



**CiViTAS**  
Cleaner and better transport in cities



# CITY TO CITY

SIMILAR CHALLENGES –  
SHARING EXPERIENCE AND SOLUTIONS

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SHARING EXPERIENCE AND SOLUTIONS

CIVITAS

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# FOREWORD



*Michael Glotz-Richter, City of Bremen  
(leader of CIVITAS CATALIST's  
"Interactive Partnerships")*

## **CITY TO CITY EXCHANGE – THE CORE OF CIVITAS CATALIST**

Although there are some individual variations in the “landscape of problems”, we find a lot of similarities when looking at transport problems in European cities – from air quality and noise levels to congestion and road safety issues and parking problems. And in all of our cities, transport is a very politically sensitive issue. But at the end of the day, the main point is quality of life for our citizens and the framework for business activities.

European cities face a lot of challenges. It is already difficult for many cities to meet European environmental standards such as those for air quality and noise. But facing climate change and limited mineral oil, it is even harder to prepare for low-carbon and post-fossil mobility. Financing the necessary changes is another challenge – where European support is very welcome. And last but not least, political backing in a democratic society is crucial.

The European CIVITAS Initiative has given some very welcome financial support for measures on clean and sustainable urban transport. The CIVITAS CATALIST project focussed on another important dimension: the process of transport planning and its political dimension.

The exchange between cities is an important instrument for inspiring decision-makers. On the technical level the direct exchange may help to avoid reinventing the wheel. As transport is a very sensitive political issue in all cities, the aspects of political decision-making, of citizen participation and of involving the media are extremely important. As important as good examples is the direct and frank exchange about “lessons learnt” when things did not develop as planned. Such exchanges require an atmosphere of trust – which we found in many examples within CIVITAS CATALIST.

The CIVITAS CATALIST project led to an extensive process of:

- Disseminating good examples at workshops and conferences – leading to inspiration
- Exchange at a political and technical level
- Organising specific thematic workshops
- Site visits

The various thematic areas within CIVITAS required different strategies. In some thematic areas, the municipalities have a high level of competence (e.g. public transport) whereas in others (e.g. freight delivery), interaction with the private or business sector is required.

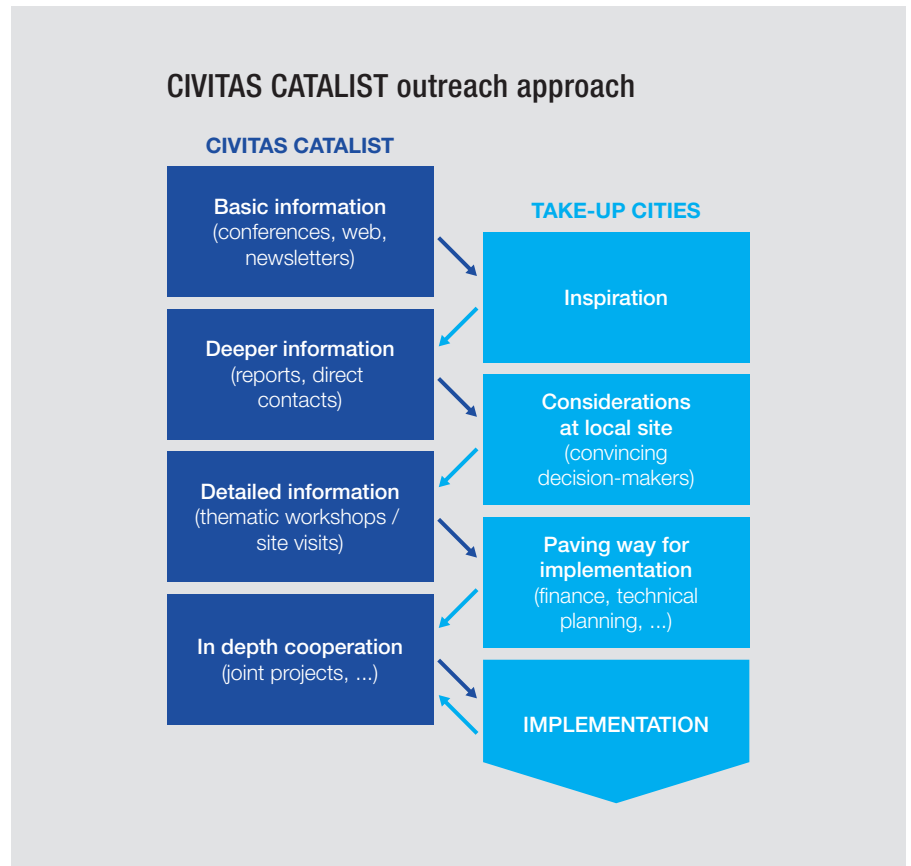
Some themes already have a high level of awareness. Alternative fuels and propulsion, for example, are the focus of many EU and national projects and also have support from industry. Although it doesn't have a similar level of public attention, the field of mobility management (dealing with ITS applications) also enjoys support from research and demonstration projects on a European and national level.

