicated to end users, their involvement and cooperation was essential to its success. To ensure that a project designed for passengers would be used by passengers, their cooperation and feedback were always regarded

as the driving force of the project. Periodic meetings were held — even with institutions that were not direct partners — to communicate new developments and validate new strategies.

Hallmarks of innovation

The measure was a ground-breaking innovation at national level. This was the first system in Portugal to supply real-time information from more than one transport operator. The two main hallmarks of innovation were the provision of real-time data and intermodal planning. Operators are now working together for the benefit of users. The focus is not on whether the system achieves better results for one or the other competing operator: the goal is to ensure that users are well informed about all the available services and are able to choose the one that is most appropriate to their needs.

Future plans and promotion

A good, centralised marketing campaign succeeded in attracting support from other companies and cities. Good communication with local partners also encouraged stakeholders to replicate the project elsewhere. The Porto tourist office, for example, promotes MOVE-ME as its official application. Based on the success achieved in Porto, a new version of MOVE-ME is now in use in Lisbon. The ultimate goal is for MOVE-ME to be adopted as a national system.



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FOLLOWING UP: Information 'to go'

Porto established a mobility shop in the heavily congested Asprela district in September 2010 in order to provide citizens with information about all the available means of transport in the city. It also helps to raise awareness among the general public about mobility issues.

The main objective behind the measure was to generate a debate on changing mobility habits. Asprela is characterised by a unique mobility demand pattern that results from its concentration of universities, research and design centres, and public institutions such as hospitals, all of which generate varying seasonal demand.

The mobility shop's website currently offers information and advice on multimodal transport and provides logistical support for a car-pooling service. The number of visitors to the site has increased steadily, with an average of 100 daily visits and a record high of 342 visits. The mobility shop has a colourful exterior design and has attracted high numbers of visitors, with a record of 2,300 in a single month.

Most of the information requested in the mobility shop is related to public transport operators, the subway system and buses. The shop also provides information on private transport operators and trains, and advice services for better mobility management.



CATEGORY I: TECHNICAL INNOVATION

COLLECTIVE PASSENGER
TRANSPORT

Ticketing and tariffs

Intermodality



Nantes, France (2013)

Located on the river Loire, close to the Atlantic coast, the Nantes conurbation comprises 24 municipalities and is home to 550,000 inhabitants. The largest urban centre in western France, Nantes has also been the country's second fastest growing urban area since 2000. The conurbation covers an area of 52,000 hectares, half of which is unspoiled or agricultural land irrigated by 150 km of rivers. The Nantes–Saint-Nazaire metropolitan zone combines strong economic assets with a quality of life based on a balance between the natural and urban environments.

Nantes has a long-established integrated and sustainable transport policy with a focus on public transport and cycling. It was also the first French city to successfully reintroduce electric trams. Its ambitious transport policy has reduced air pollution, and a new climate plan aims to cut CO₂ by a quarter by 2020. Despite its demographic expansion, the city has witnessed a significant reduction in the use of private cars.

Innovative mobility solution

The Libertan multimodal contactless smartcard is connected to a post-payment system: occasional users validate the card each time they board a public transport vehicle and are invoiced the following month on the basis of their real use. The system also calculates the best applicable rate up to a maximum limit equal to the price of a monthly ticket.

The card is an innovative and powerful tool for triggering behavioural change. It improves the user friendliness of public transport services for occasional users: there is no need to buy tickets in advance or fret over the best type of ticket to buy. In addition, the recent launch of the Mticket, an electronic ticket that can be purchased by smartphone, promotes the image of a modern service tailored to users' needs.

Technical competence

The public transport operator SEMITAN was responsible for the project concept and development in close cooperation with Nantes Metropole, the organising authority. Ad hoc technical capacity was provided by experts from SEMITAN. Nantes Metropole contributed its overall vision for mobility, along with other services.



Local stakeholder involvement

The project was based on the existence of a specific category of passengers — those who use public transport regularly but not sufficiently often to merit buying a monthly or seasonal pass; the need to encourage and support people to change their mobility behaviour; and the need to promote the image of a modern network and maintain a good image for public transport services. Stakeholders included local train operators, intercity coach operators, and other mobility operators.

Hallmark of innovation

In the first phase, the smartcard provided access to all public transport modes in the urban area: buses, navibus and regional trains. In the second phase, the scope was enlarged to integrate park-and-ride access; the car-sharing service Marguerite; and Bicloo, a self-service bicycle rental system.

The objective was to give users a key to alternative mobility solutions, encouraging them to go from one mode to the other or to combine modes in order to find the appropriate solution for their travel needs. The card boosts integration and coherence between all of the mobility options available in the conurbation and promotes their use.

Long-term results sharing

The Libertan smartcard was developed under the INTERREG IVB project Smart Integrated Ticketing for Europe (SITE), with the aim of addressing barriers to ticket interoperability in the Atlantic area. The ultimate goal is for passengers to be able to purchase a smart ticket in one region and utilise the transport networks of other regions in the Atlantic area using the same ticket.



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FOLLOWING UP: In good company

In 2002, 75 percent of the almost 600,000 work-related trips in the Nantes conurbation were made by car, largely during peak hours. Increasing levels of congestion, and the resulting deterioration in air quality, highlighted the need for change. Company travel plans were promoted to encourage employees to opt for more sustainable transport modes.

Just a small decrease in car traffic was needed in order to improve traffic flow, lower fuel consumption and reduce emissions of pollutants. Company travel plans were thus seen as an effective and practical solution, especially among the growing number of employees concerned about climate change and rising fuel prices.

The city of Nantes introduced travel planning for its own employees with the aim of increasing public transport use from 20 to 30 percent and reducing the modal share of private cars from 62 to 50 percent for commuting and work-related trips. Nantes worked in partnership with the public transport operator SEMITAN, the national environmental agency ADEME, the Chamber of Commerce and various local companies.

The benefits of the scheme were apparent to all key stakeholder groups. Companies enjoyed improved accessibility for clients and visitors as a result of reduced parking demand. Employees saved money, enjoyed better health, and interacted more regularly with non-car-owning colleagues. The local authority promoted a measure that resulted in less congestion, less pollution, economic savings and enhanced road safety.

The company travel plans comprised four stages: an analysis of employees' mobility needs and habits and of companies' accessibility by various transport modes; the elaboration of measures to provide better information on alternative modes of transport; the signing of a contract between Nantes Métropole and SEMITAN; and follow-up and assessment after three years in order to compare mobility habits with contractual objectives.

By the end of 2010, a total of 246 company travel plans had been put into effect (compared to 16 in 2005), benefiting around 66,690 employees. The travel plan of Nantes local authority (2,300 employees) cut car use from 62 to 50 percent, representing 640,000 fewer kilometres travelled and saving 90 tonnes of CO₂ emissions.





CATEGORY II Public Participation

(Non-demonstration City category before 2010)



CATEGORY II: PUBLIC PARTICIPATION

COLLECTIVE PASSENGER
TRANSPORT

Intermodality



La Rochelle, France (2004)

The city of La Rochelle is situated on the Atlantic coast in the Poitou-Charentes region of western France. The Urban Community of La Rochelle comprises the city and its 17 surrounding communes, with a total population of 160,000 inhabitants. With a significant number of small and medium-sized enterprises, La Rochelle's economic dynamism is a strong driver for change in a city that promotes quality of life, sustainable transportation and urban ecology. The first city-centre pedestrian precinct was opened in 1973, a bicycle loan scheme was launched in 1976, and the first car-free day took place in 1997. La Rochelle's participation in the CIVITAS SUCCESS project was part of the local authority's environmental strategy to improve quality of life by boosting existing public transport solutions, promoting multimodality, and giving greater coherence and visibility to all public transport services.

Ambitious measures

La Rochelle has been developing the concept of semi-mass and individual transport alternatives to the private car since 1985, and the implemented measures promoted the combined use of

different transport modes. The keys to the success of the city's transport policies are multimodality (choice of mode) and intermodality (flexibility in terms of use and advantageous flat rates). With just a single ticket, passengers can

LA ROCHELLE, FRANCE

CiViTAS



use buses, coaches, trains, shuttle boats or bicycles. A first in France, the system has similarities with the Carte Orange transport pass introduced in the Greater Paris area.

Political support and technical competence

La Rochelle approved its urban transport plan in 2000. The plan was founded on a spirit of open dialogue and transparency, with the involvement of all the relevant agencies: state and local administrators, chambers of commerce, shopkeepers, trade unions, business associations and community organisations. An innovative approach was the creation of a body known as the “Group of 400”, as it brought together 400 representatives from towns, neighbourhoods and local organisations, who consulted with more than 2,700 people. The method has now been tried and tested, and no project worth an experiment is rejected without discussion and consultation.

Local culture

The conurbation of La Rochelle, although relatively small in area, has earned a remarkable reputation, particularly in the field of urban ecology. It is based on a series of initiatives, many of them related to transport and mobility. Its coastal location has enabled the city to develop a variety of soft maritime transport services — two electric shuttle-boat services and the Sea Bus — to connect its districts while preserving the environment. The system also gives priority to pedestrians and cyclists.

Monitoring

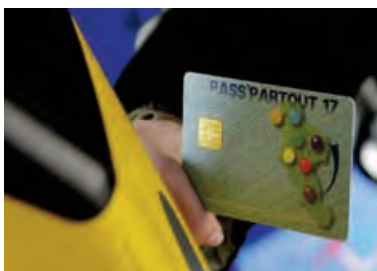
A transport observatory was created in order to closely monitor the implementation of the urban transport plan and to measure its effects with precision. The observatory collects and uses a great deal of data, making it possible to track the evolution of mobility practices and obtain a mobility outline of the entire area of La Rochelle. All the partners involved in the measure made their own contributions to the observatory.



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FOLLOWING UP: Multimodality and intermodality



Largely on its own initiative, La Rochelle has been pursuing multiple alternatives to car usage, mainly by developing multimodal and intermodal schemes. Integrated public transport ticketing was implemented, notably thanks to CIVITAS SUCCESS, through the creation of the Yélo brand and Yélo smartcard for various user groups including commuters, students and tourists.

In recent years, the Urban Community of La Rochelle has developed a wide range of public transport modes and has endeavoured to improve the attractiveness of its public transport network by launching a new service offer and pricing scheme combined with the unique Yélo brand. With the Yélo smartcard, the network offer and pricing system were upgraded, making the use of all modes of transport — buses and coaches, public bikes, park-and-ride facilities, electric boats, shared electric cars and trains — easier and more practical.



CATEGORY II: PUBLIC PARTICIPATION

COLLECTIVE PASSENGER
TRANSPORT

Intermodality



Dresden, Germany (2005)

Dresden is the capital of the German Federal Free State of Saxony and is home to 517,000 inhabitants. Lying on the river Elbe, Dresden is one of Europe's greenest cities, with 63 percent of its area comprising green spaces and forests. The city also has an extended tram network and high rates of bicycle usage. Its transport planning has historically focused on four pillars: city development, infrastructure, transport management and mobility management. With a view to integrating these and other aspects of transport planning, Dresden is drafting a sustainable urban transport plan to guide mobility efforts up to 2025. The 2025-plus Dresden Transport Development Plan is intended as a bridging document between plans related to noise pollution, air quality, public transport, transport measures and concepts, and other transport-related sectoral issues, including zoning.

Ambitious measures

For many years, Dresden has been engaged in ambitious policy making towards the development of a sustainable local and regional transport system. The policies and measures have covered all important modes of transport (with the exception of an underground train system). Implemented measures include the modernisation of the city's trams in order to make them more accessible and energy efficient; the introduction of grass-lined tram tracks and green corridors in 1996 in order to enhance the aesthetic appeal of the built environ-

ment and reduce noise; intermodal connection management and the installation of passenger information facilities at transport junctions; the 2005 launch of the Be-in Be-out public transport pass — a no-hands card that detects passengers as they enter and alight from public transport vehicles; the installation of bicycle parking facilities, especially in the city centre and at public transport stops; the implementation of mobility solutions for disabled people in public spaces and on public transport; and the creation of a coach parking and guidance system, which earned Dresden the International Road Transport Union City Trophy award in 2005.



In terms of soft mobility, Dresden encourages cycling as a flexible means of urban transport by providing 370 km of cycle paths. Approximately 50 km of this network form part of the Elbe bicycle route, a regional tourist route that has been undergoing improvements since 1991. Another initiative to support less-car-dependent lifestyles is Dresden's car-sharing system. Launched in 1998 by Dresden's public transport operator DVB, the system (as of 2011) offered nearly 100 vehicles available at 50 hire stations in the city.

Political support and technical competence

Innovation in local and regional transport is one of Dresden's foremost policy priorities and is based on a clear political strategy. This transport strategy is supported by a network of excellence that includes partners such as the city of Dresden, DVB, the regional public transport association VVO, the Friedrich List Faculty of Transport and Traffic Sciences of the Dresden University of Technology, and the Fraunhofer Institute for Transportation and Infrastructure Systems (IVI). The city of Dresden joined Polis, a network of European cities and regions working together to develop innovative transport solutions, in January 2004.

Local culture

The Dresden region is characterised by a high level of urbanisation along the river Elbe, which has to be taken into account in the organisation of local and regional transport. The urbanised area within the Elbe valley spreads from Meissen in the west via Dresden to Pirna in the east. The improvement of cross-border public transport through the exchange of information and the co-ordination of timetables is another important factor in regional transport policy.

Monitoring

The network of excellence and individual partners carry out continuous qualitative and quantitative monitoring. The integrated city development plan also contains indicators concerning mobility development. Household and travel surveys have been carried out regularly in Dresden since 1972.



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FOLLOWING UP: On the right track

Dresden began installing grass tracks alongside its tram lines in 1995. As well as helping to reduce noise and emissions levels, these grass areas also provide valuable cooling. Grass tracks not only look good, they slow down the evaporation of stored water, especially in summer, which has a cooling effect. They also reduce the drainage of precipitation from the soil by improving water storage capacity, and help regulate groundwater levels. Grass tracks are up to 5 dB quieter than non-grass tracks.

Dresden's local transport company DVB and Dresden University of Applied Sciences conducted a study to determine whether grass tracks had beneficial effects on the city's microclimate. The results were surprising. Every year, Dresden's grass tracks cool down 8.8 billion m³ of air by 10 Kelvin. At an estimated price of EUR 0.20 per kilowatt-hour, the tracks save the city an estimated EUR 6 million in cooling costs.

As of 2013, a total of 29.2 km (or 11 percent) of Dresden's tram network is covered with grass. A mixture of three different grass types is used, which costs around EUR 4 per square metre. Grass tracks need less maintenance than standard tracks: they have to be cut four to five times a year and require additional watering during prolonged heat waves. Some tracks have an automatic watering system, while special tram vehicles are used elsewhere. The water used to hydrate the grass tracks comes from stored rainwater collected from the roofs and surfaces of tram depots, or from wells. Total annual maintenance costs add up to EUR 3 per square metre.