Very different is the promotion of car-sharing within the thematic area "car-independent lifestyle". Car-sharing and its potential are almost unknown in many European cities, and even many CIVITAS cities. Much more needs to be done to exploit the potential of car-sharing on an EU level – which is estimated (by the EU momo project) to be 6 million users removing 600,000 cars from European cities!

During CIVITAS CATALIST, the increase in fuel prices has led to much higher interest in public transport and cycling projects. The practical experience of cycling in forerunner cities was an important instrument for inspiring decision-makers – a unique opportunity for the practical exchange we had within CIVITAS CATALIST.

CIVITAS CATALIST showed the value of technical and political exchange. As transport planning is a long-term process, more benefits will become visible over time.

The practical experience gained through seeing and testing transport solutions – as well as the direct exchange between cities – is irreplaceable. The personal contact and exchange about details in planning and implementation are significantly more important than reports with second-hand data and statistics. We must always keep in mind that transport planning is often more a political process than a question of technical implementation.



It is emphasised in European policy documents that European cities produce the lion's share of its GDP. It is also stated that European cities face great challenges in adapting to the requirements of post-fossil and low-carbon transport. In order to adapt to future needs, European cities need much more support for sustainable mobility strategies. Good examples, political inspiration and open and direct exchange about good examples and "lessons learned" are all important elements.

This brochure contains a number of examples how such exchange worked. It represents a range of themes and procedures. I hope it represents as well the spirit of exchange and collaboration we could find in CIVITAS CATALIST.





# Mobility Ambassador

## GRAZ, Austria

The CIVITAS Initiative depends on certain types of people to make it a living “laboratory” for learning and evaluating. There was (and still is) an informal network of mentors and experts from CIVITAS partners that can be relied upon to help and assist with some particularly challenging technical issues concerning new initiatives and practices.



*CIVITAS Workshop, Graz February 2011*

### CIVITAS AS A REAL NETWORK

The CIVITAS Initiative is implementation-oriented to meet the requirements of European cities.

CIVITAS acts as the engine of renewal and innovation with a positive impact for:

- Investment in public transport infrastructure
- Design measures for the public sector
- Development of mobility networks
- Mobility management in companies and schools to support accessibility and promotion of alternative forms of mobility
- Mobility management for disabled people and marginalized groups
- A wide range of logistics activities

To establish a real network of cities everyone must work towards a single aim: to make cities cleaner, greener, safer, and easier places to travel and live in. A great pan-European achievement from CIVITAS is the network of cities that have helped each other (as well as those outside the CIVITAS network) to strengthen efforts to improve sustainable urban mobility initiatives. Cities have managed to do this through a regular exchange of best practice across a wide range of European cities; each with a very

different cultural, social and political environment. It has provided a true European sustainable urban mobility community of like-minded individuals, organisations, and institutions all with a common aim.

### THE MOBILITY AMBASSADOR

But is it really useful that all of these achievements are not made public? One can use all of the possible media available, (whether conventional or innovative) but at a certain point, the time comes when the “Mobility Ambassador” sources are used only by “insiders”.