DEMAND MANAGEMENT STRATEGIES

Access management and road pricing

CLEAN FUELS AND VEHICLES

Hybrid, clean and electric vehicles

Stockholm, Sweden (2006)

With a population of 900,000, the Swedish capital is home to 10 percent of the country's population. Stockholm has a great public transport system and there is strong political support for reducing traffic congestion and making the entire transport system more environmentally friendly. Stockholm has established pilot infrastructure for alternative fuels, based on the size of existing fleets. Biogas production facilities deliver locally produced fuel, and large sections of the city have been pedestrianised, while access to the centre is restricted and parking is expensive.

Other plans included substituting conventional vehicles with cleaner models; making logistics services more effective; and creating a more efficient and attractive public transport system combined with intelligent traffic control (ITC) technology. The biggest problems in recent years are the rising number of vehicles; congestion on many of the principal roads; heavy goods vehicles; limited rail track capacity; and the low modal share of cycling. Air quality in inner city areas is generally poor, due to high concentrations of NOx and particulate matter, and noise levels are high.

Ambitious measures

Stockholm is Europe's leading city in terms of clean vehicles and fuels. Today, 25 percent of all new vehicles sold are clean vehicles. Incentives such as discounted parking fees and subsidies for the additional vehicle costs have upped the interest in clean vehicles. The successful implementation of congestion charges in 2006 reduced inner-city traffic by 25 percent.

Stockholm's public transport system handles approximately 80 percent of journeys during the morning rush hour. The system has been improved through regular quality surveys, the introduction of real-time information displays, and travel guarantees in the case of delays. An integrated ticketing system has been in use for more than 50 years.

The city has also demonstrated that the consolidation of goods reduces the negative impacts of transport. Stockholm has established two logistics centres: one to handle deliveries to large construction sites; and another to handle deliveries to restaurants.

Stockholm was one of the first European cities to introduce a 30 km/h speed limit in all residential streets — a move that has not, however, affected average speeds and traffic flow.

Political support and technical competence

Good results have been achieved with the help of strong and dedicated leaders, as well as engaged and competent technicians. Since 1994, the city has implemented a programme for introducing clean vehicles and fuels, with members from all political parties serving on a supervisory committee. Together with colleagues in Gothenburg and Malmo, the committee has regular discussions with the national government. Political courage was also needed for the implementation of congestion charges. Measures to improve cycling infrastructure, introduce a 30 km/h speed limit, and establish environmental zones would have been impossible without strong political will.

Local culture

As Stockholm is built on water, boats and ferries are natural parts of the city's transport network. The district of Hammarby Sjöstad (Hammarby Waterfront) is a former harbour area that is linked by boat to the inner city by a popular ferry line that connects with buses on the inner-city shore. Stockholm is also planning to introduce inner-city ferry lines that operate on biogas.

Traffic is now the major environmental problem in Stockholm and air quality in the inner city has high concentrations of NOx and particulate matter.



Noise levels are also high. Efforts have been made to change the behaviour of residents in order to create a more sustainable city, and more and more commuters are using public transport.

Monitoring

Stockholm's environmental monitoring system includes measurements of air quality, water quality and noise levels. Traffic indicators include traffic flow, travel time, average speed, congestion levels and share of heavy traffic. The various incentives for

clean vehicles and fuels are monitored continuously. The evaluation of congestion charges comprises over 50 studies, from socioeconomic and regional impacts to environmental and health effects. Compliance in environmental zones is monitored once every four months. The evaluation of logistics centres includes the volume of consolidated goods, delivery vehicle load rates and number of trips.

Exchanges with other cities

During the four-year TRENDSETTER project, Stockholm exchanged information and knowledge with the other participating cities, Lille, Graz, Prague and Pecs. Since the end of the project, Stockholm has continued to cooperate with the EC-financed BioEthanol for Sustainable Transport (BEST) project and international biogas-related projects, and was also a partner in the EU initiative Clean Urban Transport for Europe (CUTE), which involved demonstration projects for fuel cell buses. Stockholm is truly at the forefront of the clean-vehicle movement. The 30 km/h and environmental zone measures have attracted many visitors keen to learn more about their successful implementation.



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FOLLOWING UP: A vanguard for clean vehicles

Stockholm has helped to lead the way in the use of clean vehicles, whether privately owned or part of the city's public transportation fleet. Between January and July 2006, the city carried out a full-scale trial to test whether congestion charges would improve traffic flow, decrease emissions and enhance the urban environment.

The trial included significant investments in public transport and park-and-ride facilities. Activities included an assessment of the current traffic situation; the development of zone limits, tariffs and time limits; the setting of operative targets; and the implementation of an evaluation scheme. The trial used dedicated short-range communication (DSRC) microwave technology. All vehicles were automatically photographed in order to identify those without a receiver. In the Stockholm trial, the system featured a single-zone boundary encircling the city centre. Tariffs varied according to time of day, with higher charges during peak periods.

The trial achieved positive results. The proposal for a permanent congestion charge was subsequently approved in a referendum, and the system was put into operation in August 2007. The DSRC system did not function according to expectations and was subsequently taken out of service, with vehicles being monitored solely by camera at the various checkpoints. An evaluation of congestion charging for the period 2006 to 2008 was completed in 2009. These results were also positive, indicating an 18 percent reduction in traffic within the congestion charge zone (96,000 vehicles per day). An increase was observed in the number of vehicles using alternative fuels, which were exempt from the congestion charge until July 2012. The introduction of a congestion charge also had a positive impact on road safety, and the use of the city's park-and-ride facilities increased. More people started using public transport and cycling, and the congestion charge gained a high level of public acceptance.



CATEGORY II: PUBLIC PARTICIPATION

COLLECTIVE PASSENGER TRANSPORT

Accessibility

CLEAN FUELS AND VEHICLES

Cleaner fleets

CAR-INDEPENDENT LIFESTYLES

Public bicycles/
bicycle sharing



Ponferrada, Spain (2007)

Located beside the river Sil, Ponferrada has a population of 70,000. The city has implemented a package of measures aimed at creating a more sustainable transport system. Its main targets include the development of cycling, walking and motorised mobility. Achievements to date include the introduction of innovative measures and technologies such as restricted access to the city centre, GPS for buses, and a bike rental scheme. Special emphasis on clean vehicles and alternative fuels has been demonstrated through the increased use of biofuels in motorised public transport. Future plans include extending the car-free zones and increasing the use of biofuels in public transport. Ponferrada is working on the implementation of sustainable urban transport measures in cooperation with professional local transportation companies.

Ambitious measures

The most ambitious urban transport measure was the acquisition of 10 new 12-metre buses and four minibuses, all running on biodiesel. The buses ran more frequently, and five new lines were opened, including two circular routes for short trips in the city.

Another ambitious measure was the introduction of vertical public transport. Lifts were installed to help people travel between the higher and lower parts of the city. The system was designed with sustainable mobility in mind as an aid to pedestrians, cyclists and public transport. The lifts also improved access to facilities and provided more alternatives for people with impaired mobility.

Ponferrada also introduced a free-loan bicycle system, with 100 bicycles available at four zones throughout the city. Bicycles can be used for up to four hours, after which they may be returned to any of the four zones. The system reduces noise levels and emissions of pollution, improves the use of public space, and boosts health and well-being.

Political support and technical competence

Ponferrada aimed to offer more attractive prices, better access to urban transport, and improved passenger information. The goal was to make public transport options more attractive to citizens.



Local culture

Cultural and social conditions were taken into account from the design stage of the new public transport system. A public survey was carried out at the very beginning to find out as much as possible about the existing public transport offer.

Monitoring

The quality of the public transport system improved: all the buses are new and comply with Euro IV standards, and the number of bus passengers rose by 60 percent. Each day, 12,000 people use the vertical public transport system. The bicycle loan system has 300 subscribers — up from a total of 17 in July 2007. New pre-payment schemes have been created with a double objective: to facilitate bus usage, and to reduce costs for users. The city offers four types of public transport card:

- monthly travel cards (unlimited travel for 30 days), T5 cards (five-journey bus passes) and T10 cards (10-journey bus passes);
- student cards (60 journeys for students up to 30 years of age);
- senior cards (25 journeys for people 65 years and older); and
- free cards (50 to 100 journeys for elderly people with low incomes).

Exchanges with other cities

Representatives from Ponferrada spoke with members of other city councils during the 2006 CIVITAS Forum conference. The city has also garnered experience from participants in the ELTIS and CIVITAS networks. Study visits have also been made to Berlin, Lausanne, London, Paris and Rome.



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FOLLOWING UP: Focused on action

Ponferrada is a traditional participant in European Mobility Week (EMW). It regularly has one of the most comprehensive action plans, the longest list of partners, and the most ambitious permanent measures. The city's action plan for EMW 2007 focused on the theme of alternatives to the private car. An information centre was set up to familiarise citizens with the new public transport and bike rental systems. The local police patrolled by bike throughout the week and took children on bike tours in the town to observe mobility challenges at first hand.

Organised for the first time in 2007, and repeated each year since due to its great success and media coverage, the Transport Means Race was a competition between the most widely used means of transport (cars, buses, bicycles and walking). In 2008, additional activities included the Street Exchange Market in downtown Ponferrada, where spare parts for bicycles were offered. Ponferrada's EMW 2008 activities also featured street programmes for children, a workshop for pedestrians, a photo exhibition, and the broadcasting of statements, poems and the Manifesto for Mobility on local radio.

In 2009, the comprehensive programme included parties on streets closed to car traffic, the Green Patrol (cycling city police), eco-driving training, guided bicycle tours and a bicycle race.

Ponferrada has also introduced long-term measures to improve urban mobility. With its first sustainable mobility plan, developed in 2007, the city made a big investment in the modernisation of its public transport services by redesigning bus itineraries, renewing the fleet to run on clean fuel, refurbishing bus shelters and publishing information leaflets. Six new lines were added to the restructured bus service in 10 years, bringing the total to 15 plus a night service. The EUR 18 monthly pass is used by 20 percent of passengers, the reduced price resulting in a 27.3 percent increase in the number of bus passengers in one year. The city also set up an innovative free bicycle loan service and created 30 new bicycle parks offering 300 new bicycles.



CATEGORY II: PUBLIC PARTICIPATION

DEMAND MANAGEMENT STRATEGIES

Access management and road pricing

COLLECTIVE PASSENGER TRANSPORT

Accessibility

CLEAN FUELS AND VEHICLES

Hybrid, clean and electric vehicles



Piacenza, Italy (2008)

Piacenza is located in the Emilia-Romagna region of northern Italy and has a population of 100,000. It is the capital of the province of Piacenza and lies 60 km southeast of Milan. Local public transportation is orientated towards bus services, which are managed by two companies: Time SpA and Time Agency SpA. Piacenza is on important rail and road routes between Turin, Bologna, Genoa and Milan. Large numbers of city commuters travel by train, and the railway also serves outlying areas. Its location and its importance as a rail and road hub continue to contribute to the economic and industrial development of the city and its surrounding area.

Ambitious measures

Piacenza made efforts to improve air quality by shifting from diesel and gasoline to low-impact fuels such as LPG and CNG. A free bus service was introduced to connect the suburbs with the inner city. The city's limited traffic zone was expanded from 550,000 m² to 650,000 m².

Political support and technical competence

The city developed a partnership with the technical company Consorzio Ecogas to help with

the conversion to cleaner fuels, offering an incentive of up to EUR 350 for each vehicle conversion. The city also managed two other similar actions.

Local culture

Citizens' needs are increasingly being taken into account in terms of traffic measures. Fuel conversion and free bus services are not only good for the environment, but also reduce fuel costs for citizens. The expanded limited traffic zone also improved quality of life in Piacenza.



Monitoring

The number of fuel conversions, the number of transported passengers and the number of passes issued for the limited traffic zone are monitored each month in order to estimate emissions reductions as a result of implementing these measures.

Exchanges with other cities

Piacenza publicises its green initiatives via the Internet and by means of contacts with other cities. However, much remains to be done and Piacenza is working hard in this area.



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FOLLOWING UP: Car pooling takes off

Based on an agreement between the Italian company Tempi Agenzia S.p.A. and a German initiative (carpooling.com), a new web platform was introduced to encourage car pooling in Piacenza. The municipality unveiled the new project on February 17, 2012, National Energy-Saving Day. Those planning to make a specific journey can now use the website www.carpooling.it to get in touch with people offering their vehicle for the journey, both within Italy and across Europe. The service is available via smartphone apps (iPhone and Android) and social networks such as Facebook.

The website www.tempiagenzai.it provides an updated list of offered and requested journeys to and from Piacenza. Users can meet and share a vehicle for the same trip. Important information about each journey is provided, including the driver, how to get in touch with potential travelling companions, and rules about accessing the service. Citizens of Piacenza can now receive real-time requests and offers for car-pooling trips. Piacenza is the second city in Italy to launch a car-pooling service.





MOBILITY MANAGEMENT

Mobility planning

Mobility marketing and awareness raising

London Borough of Sutton, United Kingdom (2009)

The London Borough of Sutton has a population of 186,000 and is one of the group of boroughs that form Outer London. Sustainable transport is based on an urban train system and London bus services. The borough has a modal split of 52 percent private cars (including passengers), 22 percent pedestrians, 11 percent buses, 7 percent rail, 4 percent underground, 2 percent cycling, and 2 percent other modes. The borough's strategic approach to transport management was defined in 2006 in the three-year sustainable transport programme Smarter Travel Sutton (STS). The programme focused on four key targets: reducing car trips; creating school travel plans; creating travel plans for 15,000 employees; and providing information and advice on travel options to households. All these targets were successfully achieved.

The council is now implementing a five-year STS follow-up programme to deliver transport projects and improvements in Sutton's district centres. The projects seek to encourage greater use of local facilities within walking and cycling distance. A robust governance structure, strong political support and the involvement of partnership agencies all contributed to the project's successful progress.

mayor of London, Ken Livingstone. New mayor Boris Johnson also expressed support for the programme. The project team comprised a mixture of marketing and communications professionals, with transport planning, policy and engineering support. This strong political leadership and mix of technical skills contributed to the programme's success.

Ambitious measures

Sutton's policy is to reduce private car trips in favour of sustainable modes. In 2006, the council invested GBP 5 million in the behavioural change programme Smarter Travel Sutton, aimed at reducing car trips by 5 to 10 percent by September 2009. By September 2008, the reduction was just 2 percent, although the number of cyclists had jumped by 50 percent compared to 2007. The pilot social marketing campaign was the most ambitious in Europe to date and involved directly contacting every household in the borough. All schools have a school travel plan, and over 100 businesses have a workplace travel plan.