Therefore, it is not surprising that these cities continuously remain present for a long period because they have not only acquired knowledge but also, in the long term, these achievements are focused on certain people in each city. Such people should be used to promote “his or her” city.

“  
**Mobility Ambassadors:  
 They are a very special “species”  
 of CIVITAS individuals.**  
 ”

Mobility Ambassadors are instrumental in sharing experiences, establishing links which can only come to light through discussion, sharing background information not directly connected with the various projects or programmes, and telling stories that you may or may not often hear. Mobility Ambassadors: They are a very special “species” of CIVITAS individuals.

### IT'S ALL ABOUT NETWORKING

No matter, if it is in a large auditorium or simply in a dialogue, a Mobility Ambassador leaves a clear impression of their personal role and enthusiasm. Therefore, it is not surprising that many people use the knowledge and sources of other CIVITAS (family) members to persuade local colleagues and political representatives. But most importantly, and this is also reflected by the Latin translation for CIVITAS - which stands for citizenship - are the citizens. Citizens are the great beneficiaries and therefore, they should know about the CIVITAS Initiative. Graz introduced a set of innovative and well-proofed dissemination and communication actions to inform their citizens about CIVITAS.

CIVITAS TRENDSETTER formed the starting point for Graz to be an active ambassador of the CIVITAS Initiative on a local, national and international level and this idea was continued with their participation in CIVITAS CATALIST. Innumerable delegates from across the whole of Europe, as well as China and Japan, followed invitations by the City of Graz to learn more about ambitious and innovative solutions for more sustainable mobility. In return, Graz was invited to many conferences, site visits and other events, all over the world, to share their know-how, inter alia, via the CIVITAS Initiative.

### AMBASSADORSHIP ON VARIOUS LEVELS

In 2003 the City of Graz was named the Cultural Capital of Europe. Thus, a lot of exhibitions took place and the museum for contemporary art was opened. This building, located right in the centre of the city, consists of a special surface allowing special effects via its night illumination system. The writing “CIVITAS TRENDSETTER” was typed in big letters on the surface of the building.

“

Graz has a strong commitment and engagement and the willingness to share and spread its knowledge with the whole CIVITAS family.

”



*Japanese Delegation in Graz*

Graz is actively promoting the CIVITAS Initiative on a national level as well. It was one of the first CIVITAS cities that produced information in its national language to overcome the language barrier and to spread its knowledge to a broader national audience. To support this, Graz is working in close co-operation with the Austrian Ministry for Transport and Innovation to promote the CIVITAS Initiative on a national level. Furthermore, Graz hosted the CIVITAS Forum Conference in 2003 and presented its achievements to the whole CIVITAS family through a series of site visits. This event has formed the fundamental basis for a series of wonderful and enjoyable CIVITAS Forum Conferences in the years that have followed. Graz is one of only a handful of cities that has given presentations at each one. This shows the strong commitment and engagement of the city and the willingness to share and spread its knowledge with the whole CIVITAS family.



Graz became CIVITAS City of the Year 2008

### FRUITS OF SUCCESS

The wide range of successful activities designates Graz as an “ambassador”. The CIVITAS Initiative has recognised this by awarding Graz with a high number of local, national and international awards. For example, the “National Transport Safety Award 2005”, the “International Osmose Award – for New Non-polluting and Energy Efficient Vehicles 2007”, and last, but not least, the “CIVITAS City of the Year Award 2008”!

All of these achievements haven't been possible without certain people, who are not only committed, but also convinced that the future of a city is dependent on its citizens and on measures which put the people first. All these benefits haven't been possible without a Mobility Ambassador.