Local culture

The programme was jointly managed and delivered by Sutton Council and Transport for London, working in partnership. A stakeholder board was established to help manage the programme. The programme encouraged the regular flow of information and advice to the public, and welcomed public feedback. A key element was the work of personal travel plan advisers, who met with members of the public in the streets, at home, at school and in the workplace, offering information and advice and discussing individual travel habits.

Political support and technical competence

Smarter Travel Sutton was supported by both local political parties, who formed a programme board. Both local members of parliament also supported the programme, which was launched by the then

Monitoring

Each year, a monitoring report is published on the council's website (<http://www.sutton.gov.uk>) under the About Us tab. Monitoring and evaluation are based on both quantitative and qualitative methods. Quantitative methods include a series of automatic traffic counters across the borough to monitor traffic flow for a variety of modes at key points.

These data are monitored 24 hours a day, seven days a week. There is also a network of automatic cycle counters, and bus patronage data are collected for key bus services. All these data are compared with a control area in the neighbouring borough of Croydon. In order to obtain qualitative data, a telephone survey of 1,500 households is undertaken each year, with a further 500 surveys in the control area. The survey comprises questions relating to travel attitudes and behaviour.



Exchanges with other cities

The London Borough of Sutton has always supported the concept of information dissemination and exchange. As a CIVITAS member, the borough welcomes information from other members of the network. Sutton Council has hosted a number of study visits for representatives from Sweden, France, Australia and South Korea, as well as from many UK cities and regions. Staff members regularly attend

meetings, conferences and seminars to present results and discuss the content of the pilot programme. Information is also exchanged with professionals from non-transport backgrounds, including health and the environment. Several articles have been published in transport and local government trade journals and regional and national media.

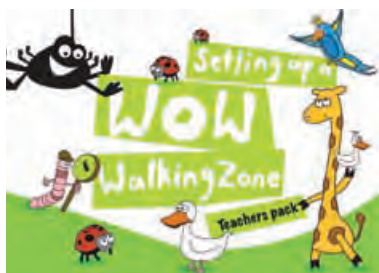


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FOLLOWING UP: Learning to walk

According to the how-to guide for schools, published in September 2011, "Schools in London have been very successful at reducing car use, having achieved a modal shift away from the car by around 6.5 percent on average since 2007." "Some schools have far exceeded this by implementing a range of activities and doing things that 'work!'"



The London Borough of Sutton has been especially assertive in encouraging its population to find travel alternatives to the private automobile. Cycling and walking are preferred modes of transport where possible, and there is equal emphasis on citizen organisation to develop plans, policies and fundraising schemes to make such options more attractive and feasible.

Where schools are concerned, Sutton has identified 10 key factors that help to bring about real change: knowing exactly which issues

should be addressed; establishing a working group; getting parents and pupils involved; undertaking active promotion; working in partnership; introducing Walk Once a Week (WoW) and Walk to School weeks; ensuring appropriate infrastructure; embedding active travel in school curricula; celebrating successes and rewarding positive behaviour; and obtaining official accreditation.

Walk to School weeks and Walk Once a Week campaigns are high-profile schemes run by the charity Living Streets. Sutton runs a WoW in the two middle months of each term. According to successful schools, it is particularly important to make more of Walk to School week and WoW by linking them to other campaigns and events, such as an eco-week or green week. This helps parents and pupils link active travel to wider environmental issues. The teachers' pack "Setting up a WoW Walking Zone" can be downloaded from: http://civitas.eu/sites/default/files/wow_walking_zones1.pdf.



CATEGORY II: PUBLIC PARTICIPATION

MOBILITY MANAGEMENT

Multi-stakeholder
consultation/public
participation



Vitoria-Gasteiz, Spain (2010)

Vitoria-Gasteiz is a city of 235,500 inhabitants, located in the province of Alava. It is the provincial capital and the capital of the Autonomous Community of the Basque Country in northern Spain, and is the second largest Basque city after Bilbao. The city is renowned for its well-preserved centre.

Citizen and stakeholder involvement

The city's Sustainable Mobility and Public Space Plan (SM&PSP) was drafted after intensive public participation, demonstrated by the Citizens' Pact for Sustainable Mobility that establishes consensus between the public administration and civil society. The information flow was both vertical (from city council to citizens) and horizontal (citizen to citizen). In a special campaign, 101 volunteers provided information about the changes to the public transport network to more than 27,000 city residents. The achievement of consensus between all political groups required the coordination of technical areas that usually operate separately.

Citizen engagement in measures and policies

The city drew support from civil and social groups for the implementation of the first measures of the SM&PSP. More than 30 briefings and participatory workshops were held in 2009 alone. At the same

time, the Agenda 21 schools educational programme incorporated sustainable mobility in its curriculum, reaching over 20,000 students in 30 schools. A vigorous communications and dissemination campaign was also launched in order to share the aims of the plan with the public. In 2009, more than 16,500 people took part in European Mobility Week, which focused on raising public awareness of sustainable mobility, activities under the SM&PSP, and the CIVITAS Initiative.

Informing citizens and stakeholders

Citizens and stakeholders receive information via a number of forums (sector councils, territorial councils, the municipal social council etc.) and support tools (mobility web portal, urban ecology classroom, digital bulletin, technical workshops, press conferences, institutional media campaigns, street campaigns etc.) A review and analysis of local sustainability indicators has been carried out every year since 1998, and the results are published in both a printed and electronic newsletter.



Legal and administrative basis for citizen and stakeholder involvement

A set of regulations on the participation of citizens came into force in 2004. These regulations govern the means and procedures for public participation and the sharing of information with the citizens of Vitoria-Gasteiz. The regulations include defining and improving the channels for direct public participation in public affairs, for which the municipality is responsible, and encouraging public involvement and intervention in municipal improvements. The set of regulations provides for the establishment of three advisory bodies and defines the purpose, composition, functions and general operating rules of each. All bodies may be required to write reports and make proposals and suggestions. The organs of participation are sector councils, territorial councils and the social council of the municipality of Vitoria-Gasteiz.

Impact of public involvement

A wide range of stakeholders participated in designing the SM&PSP. An inter-departmental technical committee was set up to oversee the work and the Citizens Forum for Sustainable Mobility was created. The approach to plan implementation has been multidisciplinary and participatory, seeking the involvement of as many citizens' organisations as possible alongside the various municipal departments: these organisations include transport professionals, associations of people with impaired mobility, the Environment Council, economic agents, traders, professional and neighbourhood associations, and the Agenda 21 Schools Council. The high level of public participation has strengthened feelings of collectiveness and enabled a common scenario to be drawn up to overcome conflicts of interest and meet public requirements. The Basque Country University has also been closely involved and has made great efforts to convey the philosophy of the SM&PSP to the public.



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FOLLOWING UP: Northern Spain's green capital

Having implemented progressive environmental policies for nearly three decades, Vitoria-Gasteiz won the coveted European Green Capital award in 2012. The city then took the opportunity to host the CIVITAS Forum conference in 2012 and the CIVITAS Plus final conference as a combined event, thus ensuring its position as a reference point for European standards, especially in relation to recycling, mobility and water consumption.

Vitoria-Gasteiz is an environmentally advanced city thanks to its ambitious plans to combat climate change, as well as its strategies in the fields of air quality, green belt creation, water conservation, waste management, energy efficiency, sustainable urban development, parks and gardens, cycling lanes and modern public transport. However, it is mostly the enthusiasm and initiative of its citizens that make Vitoria-Gasteiz a city that is green both outside and inside.

Not content to rest on its laurels, Vitoria-Gasteiz set the bar even higher by drawing up a list of ambitious goals to achieve during its award-winning year. These included increasing the use of public transport by 10 percent; reducing energy consumption in municipal installations by 5 percent; eliminating plastic bags and replacing them with alternatives that are either reusable or made from biodegradable materials; developing a pilot urban allotment plan; and reducing water consumption by 5 percent.

Not surprisingly, many of these themes found their way into the agenda of the 2012 Forum conference. In the quest to create "liveable" cities, the conference explored successful aspects of sustainable mobility and public space planning. Many of the achievements of Vitoria-Gasteiz were on display and could be visited by bike, on foot or by bus. Meanwhile, the CIVITAS Plus final conference reflected on four years of CIVITAS Plus and offered significant visibility to the results of the third phase of the Initiative. As participating cities looked to identify the way forward, CIVITAS Plus handed over the baton to the new cities participating in the fourth phase of the CIVITAS Initiative: CIVITAS Plus II.



MOBILITY MANAGEMENT

Multi-stakeholder
consultation/public
participation

Ghent, Belgium (2011)

Ghent is the third largest city in Belgium, with about 247,000 inhabitants living in an area of 156.18 km². Ghent is becoming far more attractive following considerable efforts to curb the use of private cars, calm traffic in the city centre and improve cycling infrastructure. In late medieval times, Ghent was Europe's second largest city after Paris and one of the most powerful and wealthiest. Today, the city's important port and university still make it a bustling centre. Ghent has an extensive public transport network serving the city centre and surrounding area. It is the core of a metropolitan area of about 500,000 inhabitants and there is a lot of traffic in and out of the city.



Citizen and stakeholder involvement

Although Ghent has already established a tradition of engaging its citizens in public matters such as mobility, CIVITAS has widened the opportunity for engagement. There has been some form of citizen participation or engagement in 21 of the 24 CIVITAS activities. The best results have been achieved in measures on cycling and walking, which involved before and after consultations and face-to-face interviews. From small, clearly defined actions to a broad strategic level, Ghent has enlarged the scope towards maximum consultation with and participation by all stakeholders.

Citizen engagement in measures and policies

A variety of tools and approaches were used, depending on the measure or project: online and paper-based questionnaires, the recruitment of citizens for mobility teams via face-to-face interviews, the establishment of a citizens workgroup for weekly meetings at the railway station, dialogue on mobility matters through postcards, the organisation of information moments etc. People were invited via Twitter or Facebook, for example, to participate in discussions on the redesign of a district. They were able to state their preferences, and the results were integrated in a public tender for project developers. The mayor and other Twitter users acted as ambassadors and were able to get the dialogue started.

In 1993, the city introduced a plan to create a cycling culture via infrastructure improvements, theft prevention measures and the setting up of a "bicycle unit" in the city administration. In 1997, Ghent launched the Mobility Plan for the Inner City. The ambitious endeavour to transform the city's mobility structure at first faced opposition from retailers and citizens. The plan was to eliminate through-traffic from the city centre, create a pedestrian zone, introduce a 30 km/h speed limit between the pedestrian area and car parks, and redesign streets and squares. Surveys confirm that living in and visiting Ghent is now far more pleasant than a decade ago.

Within CIVITAS ELAN, Ghent improved its public transport system with a package of 24 activities aimed at bringing it closer to being one of the most advanced cities in Belgium.



Informing citizens and stakeholders

Contacts with citizens were evaluated with the involvement of all project partners. Ghent used various communication channels to inform and consult with its citizens. Broad communication took place through the city magazine and official city channels, including its website. In terms of targeted communication, it is the role of the mobility department to decide on cooperation with community-based planning. For the large-scale project at the Gent Sint-Pieters railway station, for example, minutes of all meetings were uploaded to the project website (www.project-gentsintpieters.be). The city aims to achieve a high level of transparency in communicating with citizens.

Legal and administrative basis for citizen and stakeholder involvement

Public participation in local decision making has been an important policy issue in Ghent for 25 years. Ghent's community-based planning cell is divided into 25 sections. One to three people

are responsible for each section and interact systematically and intensively with residents. Mobility is an important issue when it comes to hearing people's opinions. In terms of transport planning and infrastructure, regular consultations take place in line with important infrastructure projects, urban transport and land-use planning. The participation of citizens and feedback at local, regional and national levels is ensured via project exhibitions in local institutions, surveys, workshops, conferences and marketing campaigns.

Impact of citizen involvement

Within CIVITAS, greater participation and engagement on the part of citizens has had a definite impact on the success of some measures. Although stakeholders were very critical about some aspects of the Gent Sint-Pieters project, they also sought better mobility solutions. Original plans were altered according to feedback from citizens: a pedestrian crossing was moved closer to a school, for example; more bicycle sheds were provided; more parking spaces were created in front of shops; and trees were shifted to better locations.



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FOLLOWING UP: Engaging citizens with ELAN

In November 2012, the ELAN project delivered its Evaluation Report on Citizen Engagement, which detailed the results of various initiatives carried out in the cities of Brno, Ghent, Ljubljana, Porto and Zagreb. The focus on public participation was a very important feature of the ELAN project's workplan. Putting citizens first means bringing about a conceptual shift from perceiving them as a problem towards recognising their constructive role in any solution.

The ELAN Citizen Engagement Strategy comprised six specific objectives: to raise awareness and understanding of citizens' engagement; to define common principles for citizens' engagement in transport planning and implementation; to assess the level of citizens' participation with regard to transport in individual CIVITAS ELAN cities through situational analyses; to identify barriers and capacity-building needs; to prepare guidelines for effective citizens' engagement in CIVITAS ELAN cities; and to support consistent evaluation through the identification of indicators.

Ghent used the ELAN project to further increase its already high levels of public participation in the planning and implementation of mobility measures. One of the objectives in Ghent was to improve the availability and accessibility of information in general, and information about city mobility in particular. The long experience of the city was a guarantee of the high quality of engagement activities using the best available method for each measure and target group. Learning from past failures was another factor contributing to success, especially in big projects where it was important to focus on as wide a range of communication tools as possible in order to address different sets of stakeholders. It is important to ensure that interactive tools are also available in order to give stakeholders the chance to provide input to projects.



Reggio Emilia, Italy (2012)

Reggio Emilia (officially Reggio nell'Emilia) is an affluent city of approximately 170,000 inhabitants in northern Italy. It is the main municipality in the province of Reggio Emilia. The city has developed and implemented a complex mix of measures to address the congestion caused by car traffic. The city's urban public transport system comprises low-emission buses that run on liquid petroleum. The municipal transit authority ACT is also responsible for peri-urban transportation throughout the province, which includes links with the provinces of Modena, Parma and Mantua and rail connections to many other cities. The authority also manages park-and-ride facilities, which offer free minibus transportation into the city centre, as well as bicycle and zero-emission electric vehicle rental services.

Reggio Emilia is connected to all major cities in central and northern Italy via the Autostrada del Sole. Congestion levels can be very high due to the rising transport needs of dynamically growing companies in the industrial district outside the city. Modernisation projects and the construction of a ring road have been under way for several years.

of action: education, communication, promotion, safety, services and city planning. These were developed into nine projects, the most notable being: "In Reggio Emilia We Go to School by BiciBus or PediBus", "Funding for Safety on Home-to-School Routes", "Health and Exercise Every Day", and "Sharing Rules to Move Safely".

Citizen and stakeholder involvement

Reggio Emilia has drafted a manifesto for safe, sustainable and independent mobility on home-to-school routes. Reggio Emilia's 170,000 inhabitants include around 8,100 children aged between six and 11, and 5,000 between the ages of 12 and 14. Taking children to school by car has adverse impacts on rush-hour traffic flows, and on the psychological and physical welfare of the children. The municipality decided to look for a citywide solution, rather than treating it as a strictly school-related issue. The manifesto is supported by city district councils, the provincial school board, school managers, Reggio Emilia's mobility agency, the Italian Federation of Paediatricians, the regional environmental protection agency, the local public health utility, the Road Safety Observatory and the Italian Federation of Bicycle Friends.

Informing citizens and stakeholders

Before drafting the manifesto, Reggio Emilia's municipal authorities involved school actors in exploring problems, demands, needs and possible solutions. Primary schools were involved via the school mobility manager, who was requested to appoint someone to be responsible for recognising, promoting and suggesting initiatives aimed at sustainable mobility education; to act as school spokesperson on mobility; to support safe and sustainable modes of transport (BiciBus and PediBus); and to join a coordination committee via which school and municipal administrations can share ideas on sustainable mobility.

Citizen engagement measures and policies

The manifesto was seen as a way to involve all city primary schools in mobility issues, and also as a shared working process. It comprised six areas

Legal and administrative basis for citizen and stakeholder involvement

Although the post of school mobility manager is not compulsory, Reggio Emilia recommends it for every primary school and offers help through training. The city helped to organise the first mobility managers' training course, contributing to both technical and motivational aspects. The task of the



school mobility manager is to motivate students and colleagues to adopt sustainable mobility good practices. The manager should also be in touch with students' families and should encourage their awareness of healthier lifestyles.

Impact of public involvement

The city of Reggio Emilia as a whole rallied behind this primary school initiative. Experience shows that

the more people are aware of important issues such as mobility, the more responsibly they act. In fact, most negative misconceptions stem from a lack of knowledge. Having a person inside the school to help energise mobility-related issues is an important step towards changing behaviour. At the same time, a network of mobility managers provides opportunities for teachers and the municipality to meet and exchange good practices for everyone's benefit.



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FOLLOWING UP: Involving the public in mobility policies

In 1971, as many as 80 percent of children in the municipality of Reggio Emilia travelled to school on foot or by bicycle. Around three decades later, more than two-thirds of children were travelling to school by car, not only limiting opportunities for physical activity and social interaction, but resulting in urban congestion, pollution and road accidents in school areas.

In April 2009, Reggio Emilia published a manifesto on safe, sustainable and independent mobility on home-to-school routes, with the aim of involving various actors in a shared planning process and developing opportunities for commitment, action and involvement.

Six separate strategies were adopted for the implementation of nine separate projects. The strategies focused on education, communication, promotion, safety, services and planning. The projects focused on travelling to school by BiciBus or PediBus; safety along home-to-school routes; school buses and car pooling; everyday health and movement; the publication of educational leaflets on sustainable mobility; and the appointment of school mobility managers.

The project resulted in a number of significant achievements: more than 500 children in Reggio Emilia now travel to school by BiciBus; 60 percent of children now travel to school on foot, by bicycle or public transport, or in car pools; and there are now 51 school mobility managers for the municipality's 54 schools.

Reggio Emilia has demonstrated convincingly that policies that attempt to influence mobility behaviour require a comprehensive approach and the involvement of all actors, particularly schools and families.



CATEGORY II: PUBLIC PARTICIPATION

MOBILITY MANAGEMENT

Multi-stakeholder
consultation/public
participation



Bologna, Italy (2013)

Bologna has a population of 373,000 and is the capital of the Emilia-Romagna region in central Italy. The city is surrounded by beautiful plains, hills, woods and the Apennine Mountains. Its central location, prestigious university and numerous enterprises require a high level of varied mobility options. A big challenge for Bologna is to reconcile the currently high demand for transport services with the low capacity of the narrow streets in the medieval city centre — which remains the focus of public, commercial and cultural life.

In the past, low traffic capacity in the city centre often led to heavy congestion that compromised quality of life. The progressive introduction of traffic restrictions, which started with the designation of the historic city centre as a limited traffic zone (LTZ) in 1989, has considerably improved the situation. Air quality has improved, and the city centre's attractiveness has been preserved. Alongside access restrictions, intelligent transport systems (ITS) have further improved conditions in the city centre.

In June 2007, the city approved its new Master Plan for Urban Traffic (PGTU), which focuses on reducing pollution, noise, accidents and congestion, while at the same time saving energy. The interlinked developments under the PGTU are

aimed at ensuring sustainable mobility and access to all parts of the city through better public transport and cycle lanes, while safeguarding the most valuable environmental and architectural features.

The city hopes that the completion of large-scale public works, together with the reorganisation of the public transport network, will help to achieve a modal split for public transport of 33 percent, to balance the share of car usage (between 28 and 33 percent). At the same time, the city has the ambitious goal of increasing bicycle usage from 7 to 9 percent, which would make its modal share comparable to the sustainability standards of other major European cities.



In CIVITAS MIMOSA, Bologna acted as a pilot site for testing innovative activities to improve its urban transport system. It was also a valuable model for other medium-sized cities across Europe. The city's efforts were recognised during European Mobility Week (EMW) in 2011, when Bologna won the EMW Award for its efforts to promote and invest in sustainable modes of transport. Bologna also won the CIVITAS Award for Technical Innovation in 2010 for the design of an ITS that integrates traffic monitoring and rule enforcement.

Citizen and stakeholder involvement

The Agency for Mobility and Local Public Transport (SRM) and the municipality of Bologna organised the European Cycling Challenge (ECC) 2013 as a follow-up to, and second scaling up of, a CIVITAS Plus MIMOSA measure. Citizens were invited to participate in UniBike lessons arranged by cycling associations. The cycling challenge and its health and environment benefits were presented and discussed with participants. Mobility managers from public and private bodies were asked to invite employees to participate. Bicycle shops were asked for sponsorship, and in turn were promoted on the challenge website. Citizens, associations and other stakeholders were asked for suggestions before the challenge started.

Citizen engagement in measures and policies

ECC 2013 benefited from the motivation of competition between European cities. The goal was to create city-wide communities that were keen and proud to contribute to city liveability by making their urban trips more environmentally friendly. Two websites were created: ecc2013.net and endomondo.com/challenges/9061077. Each city managed a dedicated webpage, including a chat section where team coordinators shared useful information and participants could exchange messages and encouragement.

Monitoring and evaluation

During ECC 2013, online leader boards displayed both individual and city mileage statistics in real

time. This motivated participants to cycle more in order to rise in the individual rankings. Participating cities were also asked to provide before and after statistics on modal shift in order to collect valuable data on the impacts of the 2013 challenge in terms of both behaviour and CO₂ emissions savings. Heat maps were created from GPS data, showing the most-used cycle paths in order to evaluate the adequacy of infrastructure. During the award ceremony, the deputy mayor distributed the heat maps to participants. "The challenge has dramatically changed my urban mobility attitude", said one participant. "I used to cycle only for sport. Now I have left my motorbike and I will only travel by bicycle in the city."

Legal and administrative basis for citizen and stakeholder involvement

The involvement of citizens and stakeholders in the ECC 2013 process was not compulsory, but they were asked to participate in the first stages of the initiative. Their feedback and contributions improved the challenge, making them feel essential to the success of the initiative. The 2013 challenge was part of the ongoing strategy of the municipality of Bologna to promote sustainable mobility in the city. In particular, the city's sustainable urban mobility plan (SUMP) identifies cycling and walking as powerful ways to reduce traffic and air pollution in the city. The legal procedure for the approval of the SUMP included specific stages during which citizens and stakeholders had to participate in the decision-making processes.

Impact of citizen involvement

Bologna is committed to involving a higher number of participants at local and European level, thus it gave the ECC 2013 initiative as much visibility as possible. The success of the initiative was based on the proactive involvement and dynamic participation of citizens. More than 3,000 people took part in ECC 2013, and during May 2013 they cycled more than 310,000 km in Bologna, Tallinn, Lille, Kaunas, London, Dublin, Utrecht, Tartu, Vila Nova de Famalicao, Padua and Rimini. About 450 participants from the Bologna team cycled more than 52,000 km in urban journeys.



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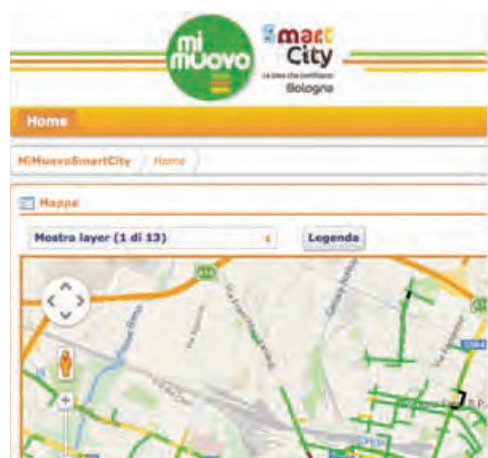
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Mi Nuovo Smart City

Whether for work, leisure or everyday needs, mobility is a key issue in a modern city. Citizens can choose from multiple mobility options and generally have Internet connection, but they may need help to select the most efficient, most affordable and most environmentally friendly way to travel. Issues such as traffic congestion, parking space availability, city-centre access, transport sharing, accessibility, CO₂ emissions, information silos and sensor networks are seldom integrated. Mi Nuovo Smart City, a smart service for multimodal mobility, is Bologna's response.

<http://mimuovo.comune.bologna.it>

Developed during the SMARTiP European project (www.smart-ip.eu), it provides citizens with real-time information on bus arrivals, bus stops, parking spaces and bike lanes. The system makes it possible to monitor the current traffic situation, bus schedules, roadworks, public parking, taxi avail-



ability, bike lanes, restricted access zones and street cleaning. Mi Nuovo Smart City is a web-based app, available on various devices including desktop computers, tablets or smartphones.

FOLLOWING UP: Total involvement

Bologna encourages its citizens to be active participants in urban mobility planning and has made great efforts to raise awareness and increase cooperation with citizens and stakeholders. CIVITAS MIMOSA objectives in relation to public participation include involving citizens and stakeholders in municipal initiatives on environmental issues; providing comprehensive information to raise awareness; influencing citizens' behaviour in favour of sustainable mobility choices; and fostering a new perception of mobility that revolves around sustainable means of transport.

In as early as June 2006 (prior to the start of MIMOSA), the city introduced the initiative "Bologna, a Changing City". Citizens and stakeholders were invited to participate in discussions, while trade unions, NGOs and technical experts had an opportunity to share ideas, make proposals and debate with municipal technicians about new regulations and traffic restrictions. Based on these inputs, the Urban Traffic Master Plan was approved in 2007.

The city then planned a campaign to raise awareness of the impacts of traffic on health, energy efficiency and safety. The campaign was based on research into new communication channels. Key elements were the promotion of urban cycling, public transport, car sharing and car pooling. Dissemination materials included leaflets, brochures, CDs and DVDs, and a website was planned to encourage participation, the exchange of experiences and information, and suggestions for improvements.

Since then, Bologna has organised and managed many opportunities to involve citizens and stakeholders in the strategy. Events during European Mobility Week in September each year of the MIMOSA project period provided great opportunities for the municipality to meet residents and listen to their opinions about sustainable mobility. During European Mobility Week 2010, Bologna organised a series of initiatives and events throughout the city. The biggest was a two-day event to promote sustainable lifestyles, which attracted 3,000 participants.



www.jrcalres.pt

CATEGORY III CIVITAS City of the Year



CATEGORY III: CIVITAS CITY OF THE YEAR

MOBILITY MANAGEMENT

Multi-stakeholder
consultation/
public participation

Mobility marketing
and awareness raising

CAR-INDEPENDENT LIFESTYLES

Car sharing



Bremen, Germany (2005)

Bremen, which is officially known as the Free Hanseatic City of Bremen, is a port and trade centre in northwestern Germany on the banks of the Weser River, close to the North Sea. The state of Bremen comprises the cities of Bremen and Bremerhaven. The 10th largest city in Germany, with a population of 550,000, Bremen is home to automotive, electronic, steel, aircraft and food industries. A university, colleges and other research institutions also make Bremen an attractive academic centre. Bremen's involvement with the CIVITAS project focused on measures to improve the city's public transport systems and also contributed significantly to the growth of car sharing in the city.

Good ambassador

For many years Bremen has been an active partner in European networks and projects focusing on sustainable transport solutions. Activities cover all eight pillars of the CIVITAS Initiative, and emphasis is given to taking a network-based approach. Financial considerations are equally important: Bremen seeks sustainable transport solutions that are both cost-effective and economically sound. This ensures that CIVITAS measures can continue beyond the project lifetime and also allows for a high level of transferability to other European cities.

Bremen has contributed to dissemination efforts by presenting the CIVITAS experience at major con-

ferences in Beijing, Shanghai, Toronto, Vancouver, Stockholm, Estoril, Genoa, Geneva, Madrid, Nantes, Hanover, Dresden and Barcelona and has also participated in many other European events. Bremen is known for taking a unique visual approach in its communication activities, with video being a favourite medium. One example was a video spot suggesting that James Bond would be likely to cycle or opt for public transport in Bremen.

Regarding communication activities within Germany, Bremen's key areas of focus are clean vehicles and car sharing, mostly through the CIVITAS VIVALDI project. The city held a VIVALDI-sponsored exhibition on car sharing and



organised a parliamentary evening on the issue in the German capital Berlin. Bremen has also shared its experience at many direct exchange events and bilateral workshops with other CIVITAS cities, including Nantes and Gothenburg.

Bremen's ambassadorial role also extends to its own citizens. During the project, EU and CIVITAS VIVALDI logos were highly visible throughout the city on CNG taxis and cars, e-ticketing smartcards and promotional materials. These efforts nurtured a positive image of CIVITAS among citizens, media and local politicians. In recognition of these efforts, Bremen received the CIVITAS City of the Year award in 2005 from Commissioner for Transport Jacques Barrot.

Timely implementation

The CIVITAS VIVALDI measures were in line with Bremen's general political objectives and had solid political backing. The measures were rooted in politically adopted plans and built on previous achievements. With its new services and technical improvements, CIVITAS contributed to a 43 percent increase in the number of active car sharers.

Stakeholder involvement

Bremen involved 10 full (local and regional) partners in the CIVITAS VIVALDI project, based on the belief that regional solutions are crucial when addressing urban transport problems. Through

VIVALDI, Bremen involved both the gas supplier and the local energy agency in the partnership for clean vehicles. The freight sector was represented by the city logistics operator, while intermodal issues involved the main local public transport operator (BSAG), the regional public transport umbrella organisation (ZVBN) and the operational body VBN, covering 34 operators working in an area of 8,400 km². The intensive involvement of so many partners allowed for the implementation of joint activities throughout the region, including an integrated electronic ticketing system with innovative pricing strategies.