### COMMENT ON THE TOPIC

#### Lisa Rücker

Vice mayor of the City of Graz and responsible for mobility and environmental affairs

*“As vice mayor of the City of Graz, responsible for mobility and environmental affairs I appreciate the CIVITAS Initiative very much. From the beginning on Graz has been involved as a forerunner city in CIVITAS standing for a sustainable and Gentle Mobility.*

*And we always could and still can learn from other cities' and partners' fruitful experiences in various networking activities CIVITAS is offering: conferences, workshops, seminars, brochures and other information tools.*

*Mobility has a strong relation to everybody's personal behaviour and therefore we started in the 1990s with a broad Mobility Management programme in schools, kindergartens, companies and 2011 with developers to influence people's mobility behaviour towards more sustainability.*

*Implementation programmes are therefore a key factor: As a city, we offer mobility and bicycle trainings for different target groups to motivate and engage citizens using soft modes of transport. CIVITAS supports our actions through international and national know how transfer by formal but also informal channels, through personal contacts as a result from various and lively possibilities within the CIVITAS network.*

*Therefore I'm happy to be a Mobility Ambassador for the CIVITAS Initiative and for a sustainable and Gentle Mobility in Graz!”*





# Urban Goods Transport

## GOTHENBURG, Sweden

Organised as a reflection of all themes of the CIVITAS programme, CIVITAS CATALIST encompasses thematic groups with “ambassador cities” from the CIVITAS I and II projects. Gothenburg participated in CIVITAS TELLUS (2002–2006) and leads the thematic network on urban goods distribution, which also involves the CIVITAS cities of Berlin, Bremen, Genova and Rotterdam.

### A SERIES OF SUCCESSFUL EXCHANGES WITH TAKE-UP-CITIES

Initially, a CIVITAS CATALIST User Needs Analysis Survey was undertaken within the goods network to get an overview of the experiences of the cities. These experiences were then matched with the expressions of interest of other cities in Europe. An initial strategy was established by the urban goods transport group together with a complementary action plan in February 2010.

The results of the survey showed the cities had a need to discuss their role and the role of cities in urban freight distribution to a more in depth level.

### PARTICIPATION

On 11–12<sup>th</sup> February 2010 Gothenburg organised, together with Polis, a work-shop on the theme “The cities’ role in urban freight” in Brussels. The workshop was attended by 40 people (more than was expected).





The two-day workshop comprised the following:

- Update on EU transport policy (Urban mobility action plan)
- Overview of EU funding opportunities
- Previous experiences from CIVITAS CATALIST cities
- Initial results of the CIVITAS CATALIST long term evaluation

Amongst the participants were Transport for London (TfL), Brussels, Trondheim, Emilia-Romagna and Newcastle (along with the several other CIVITAS cities that attended). London showed a particular interest in the experiences of urban freight distribution concepts in Gothenburg.

A two-day site visit was organised for several London boroughs to Gothenburg in the summer of 2010 with funding from the CIVITAS Activity Fund. London (through TfL) is a partner in the SUGAR project. Co-operation between SUGAR and CIVITAS CATALIST was initiated and strengthened when the freight manager in Gothenburg actively participated in the SUGAR meeting in London in November 2010.

In 2008, Copenhagen participated in the kick off meeting of the urban goods group in Gothenburg. The discussion about an exchange of experience was intensified during the CIVITAS CATALIST project.

With funding from the CIVITAS Activity Fund, an initial co-operation between Gothenburg and Copenhagen has been initiated during the last few years.

### INCREASING INTEREST

Initially, interest in exchanging experiences in the field of urban goods was low, confirmed by the results of the CIVITAS CATALIST User Needs Analysis Survey.

The worsening economy in several European countries also hindered cities that were interested but did not have the funding.

However, towards the end of 2010 and beginning of 2011, interest in urban freight and co-operation with CIVITAS CATALIST increased significantly. Several cities contacted the urban goods group with requests for co-operation and participation in conferences, seminars etc.

Tyne and Wear Freight Partnership has received funding from the CIVITAS Activity Fund and organised a freight conference on 22<sup>nd</sup> February in Newcastle. The conference was well attended with representatives from local authorities, operators, academics, students, and other organisations. The Tyne and Wear Freight Partnership was also at a study tour in Bremen in December 2010.