Bremen saw itself as a kind of broker, bringing together and supporting various stakeholders to work towards sustainable mobility.

Information exchange

Bremen has long been actively involved in European networking activities to promote a new mobility culture. In order to assist other partners, project information from Bremen is available in all five VIVALDI languages: German, English, French, Danish and Lithuanian.

Bremen sees the CIVITAS cities as anchor points for disseminating further experiences and is determined to continue with evaluation and dissemination activities in order to promote clean and sustainable urban transport for the benefit of the citizens of Bremen and other European cities.



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FOLLOWING UP: Winning through sharing

Bremen has earned a worldwide reputation as an ambassador for sustainable mobility, as a cycling city and as a promoter of car sharing. Within the last 10 years, the city has made significant progress in various fields of sustainable mobility.

The city extended its tram network by adding new connections, for example to the airport, the university, new residential districts and the revitalised former harbour area Uberseestadt.

It also introduced a network of cycle streets on which cyclists have priority. On almost all one-way streets cycling is permitted in a contraflow direction, and all residential streets are 30 km/h zones.

As a result of such measures, the share of cycling is 25 percent, which means that every fourth trip in Bremen is made by bicycle. Sustainable modes (walking, cycling and public transport) represent a combined share of 60 percent of all trips. In its Targeted Plan for Cycling, Bremen set the target of a 30 percent share for cycling by 2020.



CATEGORY III: CIVITAS CITY OF THE YEAR

At the end of the CIVITAS VIVALDI project there were around 4,000 car sharers in Bremen. By 2014, the number had increased to 10,000. Car sharing has become a strategic element in efforts to reclaim street space from car parking and devote it to pedestrians and cycle parking. Car sharing in Bremen has cut the number of cars in use by 2,000. With the politically adopted 2009 Car-Sharing Action Plan — the world's first municipal action plan on car sharing — Bremen became a leading example of the strategic integration of car sharing. The city received the German Transport Planning Award in 2010; the Austrian Mobility Award in 2012; and the EU Sustainable Energy Award in 2013. As car sharing is recognised as an innovative means of tackling the problem of increasing car ownership, Bremen was selected as an example of urban best practice for presentation at the World Exposition 2010 in Shanghai, China. The Bremen pavilion attracted around 1 million visitors. Following the presentation in Shanghai, Bremen was visited by many Chinese experts and the city was invited to present its experiences on several occasions in China — including during the EU–China summit in November 2013 in Beijing.

In 2012, Bremen began to revise its sustainable urban mobility plan. The city's innovative online tools for participation and its scenario games (www.bremenbewegen.de), in conjunction with an intense series of meetings, forums and exhibitions, earned Bremen the CIVITAS City of the Year award in the Public Participation category in 2014.



The measure was implemented in response to a growth in car ownership and the related congestion and negative impacts on air quality. As a result of the car-sharing scheme, drivers have access to cars without the need for ownership. Bremen aimed to improve its scheme by creating new and enlarged car-sharing stations in conjunction with public transport stops; targeting offers to specific clients (companies, families, cyclists); improving the technological aspects (access, booking software); supplying user-friendly consumer information; and creating a simple tariff structure.

Within the VIVALDI project, eight new car-sharing stations were opened: three in the city centre at main public transport interchanges; one at the edge of the city centre; two along tram lines; and two in the peri-urban area. A car-sharing service was also launched in cooperation with the local public transport operator.

In order to achieve more balanced demand during the day and to increase the efficiency of car use, it is important to attract business clients. Two easy-to-communicate tariffs were made available to this target group, including bigger companies with more than 60 employees and smaller one-person start-up companies. The interest generated was proof of the win-win concept of car sharing: it is good for both the environment and the economy. Technological improvements made possible innovative services such as open-end booking and automatic cancellation. The cambio smartcard is valid on the entire cambio network in Germany (cambio is one of the car-sharing providers in Bremen), as well as in Belgium, and also allows access to the services of partner operators in Germany. The implemented measure was continued, extended and further optimised after the end of the VIVALDI project. In 2009, Bremen developed a car-sharing action plan, with the aim of achieving 20,000 car sharers by the year 2020 via measures such as dedicating more public parking spaces to car sharing.

Within the three years of the VIVALDI project (2002–2005), the number of car-sharing users in Bremen increased by about 43 percent (from 2,455 to 3,512). By January 2010, the number had reached about 5,500. The cars used in the scheme comply with the latest emissions standards and the cambio car-sharing fleet in Bremen has average CO₂ emissions of 129 g/km. Not only has the scheme dramatically improved air quality, there is also more street space as one car-sharing vehicle in Bremen replaces an average of 11 private cars. The number of car-sharing cars in Bremen rose within the CIVITAS project period from 80 to about 100.



MOBILITY MANAGEMENT

Multi-stakeholder consultation/
public participation

Mobility marketing
and awareness raising

CLEAN FUELS
AND VEHICLES

Clean fuels and
fuelling infrastructure

Malmo, Sweden (2006)

Malmo is Sweden's third largest city, with a population of around 315,000. It has developed as a thriving industrial and trade centre from its medieval roots. Following a significant economic recession and high unemployment in the 1980s and 1990s, Malmo emerged as a rapidly developing city in the new millennium. Since the 1980s, Malmo has reinvented itself as a sustainable multi-cultural European city of the future, with major innovations such as the opening of Malmo University, the construction of the Oresund Bridge to Copenhagen, urban renewal, and the construction of attractive new housing and commercial areas. The Western Harbour, an award-winning ecological housing area, was completed in 2001 for the major European housing expo Bo01.

The environmental adaptation of the city's transportation infrastructure is based around the construction of an underground/overground rail system linking into the transport infrastructure of both Malmo and Copenhagen. Malmo was the coordinator of the CIVITAS SMILE project between 2005 and 2009, which involved the cities of Norwich, Potenza, Tallinn and Suceava.

Good ambassador

Malmo has actively promoted sustainable transportation from a European perspective, mainly by implementing a training model together with the CIVITAS city Tallinn. This led to both benchmarking and knowledge-transfer schemes. Representa-

tives from Malmo's project management office have also made several visits to Karlovy Vary and Paris to give talks about the city's work in the field of sustainable transportation within the CIVITAS Initiative. Other ambassadorial trips have been made to Gothenburg, Aalborg and Groeningen. A presentation about SMILE and CIVITAS was also given at the annual conference for the Swedish Association of Local and Regional Authorities.

Malmo's communication efforts include the production and distribution of leaflets, brochures and posters bearing the CIVITAS logo. Participation in European networks has promoted the Initiative at international level. Finally, the SMILE reference group, which was created to promote CIVITAS poli-



CATEGORY III: CIVITAS CITY OF THE YEAR

cies, involved stakeholders from all sectors of society, including the Swedish Road Administration.

Timely implementation

Malmö pooled a great many technical and policy measures when implementing its Traffic Environmental Programme, which ran through 2011. By joining the CIVITAS Initiative in its infancy, the programme was able to take on a new dimension and scope, while at the same time winning unanimous political support.

Other important work has been done to promote the use of biogas. This work will presumably generate a critical mass towards the ownership of cleaner vehicles, while at the same time reducing the negative environmental impacts of large vehicle fleets. In parallel, subsidised parking was introduced for environmentally friendly cars.

The city's work with low-emission zones has already had an impact on local environmental regulations and is poised to influence national policy as well.

Stakeholder involvement

Malmö's Mobility Management project encouraged the highest levels of stakeholder involvement. Huge efforts were made to promote Malmö as a cycling city. All newcomers to the city received an attractively designed brochure presenting local celebrities and their relationship to cycling. Another important area of activity within Mobility Management was cooperation with local commerce and industry to promote cycling, public transportation use and clean vehicles. Another project aimed to change the way in which parents took their children to school, while other campaigns addressed commuting habits.

Engaging other cities

Malmö strives to maintain the training model it shares with Tallinn and it continues extensive cooperation with the CIVITAS I city Stockholm. Several study trips were made during the CIVITAS project (to Gothenburg, Aalborg and Ljubljana), and Malmö shares many contacts with its SMILE partner cities.



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FOLLOWING UP: Still reaching out

Continuing to play its role as a good ambassador, Malmö supported the CIVITAS Forum Network by hosting the CIVITAS CATALYST conference/workshop in September 2010. The main goal of CATALYST was to engage an increasing number of cities in the CIVITAS Initiative. This was achieved by presenting the CIVITAS approach and its achievements; promoting the concrete take-up of sustainable and integrated CIVITAS-like measures; and assessing the long-term impact of these measures.



Also in September 2010, Malmö hosted an informal EC information session on the CIVITAS Plus II call, in addition to the CIVITAS Marketplace, which provided an opportunity to share ideas for possible projects. Due in part to Malmö's involvement in concerted outreach efforts such as these, CIVITAS has acquired more than 30 new members since 2009, as well as a further 700 inquiries via telephone or email.

Practising what it preaches, Malmö has undertaken more than 20 separate initiatives related to green transport in the past decade. They include developing a clean municipal fleet; extending environmental zones for heavy goods vehicles; integrating cycling with public transport; car sharing for individuals and businesses; satellite-based traffic management; mobile Internet bus information services; eco-driving training for municipal employees, hospital employees and lorry drivers; and real-time information for passengers with in-vehicle displays.



SAFETY AND SECURITY

Safer roads, bike paths and footpaths

DEMAND MANAGEMENT STRATEGIES

Access management and road pricing

CLEAN FUELS AND VEHICLES

Cleaner fleets

Burgos, Spain (2007)

Burgos is situated in north-central Spain in the region of Castile and Leon, half way between Madrid and the French border. It has a population of 170,000 and is known for its cultural, historic and artistic heritage. Just a few kilometres outside the city is the important archaeological site of Atapuerca, which contains a rich fossil record of the earliest human beings in Europe. The city enjoys good transportation links with cities in Spain, France and Portugal, contributing to its varied and dynamic industrial development. Burgos has undertaken many activities in the field of sustainable mobility and won the Energy Globe Award in 2008 in the Air category. It is a leader among Spanish cities in terms of sustainable mobility, making huge efforts to achieve a car-free city centre and 100 percent clean public transport. It has also introduced the BICIBUR free bicycle loan system.

Good ambassador

Medium-sized cities can act as living laboratories, demonstrating how innovative measures in sustainable transport policies can achieve good results within a short period of time. From the very beginning of the CIVITAS project, Burgos selected a set of demonstration areas in order to identify the most appropriate approach towards the recovery of public spaces for citizens, mainly in the city centre; the promotion of cycling and public transport as efficient alternatives to privately owned vehicles; and the introduction of biofuels. A wide range of marketing activities, addressed to both

citizens and stakeholders, were carried out during the first half of the CIVITAS implementation period.

Three local forums were held, an exhibition of mid-term results toured the main cities in the province, and emphasis was given to the exchange of knowledge with other cities through study visits to Stuttgart, Krakow, Genoa and Cologne within the CIVITAS CARAVEL consortium. Burgos maintained an active presence on the CIVITAS Political Advisory Committee and at the CIVITAS Summer University. The management team, together with more active stakeholders, made presentations at several forums throughout Europe.



As a result of the interest shown by many cities, Burgos received delegations from Chandigarh, India; Nagoya, Japan; and Trento, Italy; as well as from the Spanish cities Madrid, San Sebastian, Oviedo, Valencia and Seville. However, the main effort to promote CIVITAS was made during the CIVITAS Forum conference in 2006, when Burgos had the opportunity to demonstrate its efforts to more than 300 participants.

Timely implementation

From the beginning of the project, the project management team in Burgos understood that they would have to face the challenge of coordinating several city council departments — as well as the cross-cutting interests of different stakeholders — with a limited budget and within a short timeframe. At the outset, a technical coordination committee was established under the supervision of the environment department. In order to achieve greater coherence and efficiency, measure leaders played a key role in discussing action plans with stakeholders and city departments. Throughout the project, measure leaders were in contact with their counterparts in the other CARAVEL cities using virtual spaces and technical meetings, resulting in an intensive exchange of knowledge.

One of the key difficulties encountered during the implementation of the access restriction plan in the city centre (a 100 percent car-free area of 4 km²) was coordinating the construction of four new un-

derground car parks to relieve pressure on public spaces. The mayor of Burgos speeded up the construction of the required infrastructure by establishing a follow-up committee with the primary stakeholders — shopkeepers and neighbourhood associations. The measure won widespread acceptance among residents.

Public confidence in the public transport department had been waning, partly due to serious doubts about its status as a city council department and the possibility of it being run privately as a public concession. The resulting lack of investment and initiative had seriously damaged the service. In this context, CIVITAS efforts focused on building up the low-emission fleet with the addition of eight new CNG buses; improving information by installing 23 display panels at bus shelters and bus stops; and improving accessibility and information for elderly people and those with impaired mobility. In less than 14 months, the excellent work carried out by the transport department started to bear fruit, leading to a political debate that ended with a decision to renew the entire bus fleet. This combination of CIVITAS measures and political commitment led to a 6 percent increase in the number of passengers and a great improvement in the management and image of public transport.

Nonetheless, Burgos is most widely recognised for its cycling strategy, which has renewed faith in cycling on the streets of Burgos. Prior to the project, bicycles were regarded more as a danger on the road than as an efficient means of transportation.



With security and promotion as the main issues, the project was carried out by the youth department in coordination with the infrastructure and traffic department. The development of 38 km of safe bike lanes put Burgos among the leading Spanish cities in the field. Another contribution to increasing confidence in cycling is the city's free bicycle loan service BICIBUR, where the main challenge was to design an individual system independent from other commercial solutions already on the market.

Stakeholder involvement

Stakeholders were involved in CIVITAS measures by means of continuous consultation with measure leaders and the management team; and as a result of project coordination by an independent agency, Burgos City 21, a non-profit association of more than 60 relevant institutions and companies. Several open forums were organised to help citizens feel comfortable discussing mobility policies, while information campaigns were also addressed to the general public and targeted stakeholders. The CIVITAS website and city call centre also provided information on how to participate in CIVITAS.

Engaging other cities

Regular CIVITAS CARAVEL meetings and the use of virtual space increased confidence among members of the consortium and opened the way for knowledge exchange and technical cooperation in many fields. Know-how from Stuttgart, for example, was made available through a visit to the city's emergency coordination centre and was put into practice in the Burgos Traffic Control Room in September 2006. Lessons on managing historical areas taken from Genoa were also employed in dealing with goods distribution. Other examples of cooperation related to the promotion of cycling, while Burgos shared its own experiences with Krakow. Burgos is committed to being a trustworthy ambassador for the CIVITAS Initiative and has hosted visits from other city delegations interested in collecting information or asking for technical advice on their own projects and mobility plans. Through the CIVITAS Forum, Burgos is in touch with other cities and networks such as EURO CITIES and Polis to discuss future cooperation. Other Spanish cities have also taken notice and are following Burgos's lead.