“

Several cities have contacted the urban goods group with requests for co-operation and participation in conferences and seminars.

”

## DEVELOPING CONTACTS

The CIVITAS CATALIST goods group has also successfully developed contacts with other projects. Gothenburg represented the group at the joint EUROCITIES/CIVITAS MIMOSA meeting in Utrecht in autumn 2010 and Gothenburg also participated on behalf of CIVITAS CATALIST in meetings with the SUGAR project.

## OTHER ACTIVITIES

The guidebook “Urban Distribution, more than air quality” is a Dutch guide book for municipalities on how to implement sustainable urban goods distribution strategies in cities. Rotterdam translated the guide into an English version, which has been distributed to CIVITAS CATALIST members and (potential) take-up cities.



### Jim McGeever

London European Partnership for Transport (formerly)

*“The CIVITAS Activity Fund has proved to be a real “catalyst” for London. Freight is such an important element of Mobility Management planning here in London and it was so useful to get an insight into similar issues in the CIVITAS city of Gothenburg”. Through the CIVITAS CATALIST project we have now secured additional support to further develop this relationship with Gothenburg. Our involvement has really helped raise the profile of European co-operation in Mobility Management.”*





# Buses with a high level of service

## NANTES, France

Buses are the most used form of public transport in Europe and all over the world. However, the past decades have seen the rising implementation of mass transport modes (metro and LRT) not always adapted to the local demand to the detriment of the quality and image of the rest of the network. In a context of decreasing investment capacities coupled with a growing need for cheaper and cleaner mobility options, these expensive policies need reviewing. This is when buses with a high level of service (BHLS) come into play.



*The BusWay system in Nantes*

All across Europe, new urban bus schemes of high quality are being implemented. These are known as BHLS – “Bus with High Level of Service”.

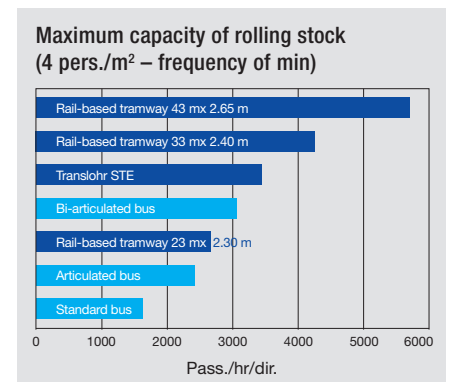
By taking a comprehensive approach (to rolling stock, infrastructure and operating conditions), the BHLS can offer a continuously higher level of service than conventional bus routes (in terms of frequency, speed, span, regularity, comfort and accessibility). The bus is considered in its widest sense: it may be guided (using a physical or non-physical guidance system) or non-guided, and powered by fossil fuels or electricity, or use a hybrid power system.

### HOW TO START?

### HOW TO AVOID MISTAKES?

The choice of implementing a BHLS rather than another mode can be very complex. The following 6 themes should be taken into account (source: CERTU – fact sheet n°10):

1. The long-term view (20–30 years) of the development of conurbations and public transport systems: long-term strategies regarding the location of housing, employment and services, together with changing travel expectations and behaviours must be anticipated.
2. Targets in terms of level of service: Although LRT and BHLS systems can provide the same level of service in terms of frequency, span, speed and regularity, some difference remain in terms of levels of comfort, accessibility and image which are better with the tram, although developments around buses have led to numerous improvements.
3. Travel requirements and capacity:



Source: Certu





4. Overall cost: not only the initial investment costs but also long-term operating and maintenance costs including the life expectancy of rolling stock.
5. Integration into the urban fabric (for instance according to the width and design of streets).
6. Choice of technology and industrialisation.

**THE CIVITAS VIVALDI EXPERIENCE**

Within the CIVITAS VIVALDI project (2002-2006), Nantes converted a former urban through-road linking the ring road to the city centre in a 2-way dedicated lane to implement its BHLS: the BusWay. Though the initial plan was to build a new tram line to complete the existing network, local officials began looking for a less expensive solution more adapted to the needs and using buses, which would perform as well as the tram.