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FOLLOWING UP: Reclaiming public space

Over the past decade, Burgos has implemented a series of measures to renovate its historic city centre, protect historic monuments, reduce air pollution and create a more relaxed and attractive atmosphere for inhabitants. Following stakeholder meetings, a number of pedestrian zones were created between 2006 and 2008, and parties were organised to celebrate the launch of each zone.

The restricted access system was implemented using electronic bollards activated from a new traffic control centre. This was accompanied by the construction of a ring road around the city, along with additional link roads. More than 30 meetings with stakeholders were decisive in the overall success of the renovation efforts.

The measures have resulted in several favourable outcomes: 75 percent of streets in the historical centre were converted into pedestrian zones over an area of 4 km²; access is 100 percent restricted in clean zones; 16 mechanical bollards were installed; traffic in the restricted access zone has been reduced by 97 percent; heavy goods vehicles have been eliminated from the restricted access area; the restricted access measure gained an 84 percent acceptance rate, according to preliminary evaluation results; 92 percent of the population of Burgos considered the measures to be important and well planned; and the number of pedestrians in the zone increased by 30 percent, with an accompanying 200 percent increase in the number of cyclists.





CATEGORY III: CIVITAS CITY OF THE YEAR

SAFETY AND SECURITY

Safer roads, bike paths and footpaths

MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation

Mobility marketing and awareness raising

DEMAND MANAGEMENT STRATEGIES

Parking management/pricing

CLEAN FUELS AND VEHICLES

Cleaner fleets

Graz, Austria (2008)

With 270,000 inhabitants, Graz is the second largest city in Austria. It is the capital of Styria and the province's cultural, economic and academic centre. The city council has a clear transport policy based on the concept of Sanfte Mobilität, or soft mobility. The city of Graz has a radial public transport system with harmonised tariffs and timetables and uniform tickets for both the city and the province as a whole. Graz was the first city in Europe to implement a speed limit of 30 km/h within the entire city (with the exception of major roads). The city centre features many pedestrian zones and the city administration has made great efforts to promote cycling. Graz was the first Austrian city to open a mobility centre. The city has also started to convert the public bus fleet to run on more environmentally friendly bio-diesel.

The main problem facing Graz is the rise in car use, due to the growing movement of people from the city centre to the city outskirts. Information technology measures will be introduced to make public transport more user friendly and the services more attractive. The objectives of the city's transport policy are to make Graz a city of short distances; balance the distribution of transport modes; ensure socially and environmentally compatible traffic; create good accessibility for all destinations using all modes; and ensure grassroots planning, public participation and public awareness.

Good ambassador

Soft mobility means developing and implementing comprehensive measures to encourage walking, cycling and the use of public transport. In the long run, such measures make a city cleaner, safer, more liveable and more enjoyable. CIVITAS TRENDSETTER emerged as the starting point at which Graz became an active CIVITAS ambassador at local, national and international levels.

In keeping with the name CIVITAS, citizens are the Initiative's primary beneficiaries, and Graz has made great efforts to disseminate information on CIVITAS actions to the general public.

Graz was one of the first CIVITAS cities to produce its own national-language website. This was a very important step in overcoming the language barrier and reaching a broad national audience.

Graz also works closely with the Austrian Ministry for Transport and Innovation to promote the CIVITAS Initiative at national level.

The city hosted the CIVITAS Forum conference in 2003, which attracted 139 participants from 39 CIVITAS cities. This was the first occasion on which a CIVITAS city presented its achievements to the whole CIVITAS family through a series of site visits. The event laid the foundations for a series of highly successful and enjoyable CIVITAS Forum conferences in the following years. Graz is one of only a handful of cities to have given a presentation at six consecutive CIVITAS Forum conferences.

Timely implementation

During the 1990s, Graz introduced a new traffic policy based on soft mobility measures. A decision was made to limit the share of motor vehicles and to promote walking, cycling and public transport use.

In 1992, a speed limit of 30 km/h was introduced on 802 km of the city's 996 km road network. Although very controversial at first, the measure reduced pollutant emissions and noise levels, and the number of accidents fell by 24 percent. By 1995, it was already possible to introduce a parking management concept as an effective instrument for controlling motorised traffic. Short-term parking within the so-called Blue Zone resulted in shifting 100,000 car commuters to public transport. In 2006, the system was expanded to include a



Green Zone, which allows car owners to park their cars longer and at lower rates. A number of park-and-ride facilities were also created to make it easier for commuters to travel into the city centre. Graz extended three tram lines in 2007, one of which connects directly with a park-and-ride facility.

Graz completed 17 transport-related projects within CIVITAS. The best known was the conversion of the entire Graz bus fleet to 100 percent bio-diesel — the largest such fleet in the world. The introduction of a night bus service made it possible for more than 2,500 passengers per weekend to get home at night via public transport. This has reduced the risk of road accidents caused by alcohol consumption. The installation of electronic displays at stops and stations made it possible to provide passengers with precise information about arrival times. The establishment of a mobility centre and online information system provided a wealth of transport-related information, contributing to at least 20 percent of the local population changing their mobility behaviour.

By involving citizens in decision-making processes, it was possible to create a pedestrian area in the centre of Graz. Parking spaces had to be eliminated in order to redesign two squares to create more space and two pedestrian zones.

By closing gaps in the bicycle network and optimising important bicycle routes it was possible to eliminate many unnecessary barriers and detours. A new digital city map helps cyclists to identify

their best route. Based on successful participation in CIVITAS, Graz continues to focus on transport-related EU projects such as Partner Initiatives for the Development of Mobility Management Services and Transforming Actions in Sustainable Mobility for European Regions (PIMMS Transfer); Advancing Sustainable Transport in Urban Areas to Promote Energy Efficiency (ASTUTE); and | Klagenfurt's Anti-PM10 Action Programme in Cooperation with Graz and South Tyrol (KAPA GS).

Stakeholder involvement

Graz has a long tradition of public participation in decision-making processes. A citizens' participation committee was established during the CIVITAS TRENDSETTER project to enable active participation in the design of a city centre area. Encouraged by the huge success of this participation project, Graz launched the public communication and agreement process Time for Graz, which ran from autumn 2006 to winter 2007. The objective was to devise and agree on concrete measures to address various problems and improve quality of life. Suggestions developed during the process were checked and amended by experts with regard to jurisdiction, costs, regulatory framework and possible overlaps with already existing projects. The participation and involvement of citizens and stakeholders in political decision-making processes is a fundamental indication of a modern administration and is an important prerequisite for sustainable development.



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FOLLOWING UP: Bio-lessons

Graz launched the first of several biofuel-oriented initiatives and studies in 1990, when it started collecting used cooking oil from private households. Over the next 15 years, the city implemented a pilot research project, during which two public transport buses ran on biodiesel derived from used cooking oil; extended the collection of used cooking oil to include local restaurants; participated in the EU CIVITAS TRENDSETTER project to run an additional 54 buses on biofuel; and finally operated the entire public transport fleet of 135 buses on biofuel.



In January 2013, Graz helped to coordinate a webinar on biofuels, conducted by Gerhard Ablasser. The webinar provided an overview of the city's experiences in converting its entire bus fleet to biofuels, along with a valuable set of possible and negative conclusions about their use.

Graz has been able to impart a number of valuable lessons to other cities interested in biofuel initiatives: a highly motivated team is needed, which is present in all sectors of the partnership responsible for running the fleet; using biofuel

made from waste material is only a small step, but at least a step in the right direction; local experience helps pave the way to blending biofuels on a much larger scale; it is impossible to achieve 100 percent biofuel without new engines, but positive things can be done immediately with older buses; and while discussion is nice, action is essential.

Graz has been piloting four CNG Mercedes vehicles and testing a hybrid bus since 2009, and the city began testing an electric bus in February 2013. The city draws heavily on the experience of other European projects and takes pride in learning from its European partners to identify the right solution. Meanwhile, the city is also turning its attention to other private and public fleets, such as taxis and other public services.



MOBILITY MANAGEMENT
Mobility planning
COLLECTIVE PASSENGER TRANSPORT
Service improvements
CLEAN FUELS AND VEHICLES
Cleaner fleets
CAR-INDEPENDENT LIFESTYLES
Public bicycles/ bicycle sharing

Nantes, France (2009)

Located on the river Loire, near the Atlantic coast, the Nantes conurbation comprises 24 municipalities and is home to 550,000 inhabitants. The largest urban centre in western France, Nantes has been the country's second fastest growing urban area since 2000. The city's long-established sustainable transport policy focuses on public transport and cycling, and Nantes was the first French city to reintroduce electric trams.

Ambitious measures

Under CIVITAS VIVALDI, 161 CNG buses were purchased with the aim of creating a clean bus fleet.

CIVITAS helped Nantes to remodel two main access roads to the city centre in order to favour public transport over private cars. Following this measure, Nantes increased the length of its tram network and introduced a bus rapid transport system on one of the main highways. The Chronobus rapid transit service, created thanks to VIVALDI, was introduced in order to deliver higher levels of service in terms of regularity and frequency.

Nantes also further developed its bike-and-ride policy; provided 2,000 additional secured bike parking spaces; and introduced the Bicloo bike-rental system, which comprises 89 stations and 790 bicycles.

Stakeholder involvement

Partnerships were established with other authorities (mainly the province and the region) to carry out joint work on a mobility platform (Destineo) and to develop an integrated fare system (Métrocéane). This on-going process makes possible the large-scale development of public transport for the benefit of citizens. Citizens are also actively involved in defining the public transport and mobility policy: citizens' associations have been organised into a consultation body, and in-depth consultation is made possible through citizens' panels.

Companies are involved via dynamic partnerships with chambers of commerce, but also through the development of company travel plans. Launched in 2004, by the end of the CIVITAS project period there were 53 participating companies (and



CATEGORY III: CIVITAS CITY OF THE YEAR

25,000 employees), and the numbers have since risen to 201 companies and 62,000 employees.

Challenges and obstacles

CIVITAS highlighted the difficulty in achieving a unified vision for a transport and mobility strategy, as competences were split between many departments and key players. However, since 2008 the city's mobility, transport, traffic and parking services have been combined into a single department, resulting in a more coherent, readable and user-friendly all-mode policy. Another key issue was to encourage the population to favour alternatives to the private car. This encouragement took several forms: increasing the quality of public transport while shrinking the amount of public space allocated to cars; developing a wide range of alternative mobility services, such as car sharing, car pooling and self-service bike rental; and integrating fares for different systems. The modal

share of cars dropped from 62 to 57 percent following the launch of the CIVITAS project in 2002.

Good ambassador

Involvement in CIVITAS VIVALDI was the cornerstone for the city's active commitment at European level. Nantes was selected as one of the CIVITAS ambassador cities for the CATALYST conference to help newcomers benefit from the CIVITAS experience. At national level, Nantes is involved in the CIVITAS French Task Force, a tool for the dissemination of CIVITAS best practices. In parallel, Nantes greatly values being a dynamic member of the CIVITAS family and actively participates in all CIVITAS Forum events. The city has extended its work with other partners and programmes, including the COMPRO project for the common procurement of clean vehicles, and the European Bus System of the Future project to develop new-generation buses.

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FOLLOWING UP: Riverboat gambles

Several rivers flow through Nantes, making transport connections in some areas problematic. However, viewing its waterways as strengths rather than obstacles, Nantes was able to introduce unique transportation options to ease road congestion and improve connections. While tram line 2 provided an efficient link between the Tertre campus and the city centre, the link between the two banks of the Erdre River in the campus area was not good. Likewise, the traditional fishing village of Trentemoult on the left bank of the Loire was not well connected with Nantes or with the public transport network in the nearest suburban town of Reze. There were no direct links between the two banks for pedestrians and cyclists, who were obliged to use two bridges and cross Nantes Island.

A decision was taken in the context of the urban mobility plan to open up the two isolated areas by using the waterways for public transportation. A navibus on the Erdre was planned to provide a direct connection between the railway station and the university campus, while a navibus on the Loire was intended to link Trentemoult and the city centre with tram line 1 on the right bank. In 2004/5, the public transport operator built waterbus stops along the river and procured new boats for the service. The navibus service on the Loire was launched in June 2005, and the Erdre service was launched in July 2005 with one boat, targeting campus students and employees as well as people travelling between the city centre and the suburbs along the river.

The twin endeavour was not entirely successful. The Erdre route was withdrawn from public transport services in summer 2009 (that is, it was no longer accessible using a public transport ticket). With only one boat, a low frequency (one trip every 80 minutes) and a route following that of the tram, the Erdre navibus did not attract a sufficient number of passengers and was mostly used by tourists (a total of 70,500 users in 2008). Based on these conclusions, the route was handed over to a tourist boat operator. On the other hand, with 365,000 users in 2008, the Loire navibus can be considered a success. The service has been maintained and reinforced with the purchase of a new boat in 2009, raising the frequency to 10-minute intervals during peak hours.



MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation

DEMAND MANAGEMENT STRATEGIES

Access management and road pricing

COLLECTIVE PASSENGER TRANSPORT

Service improvements

CAR-INDEPENDENT LIFESTYLES

Car sharing

Genoa, Italy (2010)

With a population of 630,000, Genoa, known as La Superba (The Proud), is the capital of the region of Liguria in northwest Italy. Genoa has one of the largest historical centres in Europe and was added to the list of UNESCO World Heritage sites in July 2006. The city lies between the sea and the mountains and has a comparatively long and narrow coastline. In terms of accessibility, lack of space and the absence of alternative routes make it difficult to navigate the streets of Genoa.

Nevertheless, its port is one of the most important in Italy. In central Genoa, the biggest mobility challenge is the unsustainable number of private cars on the roads. A mix of measures is required, including access restrictions and new forms of mobility for passengers and freight. Genova is active in all the CIVITAS policy areas and has been CIVITAS thematic leader in the field of flexible on-demand transport systems since September 2006.

Ambitious measures

The coordinator of CIVITAS CARAVEL, Genoa developed a bold package of integrated measures covering all the CIVITAS policy fields with a unified

plan. A strong focus was placed on the public transport sector, where more than 100 new clean vehicles were purchased and 17 km of high-mobility corridors introduced; a parking pricing scheme was widely applied in the city (and further extensions are on-going); an integrated access control system was created in the historic city centre and a pricing scheme based on the concept of mobility credits for goods distribution was tested; and a car-sharing scheme was introduced, which saves about 500,000 litres of fuel and more than 1,000 tonnes of CO₂ each year. All these measures are characterised by a high degree of innovation and were implemented to influence and change the mobility habits of citizens.