Commissioned in November, 2006, the line 4 BusWay took the elements that made the tram a success (dedicated lane, stations, priority at intersections, high frequency and extended hours) and applied them to a bus system:

- A dedicated lane along virtually the entire route.
- Well-equipped stations with wide platforms and all the necessary equipment (shelters, real-time information panels, ticket distributors, system plan).
- Priority at intersections.
- Extended hours and high frequency.
- Station docking, with stations positioned on straight sections, with straight approaches.
- Specific vehicles: standard 18m articulated CNG buses but dedicated to the line and with a higher level of comfort and a specific layout.

Some results (2010):

- 28,500 passengers/day,
- Saturation of P+R,
- Tram-like modal shift (25 % from cars to BusWay – surveys in 2007).

**THE CHRONOBUS EXPERIMENT LEVELS**

Chronobus is an innovative BHLS concept, aiming at positioning major bus lines as an intermediate offer between normal bus services and BusWay services.

Chronobus lines will offer a high quality of service (guaranteed travel time, improved frequencies, extended operating hours) supported by specific developments:

- Bus corridors (33km among 70km of lines),
- Road enlargements through the removal or transformation of parking spaces,
- Priority systems at crossroads,
- Developing roundabouts, and
- A new traffic plan.

The technical solutions tested will have to be innovative and economically efficient to cope with budgetary constraints and space availability: traffic calming bus stops, alternative dedicated lanes, limited traffic zones etc.



*Delegation of French politicians from Lorient, Nantes, 19<sup>th</sup> April 2012*



*Chronobus*



Like the BusWay, Chronobus is based on a system approach with solutions adapted to the needs :

- A regular but recent bus (CNG) with a specific identification,
- Infrastructure adapted to urban constraints (mixed traffic, one way lateral, bilateral, alternative lane),
- Information on board and at stations and
- Priority systems (traffic lights, roundabout, etc.).

Some figures:

- 7 lines in 2012–2013, 3 after 2014,
- 70km for the 7 lines with 33 km of dedicated or shared lanes,
- 70,000 trips/day for the 7 lines,
- EUR 65 million investments (rolling stock excluded)

Within the CIVITAS CATALIST project and in recognition of the experience gained through CIVITAS VIVALDI, Nantes has been leading the Collective Passenger Transport task.

Within this task, Nantes has exchanged its knowledge with other cities through the organization of study visits and workshops as well as its participation to meetings and conferences.

**SHOWCASE: TECHNICAL WORKSHOP**

Held in Nantes on 19<sup>th</sup> May 2010, a technical workshop successfully gathered more than 50 participants from eight different countries (Austria, Belgium, France, Germany, Ireland, The Netherlands, Sweden and UK) around the topic of Collective Passenger Transport, co-organised by the Interreg IV B BAPTS and CIVITAS CATALIST projects, the aim of the conference was to spark off exchanges of experiences between European cities. A section was specifically dedicated to the question of the choice between LRT and BHLS.