Stakeholder involvement

CARAVEL was a turning point for stakeholder involvement and participation in the decision-making process, in that it opened up several approaches resulting in shared designs. Once the main technical approaches were defined, it was decided to involve commercial associations (shopkeepers, craftspeople, professional carriers and couriers) from the very beginning. Approximately 30 plenary meetings were held to discuss all aspects of the project — that is, regulations and operative procedures, but also communication and public information. The municipality considered each point of view and all stakeholders were able to achieve substantial agreement.

potential alternatives with a wider audience, including selected stakeholders; opening up frank discussions with the EC to explain where and why things had gone wrong and to propose valid alternatives; and learning from previous mistakes. Apart from targeted recovery actions, all the projects were developed by the municipality of Genoa and were very closely monitored in order to anticipate problems that might lead to delay or failure.

Why City of the Year?

Those aspects that made Genoa a front-running city in the field of innovation in urban mobility have continued since the end of the CIVITAS II period. Measures developed within CARAVEL have been followed up and consolidated, and new actions, including a bike-sharing scheme, will be implemented. Genoa continues to be actively involved in the CIVITAS community, as demonstrated by its participation in the CATALYST conference and the CIVINET programme, which makes available to new cities hoping to join the CIVITAS family the entire stock of Genoa's experience and lessons learned.



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Challenges and obstacles

Not all of the originally planned measures were implemented without problems. Some objectives had to be reshaped, for both technical and political reasons. The general strategy for overcoming barriers included analysing problems at different levels and identifying the most suitable solutions; discussing



FOLLOWING UP: CARAVEL Mobility Forum

In order to encourage public participation and improve information exchange, Genoa established a mobility forum as a permanent institution with a high political profile devoted to the dissemination of CARAVEL measures in the city. However, it was decided approximately two years after the end of the project not to maintain the forum as a permanent institution.



MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation

COLLECTIVE PASSENGER TRANSPORT

Ticketing and tariffs

Intermodality

Utrecht, The Netherlands (2011)

Utrecht is the fourth largest city in the Netherlands, with a population of 300,000 and growing. Due to its central location, tens of thousands of commuters travel through the city every day. Utrecht is expanding and currently undergoing major construction works that are putting a strain on the city's accessibility and jamming the centre with cars. Utrecht is a node at which major roads and railways intersect. The number of passengers handled by Utrecht central station is projected to double in the next 20 years, reaching up to 100 million travellers a year. Together with the Ministry of Transport, the Ministry of Spatial Planning and several private companies, Utrecht is working on a complete makeover of the central station, including a new station terminal. While good accessibility is crucial to the economy, as well as to the people who live and work there, the city of Utrecht also wants to ensure a pleasant living environment. The continuous growth in traffic and the development of the city call for an integrated approach to improve air quality.

Ambitious measures

Utrecht has an ambitious policy in place to reduce the growth in car traffic by 50 percent by 2030, and to lower CO₂ emissions by at least 30 percent by 2020. Over 30 projects were launched under the umbrella of the policy document "Utrecht: At-

tractive and Accessible", 18 of which were CIVITAS MIMOSA measures. The city chose a mix of programmes aimed at behavioural change and investments in infrastructure and public transport, with special emphasis on traffic management. The focus now, however, is on changing behaviour.



CATEGORY III: CIVITAS CITY OF THE YEAR

Utrecht has carried out successful programmes using incentives, whether rewarding car users for avoiding rush hours, or providing better bike parking facilities to promote cycling. One of the most successful initiatives to promote public transport is the Utrecht Accessible Pass — a single card that allows the purchaser to use public transport, park-and-ride facilities and rental bikes. The electric Cargohopper vehicle was also introduced as a clean and energy-efficient means of delivering goods in the city centre. Better bike facilities were created for the 90,000 cyclists who travel to and from the city centre on a daily basis. Finally, the city expanded its tram network and greened its bus fleet — measures that are directly linked to increasing the use of park-and-ride facilities.

Local stakeholder involvement

Utrecht works actively with stakeholders and citizens to achieve common goals. In drafting documents such as "Utrecht: Attractive and Accessible", the city worked with public transport companies, the regional chamber of commerce and other businesses. Roundtable discussions are held with transport companies to develop better and cleaner freight transport solutions. The city carries out research on commuting behaviour and uses mobility marketing techniques to change the habits of specified target groups. Utrecht has a participation standard, which means that public participation is mandatory for every project. In this

way, the city obtains new ideas and receives the necessary public support to implement measures that create a cleaner and more attractive city.

Key challenges and obstacles

Political support from the city council is essential. A policy measure will not be carried out if the vice mayor in charge opposes it. When the vice mayor was a member of the Liberal Democrats, for example, a measure to financially reward car drivers for avoiding the rush hour was not accepted, nor was a measure to introduce differentiated parking tariffs based on a vehicle's environmental characteristics. However, when a member of the Green Party became vice mayor for traffic issues, the first measure was implemented and the second was closely monitored and prepared in the event that national legislation allows for its implementation. Longer-term policy plans for sustainable transport present other challenges, but Utrecht's air quality plan, its plan for more sustainable freight transport, and the policy document "Utrecht: Attractive and Accessible" have been approved by the city council and serve as excellent guidelines for the city's ambitious plans.

National legislation is sometimes an important obstacle. In some cases, such as the differentiation of parking tariffs based on environmental criteria, national permission is required to carry out local pilot actions. Lobbying takes place through politi-





cal channels, as well as through meetings at lower administrative levels. Utrecht cooperates closely with the group of the four largest cities in the Netherlands.

Why City of the Year?

Utrecht was one of the most ambitious cities in the CIVITAS Plus programme. No fewer than 17 measures were implemented, many of which have already generated impressive results. Utrecht tries to be visible as a CIVITAS city. In October 2010, for example, Utrecht hosted a workshop on urban

freight transport jointly organised by CIVITAS MIMOSA and EUROCITIES. Utrecht also maintains contacts with many companies, NGOs, entrepreneurs, authorities, citizens and schools, listening to and working with them. Utrecht considers it important to be aware of their needs and therefore carries out research before taking action. By consistently applying the five Es (education, enforcement, encouragement, empowerment and engineering) to its CIVITAS MIMOSA measures, Utrecht is creating a cleaner, more sustainable city — and is proud of its results.



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FOLLOWING UP: Beating the rush

Accessibility in Utrecht is hampered by construction work. To address the problem, the city, in close cooperation with the national highway authorities, established a public-private cooperation between five organisations. The goal of the “Stichting Utrecht Bereikbaar” initiative (SUB) is to limit the negative impacts of roadworks on traffic flows in and around Utrecht.

The SUB initiative has implemented several measures to prevent traffic disturbances and encourage citizens to make sustainable mobility choices. In this context, the MIMOSA measure Rewarding Motorists for Avoiding Rush Hour was designed to reduce the number of private cars in the Utrecht-West area between 6 a.m. and 10 a.m. by offering financial incentives to drivers choosing alternative routes, using another mode of transport, or driving before or after the morning peak hours. Sections of road along the national highway A2 were selected, along with five main roads in the southern and western part of Utrecht.

The pilot project was based on the principle of identifying car owners who typically drove along the selected roads during morning rush hour and offering them a EUR 4 reward for not doing so. Preliminary studies had indicated that a reduction of 1,000 cars along the selected roads would be sufficient to prevent increases in the length and duration of traffic congestion during the morning rush hours. The objective of the pilot project was therefore to reach a participation rate of at least 1,000 car drivers per day.

The contractor placed cameras at the selected locations and cars that were identified more than three times within two weeks were selected. From among the 15,555 drivers selected and invited by letter to participate in the pilot project, 4,026 chose to participate.

It was concluded that traffic volumes were reduced by between 500 and 700 cars during the morning rush hours, falling short of the goal of 1,000 cars. However, a Dutch study showed that it is difficult to measure the impacts of reward distribution due to the large number of external factors that influenced traffic flow during the pilot project period. Despite apparent setbacks and difficulties, three positive and relevant observations on traffic flow in Utrecht may be regarded as successes of the MIMOSA measure. The first is that traffic flow along the selected section of the A2 highway remained stable during the MIMOSA period. The second positive outcome was established in a national report by the Ministry of Traffic, which observed a reduction in travel times along the selected section of the A2 during the pilot project period. The third result was an overall reduction in cars driving along the main traffic axes in the inner city within the pilot project period. The overall results showed that the objective was achieved, and it can be asserted that the reward system contributed to this success.



CATEGORY III: CIVITAS CITY OF THE YEAR

MOBILITY MANAGEMENT

Multi-stakeholder
consultation/public
participation

Mobility planning

DEMAND MANAGEMENT STRATEGIES

Walking and cycling
enhancements/services

Parking management/
pricing



Donostia–San Sebastian, Spain (2012)

Donostia–San Sebastian is a coastal city and municipality located in the Basque Autonomous Community, Spain. It lies on the Bay of Biscay, 20 km from the French border. The municipality has a population of 186,409, while the metropolitan area is home to 436,500 people. The main economic activities are commerce and tourism. Despite the city's small size, events such as the San Sebastian International Film Festival have given it an international dimension.

Ambitious measures

The city's bus rapid transit system combines bus lanes with innovative priority measures and high-quality operation and management standards (UNE-13816), including real-time information, on-board security cameras and smart fleet management. A comprehensive cycling policy combines the completion of the bicycle route network (an additional 9 km) with a traffic management system and 30 km/h zones that favour shared road use. Improved access and the enhancement of public space have been prioritised in order to maintain walking as the dominant mode of transport. There is also a focus on secure and sustainable mobility for children through the Way-to-School Programme. Behavioural change is encouraged through personalised travel planning, which provides incentives for high-occupancy cars and commuter travel plans.

A coherent parking policy includes on-street paid parking in the city centre and at the university. The municipal bus fleet uses blends of second-generation biodiesel, including all buses owned by the public transport operator DBus.

Local stakeholder involvement

The Mobility Advisory Council advises on all decisions related to urban transport. Twenty-nine stakeholder groups have seats on the council (including political parties, public transport companies, citizens' groups and freight hauliers). Local stakeholders have actively contributed to the definition of measures. The Basque Institute for Logistics leads the measure on goods delivery, and the local association of transport companies interviewed shopkeepers and transport companies to generate



ideas for action. The city signed a road safety pact with 35 local organisations involved in mobility. The city cooperates with cycling groups through the Bicycle Observatory, which monitors and proposes new measures. The city has also cooperated closely with associations of shopkeepers to develop campaigns such as “Shopping on Your Bike”, “Shopping by Public Transport” and “Shopping and Park and Ride”. Local stakeholders were also successfully involved in CIVITAS measures through a series of “Learning History” workshops.

Key challenges and obstacles

From a technical point of view, on-going monitoring and evaluation made it possible to adapt measures in order to overcome encountered obstacles. In some cases, such as the city bike scheme, small adjustments were required, while other approaches were deployed elsewhere (e.g. bus services to industrial areas). From a strategic perspective, the development of a comprehensive strategy that

combined push and pull measures in all fields of action helped communicate to key stakeholders the benefits of potentially controversial measures, such as parking and access restrictions. From a political point of view, a wide consensus was built with a shared vision of CIVITAS as an opportunity to improve quality of life in the city.

Why City of the Year?

The implementation of the CIVITAS project produced outstanding results at city level: a 33 percent increase in the number of cyclists per day, and an 11 percent increase per year; extended pedestrian and cycling networks (by 4 km and 22 km respectively); and 2.55 million extra passengers in the public transport system, a 9.6 percent increase with almost 40 percent of all new users shifting from cars or motorbikes. The city has improved the energy efficiency of its public transport system and reduced GHG emissions by 450 tonnes.



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FOLLOWING UP: Slower is safer

For 20 years, Donostia–San Sebastian has been implementing a strong, integrated policy in favour of pedestrians, bicycles and public transport. Prior to its involvement in CIVITAS ARCHIMEDES, the city developed a road safety plan in cooperation with local stakeholders.

While the number of accidents in the city had decreased continuously since 2002, the number of accidents with fatalities remained stable. The figures showed that while pedestrians were only involved in 10 to 15 percent of accidents, they accounted for 40 to 50 percent of fatalities between 2002 and 2009. During the first CIVITAS year, citizens and other stakeholders contributed to the development of concrete measures, culminating in the joint signing of the Citizens Road Safety Pact in the summer of 2009.



The measures included 50 upgrades to road infrastructure, the introduction of 30 km/h zones in three central districts, and the installation of radar systems in a fourth district. In each of the 30 km/h zones, on-street campaigns were organised to inform residents.

In each of the areas concerned the average speed of car traffic was reduced by between 2.5 and 5 km/h. The annual number of accidents also dropped from 44 to 38 in the district with the new radar systems. As a result of these positive outcomes, the city is considering extending the 30 km/h zones to other areas, and further evaluation should make it clear if these zones can be incorporated into the cycling network.



CATEGORY III: CIVITAS CITY OF THE YEAR

MOBILITY MANAGEMENT

Multi-stakeholder consultation/public participation

DEMAND MANAGEMENT STRATEGIES

Access management and road pricing

COLLECTIVE PASSENGER TRANSPORT

Intermodality



Funchal, Portugal (2013)

The capital of Madeira, an archipelago in the Atlantic Ocean, Funchal has a population of nearly 110,000. The beautiful mountainous setting that attracts many tourists poses a particular challenge to the development of the public transport network and the promotion of alternative modes such as cycling. Funchal hosted the CIVITAS Forum conference in 2011.

Funchal's main road network consists of radial roads built along streams and transverse roads at altitudes between 0.4 and 200 metres. Despite the challenges posed by nature, the public transport service offers a total of 66 routes and covers 200 km of road network. Overall, 2,500 trips are carried out daily within the city, transporting a total of 20 million passengers a year. Funchal has progressively closed urban streets in the historic centre and constructed coastal promenades to promote pedestrian mobility and leisure activities. The city has also restricted surface parking in the city centre and built ring roads, which have helped to reduce the traffic flow in the centre.

Cycling is not common in Madeira due to its hilly landscape. In the scope of MIMOSA, Funchal provided an intermodal line between buses and bikes that allowed people to combine healthy exercise and environmentally friendly transport modes. A

large-scale eco-driving campaign and cycling promotion led to considerable energy savings, and new green lanes contributed to improving levels of satisfaction among public transport users.

Ambitious measures

Madeira's transport sector is heavily dependent on fossil fuels and represents around 60 percent of the city's overall final energy consumption. This reflects the sharp increase in the number of private and commercial vehicles during the recent period of economic growth. To promote less-car-dependent lifestyles in Funchal, the municipality introduced traffic restrictions in the inner city and transformed parts of the historical centre into pedestrian zones. These actions have had very good results.

The city's participation in the CIVITAS MIMOSA project in 2008 was another key step. The imple-



mented measures brought several benefits, including the promotion of intermodality; the creation of a high-quality bus corridor; the introduction of a service that combines public transport and cycling; and awareness campaigns targeting specific audiences. During MIMOSA, Funchal undertook a balanced mix of 13 measures. All of them have evolved into ambitious and forward-looking support activities that are expected to be sustainable over time.

Local stakeholder involvement

Local project partners soon realised that they could work more effectively by working together. The MIMOSA project therefore led to new cooperative relationships, especially with motivated citizens who became “local champions”. Local cyclists’ associations were engaged from the start in the design of the bus and bike measure to collect tips and advice from those involved in cycling every day.

Hotel managers now understand that public transport — and in particular the Tourist Kit developed under MIMOSA — can provide added value for their businesses. The public transport operator and the municipality were able to create a strong alliance with parking facility managers to establish a park-and-ride scheme that does not entail financial risks, as the parking facilities are not rented and public transport connections to the city centre are regular. Students were involved in mobility management activities at several schools, and sports associations were engaged through orienteering competitions.

Key challenges and obstacles

When obstacles arise, project partners must join forces to overcome them. Among the key obstacles encountered were the resistance on the part of hotels to selling public transport tickets, due to the hotels’ strong links with local taxis: hotel receptionists typically get good commission from the taxi companies for persuading tourists to choose them over the public transport service. In addition, some hotels were not able to stop running their courtesy bus service as they have commercial agreements with tourism operators. The project also received little support from those hotels that believed public transport to be less “exclusive” than a special shuttle service. To convince the more sceptical hotel directors, the partners got together with the regional authorities to host a “CIVITAS MIMOSA Local Ambassadors” awards ceremony.

Why City of the Year?

Funchal came up with an interesting mix of approaches to making the city more liveable and people friendly. It attracted wide public attention through the organisation of the 2011 CIVITAS Forum conference, at which some of the MIMOSA measures were showcased. Funchal is also a founding member of the CIVINET Iberia network.

The CIVITAS package of measures won an EC RegioStars Award in 2011 in the CityStar category for integrated, clean urban transport projects. In 2012, the bus-and-bike service won the Portuguese Cycling Federation Award for cycling mobility. The jury was particularly impressed with how



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CATEGORY III: CIVITAS CITY OF THE YEAR

the service formed part of a wider sustainable mobility policy and promoted the bike as a daily mode of transport in a city with a challenging landscape.

In June 2012, Funchal's deputy mayor and other politicians from the MIMOSA consortium met with the URBAN Intergroup at the European Parliament. This meeting was an opportunity to identify

future policies and funding tools for environmental sustainability and urban mobility within the European Regional Development Fund. In addition, at a transferability auction held in the city of Bologna in 2012, Funchal's Orienteering by Bus competition was judged to be the most transfer-worthy action among all 69 CIVITAS MIMOSA measures.

FOLLOWING UP: Overcoming a steep challenge

Funchal's steep hills discourage citizens from travelling around the city by bike. To overcome this physical, and also cultural, barrier, the public transport operator introduced an innovative scheme whereby cyclists can hop on a bus to travel comfortably uphill.

The bus-and-bike programme allows cyclists to put their bikes onto racks installed on local public transport buses on five lines that cross the city, linking steep sections with flat areas. The main objectives of the measure were to integrate bicycle and bus travel options in order to promote sustainable mobility; nurture a safer and healthier urban environment; tackle a local misconception that the bicycle is not appropriate for everyday



travel needs; and reduce the number of private cars in order to make the area more attractive to tourists and locals alike. The service is free of charge, meaning that no extra fee is required for transporting bicycles.

During the preparation phase, the public transport operator obtained the support of local stakeholders, including sports associations and cycling-related companies. Together with these partners, the operator defined guidelines to regulate the service. During the initial phase, a feasibility study was carried out to collect and assess ideas for routes to be covered by the service and to recom-

mend the most suitable equipment for local needs. Solutions were found based on technical, security and accessibility standards. The operator became aware during the research and development phase that it would be important not only to offer the service on buses leading to cycle lanes and flat areas in the city, but also on buses connecting hilly areas in order to promote bike use throughout the city as a whole.

The bus-and-bike service was launched during European Mobility Week in September 2010 to coincide with the construction of a new cycle lane in the west of the city. The public transport operator installed 14 bike racks on buses on five routes. New bus lanes were designed to allow for the loading and unloading of bikes without disturbing the traffic flow. The measure was so well received by citizens that regional partners plan to introduce a scheme specifically designed for tourists by 2015. The new project, Sustainable and Energy-Efficient Mobility Options in Tourist Regions in Europe (SEEMORE), will be developed under the umbrella of the Intelligent Energy Europe Programme and aims to introduce racks for use by tourists travelling on intercity buses.



Appendices

Appendix I: Award winners by CIVITAS category and sub-category

THEMATIC CATEGORY	SUB-CATEGORY	CITY, COUNTRY	YEAR AWARDED
CAR-INDEPENDENT LIFESTYLES	Car pooling	Piacenza, Italy	2008
	Car sharing	Bremen, Germany	2005
		Genoa, Italy	2010
	Public bicycles/bicycle sharing	Ponferrada, Spain	2007
		Ghent, Belgium	2009
		Nantes, France	2009
CLEAN FUELS AND VEHICLES	Clean fuels and fuelling infrastructure	Malmö, Sweden	2006
	Cleaner fleets	Ponferrada, Spain	2007
		Burgos, Spain	2007
		Ploiesti, Romania	2007
		Graz, Austria	2008
		Nantes, France	2009
	Hybrid, clean and electric vehicles	Stockholm, Sweden	2006
		Piacenza, Italy	2008
COLLECTIVE PASSENGER TRANSPORT	Accessibility	Ponferrada, Spain	2007
		Piacenza, Italy	2008
		Ghent, Belgium	2009
	Intermodality	La Rochelle, France	2004
		Kaunas, Lithuania	2005
		Dresden, Germany	2005
		La Rochelle, France	2008
		Utrecht, The Netherlands	2011
		Nantes, France	2013
		Funchal, Portugal	2013

THEMATIC CATEGORY	SUB-CATEGORY	CITY, COUNTRY	YEAR AWARDED
COLLECTIVE PASSENGER TRANSPORT (continued)	Service improvements	Aalborg, Denmark	2004
		Kaunas, Lithuania	2005
		Preston, United Kingdom	2006
		Ghent, Belgium	2009
		Nantes, France	2009
		Genoa, Italy	2013
	Ticketing and tariffs	Kaunas, Lithuania	2005
		La Rochelle, France	2008
		Utrecht, The Netherlands	2011
		Nantes, France	2013
DEMAND MANAGEMENT STRATEGIES	Access management and road pricing	Stockholm, Sweden	2006
		Burgos, Spain	2007
		Piacenza, Italy	2008
		Genoa, Italy	2010
		Funchal, Portugal	2013
	Parking management/pricing	Graz, Austria	2008
		Donostia–San Sebastian, Spain	2012
	Walking and cycling enhancements/services	Ploiesti, Romania	2007
		Ghent, Belgium	2009
		Donostia–San Sebastian, Spain	2012
MOBILITY MANAGEMENT	Mobility marketing and awareness raising	Bremen, Germany	2005
		Preston, United Kingdom	2006
		Malmö, Sweden	2006
		Graz, Austria	2008
		London Borough of Sutton, United Kingdom	2009
	Mobility planning	London Borough of Sutton, United Kingdom	2009
		Ghent, Belgium	2009

THEMATIC CATEGORY	SUB-CATEGORY	CITY, COUNTRY	YEAR AWARDED
MOBILITY MANAGEMENT (continued)	Mobility planning (continued)	Nantes, France	2009
		Reggio Emilia, Italy	2012
		Donostia–San Sebastian, Spain	2012
	Multi-stakeholder consultation/public participation	Bremen, Germany	2005
		Malmö, Sweden	2006
		Graz, Austria	2008
		Ghent, Belgium	2009
		Vitoria Gasteiz, Spain	2010
		Genoa, Italy	2010
		Ghent, Belgium	2011
		Utrecht, The Netherlands	2011
		Porto, Portugal	2012
		Reggio Emilia, Italy	2012
		Donostia–San Sebastian, Spain	2012
		Bologna, Italy	2013
		Funchal, Portugal	2013
		SAFETY AND SECURITY	Safer roads, bike paths and footpaths
	Graz, Austria	2008	
TRANSPORT TELEMATICS	ITS for traffic monitoring, management and enforcement	Bologna, Italy	2010
	ITS-based enhancement of public transport	Aalborg, Denmark	2004
		Ploiesti, Romania	2007
	Porto, Portugal	2012	
URBAN FREIGHT LOGISTICS	Distribution schemes	Utrecht, The Netherlands	2011

Appendix II: CIVITAS Award applicants 2004–2013

2004, Rotterdam

	CATEGORY I CIVITAS Demonstration City	CATEGORY II CIVITAS Non-demonstration City	CATEGORY III CIVITAS City of the Year
WINNER	AALBORG	LA ROCHELLE	GOTHENBURG

2005, Nantes

	CATEGORY I CIVITAS Demonstration City	CATEGORY II CIVITAS Non-demonstration City	CATEGORY III CIVITAS City of the Year
APPLICANTS	KAUNAS	AALBORG	BREMEN
	LA ROCHELLE	BRISTOL	GOTHENBURG
	PRESTON	DRESDEN	NANTES
		GRAZ	ROTTERDAM
			WINCHESTER
WINNER	KAUNAS	DRESDEN	BREMEN

2006, Burgos

	CATEGORY I CIVITAS Demonstration City	CATEGORY II CIVITAS Non-demonstration City	CATEGORY III CIVITAS City of the Year
APPLICANTS	ODENSE	STOCKHOLM	GENOA
	PRESTON	KAUNAS	MALMO
	SUCEAVA	AALBORG	
WINNER	PRESTON	STOCKHOLM	MALMO

2007, Kaunas

	CATEGORY I CIVITAS Demonstration City	CATEGORY II CIVITAS Non-demonstration City	CATEGORY III CIVITAS City of the Year
APPLICANTS	GENOA	PIACENZA	BURGOS
	LA ROCHELLE	PONFERRADA	NORWICH
	ODENSE		TOULOUSE
	PLOIESTI		
	ROME		
WINNER	PLOIESTI	PONFERRADA	BURGOS

2008, Bologna

	CATEGORY I CIVITAS Demonstration City	CATEGORY II CIVITAS Non-demonstration City	CATEGORY III CIVITAS City of the Year
APPLICANTS	KRAKOW	PIACENZA	GRAZ
	LA ROCHELLE		
WINNER	LA ROCHELLE	PIACENZA	GRAZ

2009, Krakow

	CATEGORY I CIVITAS Demonstration City	CATEGORY II CIVITAS Non-demonstration City	CATEGORY III CIVITAS City of the Year
APPLICANTS	BOLOGNA	LONDON BOROUGH OF SUTTON	DONOSTIA—SAN SEBASTIAN
	GENOA	RENNES	NANTES
	GHENT	SOPRON	STOCKHOLM
	KRAKOW		
	ODENSE		
	PRESTON		
	ROTTERDAM		
	STOCKHOLM		
	ZAGREB		
WINNER	GHENT	LONDON BOROUGH OF SUTTON	NANTES

2010, Malmo

	CATEGORY I Technical Innovation	CATEGORY II Public Participation	CATEGORY III CIVITAS City of the Year
APPLICANTS	BEJA	BOLOGNA	BRESCIA
	BOLOGNA	BOLZANO	BRIGHTON & HOVE
	BOLZANO	KRAKOW	GENOA
	BRIGHTON & HOVE (3 TIMES)	PONFERRADA	KRAKOW
	CRAIOVA	VITORIA-GASTEIZ	PARMA
	DONOSTIA—SAN SEBASTIAN		VITORIA-GASTEIZ
	KRAKOW		
	PORTO		

CIVITAS Awards 2010, Malmo (continued)

	CATEGORY I Technical Innovation	CATEGORY II Public Participation	CATEGORY III CIVITAS City of the Year
APPLICANTS	VALETTA		
WINNER	BOLOGNA	VITORIA-GASTEIZ	GENOA

2011, Funchal

	CATEGORY I Technical Innovation	CATEGORY II Public Participation	CATEGORY III CIVITAS City of the Year
APPLICANTS	BATH	ARENAS DE SAN PEDRO	AALBORG
	BRIGHTON & HOVE	BRIGHTON & HOVE	BRIGHTON & HOVE
	CRAIOVA	BRNO	DONOSTIA—SAN SEBASTIAN
	DONOSTIA—SAN SEBASTIAN	BURGAS	KRAKOW
	GHENT	BURGOS	LEON
	KRAKOW	GDANSK	LJUBLJANA
	PERUGIA	GHENT	PARMA
	STOCKHOLM	GRAZ	PERUGIA
	TREVISO	IASI	STOCKHOLM
	USTI NAD LABEM	KOPRIVNICA	UTRECHT
	UTRECHT	NANTES	VITORIA-GASTEIZ
WINNER	UTRECHT	GHENT	UTRECHT

2012, Vitoria-Gasteiz

	CATEGORY I Technical Innovation	CATEGORY II Public Participation	CATEGORY III CIVITAS City of the Year
APPLICANTS	AALBORG	AALBORG	AALBORG
	BRESCIA	GDANSK	BRESCIA
	CRAIOVA	NANTES	BRIGHTON & HOVE
	GDYNIA	REGGIO EMILIA	DONOSTIA—SAN SEBASTIAN
	LUCCA	SHKODRA	KRAKOW
	PERUGIA	USTI NAD LABEM	REGGIO EMILIA
	PORTO		TOULOUSE
	REGGIO EMILIA		
WINNER	PORTO	REGGIO EMILIA	DONOSTIA—SAN SEBASTIAN

2013, Brest

	CATEGORY I Technical Innovation	CATEGORY II Public Participation	CATEGORY III CIVITAS City of the Year
APPLICANTS	KOCAELI	ARANJUEZ	AALBORG
	NANTES	BOLOGNA	BOLOGNA
	SABADELL	GDYNIA	BRIGHTON & HOVE
			FUNCHAL
			VITORIA-GASTEIZ
WINNER	NANTES	BOLOGNA	FUNCHAL



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Win a CIVITAS Award for Mobility Excellence

On behalf of the European Commission, the CIVITAS Initiative for cleaner and sustainable urban transport invites CIVITAS Forum Network members to enter the annual CIVITAS Awards competition. The Awards recognise outstanding efforts contributing to the CIVITAS goal of achieving a decisive modal shift towards sustainable urban mobility.

The awards ceremony takes place during the annual CIVITAS Forum conference. This prestigious event attracts between 3,000 and 4,000 participants, including officials from EU member states, city mayors from throughout Europe, academics, urban mobility experts and media representatives.

The awards showcase the best examples of policy making and action. Through press coverage, other cities are inspired to undertake new developments in the field.

Awards are made in three categories:

- **Technical Innovation**
- **Public Participation**
- **CIVITAS City of the Year**

The CIVITAS Awards competition is open to all cities that have signed the CIVITAS Declaration and that are members of the CIVITAS Forum Network.