**SHOWCASE: STUDY VISITS**

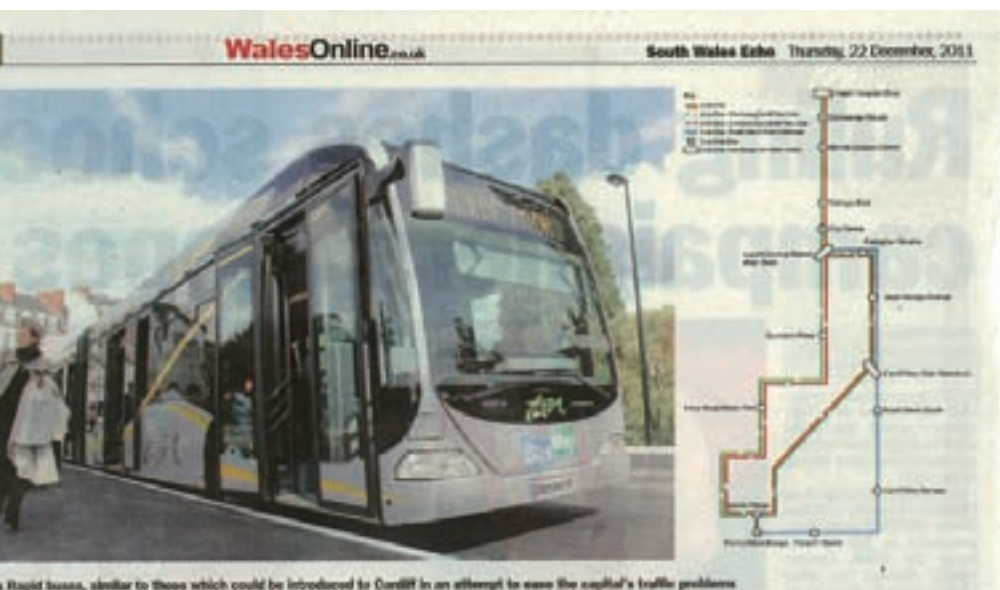
During CIVITAS CATALIST, over 50 delegations came to Nantes to get an insight of the BusWay then the Chronobus project.



**The Norwegian group is safely back in Stavanger. They have expressed great satisfaction with the visit and were impressed both by the presentations and by experiencing the Busway system in operation.**



Three cities in particular (Irun, Thessaloniki and Turnout) could participate to an in-depth study tour thanks to their successful application to the CIVITAS Activity Fund.



*The visits triggered very positive feedback. South Wales Echo, Thursday, 22 December, 2011*



# Collective Transport

## BUCHAREST, Romania

The continuous growth of mobility demand and the risk of decreasing the quality of the city environment lead to reconsidering the tram transportation system in Bucharest. Since new technologies and design were introduced, the tram has become more environmentally friendly, faster, safer, more reliable and comfortable. This is the reason why many cities are reconstructing, upgrading and building new tramway lines.

Bucharest has had a tradition for over 100 years of continuous tram operation (1872 – tram horses, 1894 – electric trams) but the activity of the public transport operator was seriously affected at the end of 1980s, by restrictions which ignored the distinctiveness of trams. As a consequence, infrastructure was continuously downgraded and the fleet became worn out. During the 1990s the situation improved, but in an inconsistent manner.

Addressing this aspect of the problem and based on different studies, RATB (the surface public transport operator from Bucharest) developed an ambitious strategy from 2000-2010. It stated it was compulsory to apply integrated and coherent policies to attract people to use public transportation by implementing innovative solutions to:

- Reduce air and noise pollution
- Improve traffic conditions
- Reduce fuel and energy consumption
- Increase comfort and accessibility
- Improve safety

The synergy between this strategy and the CIVITAS programme through the project CIVITAS TELLUS (2002-2006) has proved to be a benefit for public transport development in Bucharest.

During the CIVITAS TELLUS project, RATB increased its fleet by eight trams manufactured within RATB's Repairing Plant – URAC (according to the energy consumption diminution and noise reduction objectives which were introduced into exploitation). Moreover, to respond to accessibility needs, RATB started to refurbish old trams giving them low floors in the middle area of the vehicle, access platforms, and energy reduction devices.

At the same time, RATB increased the tram's operating efficiency (exploitation speed, comfort and reliability, diminished noise and vibration, and reduced maintenance costs) and modernised the tram infrastructure (tram tracks, electric substations and network, passenger shelters). By the end of the CIVITAS TELLUS project, 35 % of the tram infrastructure was modernised.



*Tram manufactured and put into operation during CIVITAS TELLUS project*



“  
 During CIVITAS CATALIST a new type of low floor tram (60%) – BUCUR LF was designed and manufactured in the RATB Plant and put into operation in 2008.  
 ”

After the CIVITAS TELLUS project concluded, RATB continued fleet renewal with energy saving vehicles and the rehabilitation of the tram infrastructure. At the end of 2009, the trolleybus fleet was completely renewed with 300 energy saving vehicles (100 of them with low floors) and the tram fleet included 56 energy saving, partial low floor vehicles. All the new trams were manufactured in RATB's Repairing Plant. In addition, more than 50% of the tram infrastructure and 4 depots were modernised.

During CIVITAS CATALIST a new type of low floor tram (60%) – BUCUR LF was designed and manufactured in the RATB Plant and put into operation in 2008. Some of the characteristics of this tram included: higher capacity, accessibility, better comfort because of improved acceleration and deceleration, passenger counting systems, passenger information system (LED panels), improved ergonomic characteristics of the driver post, on-board computer for an easier monitoring of tram operation parameters. In 2012 there are five new trams operating. Moreover, there are three modernised trams in operation with AC traction system.

#### **CASE 1: ORGANIZING TRAM WORKSHOP AND TECHNICAL VISIT**

In May 2011, RATB organized a workshop and a technical visit on “Tram – network extension, infrastructure and vehicle maintenance”. It was aimed at local and central authorities, public transport operators, and specialists in urban planning and transport. The workshop was structured into two

modules. The first module was dedicated to rolling stock and infrastructure maintenance topics, and the second module aimed to present the integration of the new tram network and urban planning in cities from Romania and around Europe.

It was of great benefit to have valuable expertise brought by experts in the field of tram operation and maintenance (from UITP Light Rail Committee, TTK, SEMITAN–Nantes Metropole, BRAICAR SA, RATB).

A technical visit was scheduled at the end of the workshop, including trips to two places: Basarab Overpass (showing multimodal integration) and Dudești RATB Depot (demonstrating the recent upgrade of facilities and the improved maintenance of technological flow). The attendees also had the opportunity to visit the oldest depot in Bucharest (Victoria, 1888), which is still functional. Between the two depot visits, trips were taken on the BUCUR LF tram, designed and built by RATB specialists in the RATB Central Workshops.

#### **CASE 2: PARTICIPATION TO PUBLIC UTILITY FAIR, ROMEXPO, BUCHAREST, 2011**

At the beginning of September 2011, RATB participated as an exhibitor at the Public Utility Fair, organized by ROMEXPO. The Fair offered an overall picture of the development opportunities and investment projects that could be realized in urban and rural areas.

The exhibitors were Romanian municipalities and companies which offer public services as their main activity. The Fair was an opportunity to present projects benefiting from non-refundable sources.

The exhibition was a great opportunity for the CIVITAS CATALIST team to talk to representatives from different municipalities about the CIVITAS Initiative and its achievement over the last ten years and to invite them to adopt the principles of sustainability in their cities.



*Technical visit to Dudești Depot*



*RATB exhibition stand at Public Utility Fair, Bucharest 2011*



### CASE 3: PARTICIPATION IN INFRATRANS 2011, GARA DE NORD STATION, BUCHAREST

At the end of September 2011, RATB participated in the international symposium and exhibition – INFRATRANS 2011 “Towards a sustainable rail transport” – organized by the Rail Engineer Association and ITS Events Management.

The event, supported by the Ministry of Transportation, intended to promote projects to improve rail transport quality, implementing new technological solutions for track maintenance and integration between national, regional and local tram and train transport.

This subject was broadly debated in a special session – “Urban, suburban and regional public transportation/Solutions for integration towards increasing the public transport attractiveness and reduce single car usage/Collaboration between rail companies and public transport operators”. This session was an opportunity to highlight the CIVITAS Initiative objectives and to invite participants to work with one another.

### CONCLUSION

The tram transport system in Bucharest was always considered the backbone of the city, being redeveloped as the city expanded. In spite of some difficult periods of time during its history, it was never closed. Moreover, the authorities have encouraged the development of the tram system by designing, manufacturing and maintaining vehicles in the RATB Plant – vehicles adapted to the needs of the city. Likewise, special attention was given to infrastructure maintenance, where a special solution was adopted in order to improve operational efficiency and to improve the quality of trips. These efforts have been recompensed by 44% in public transport modal split allocated to tram transport.



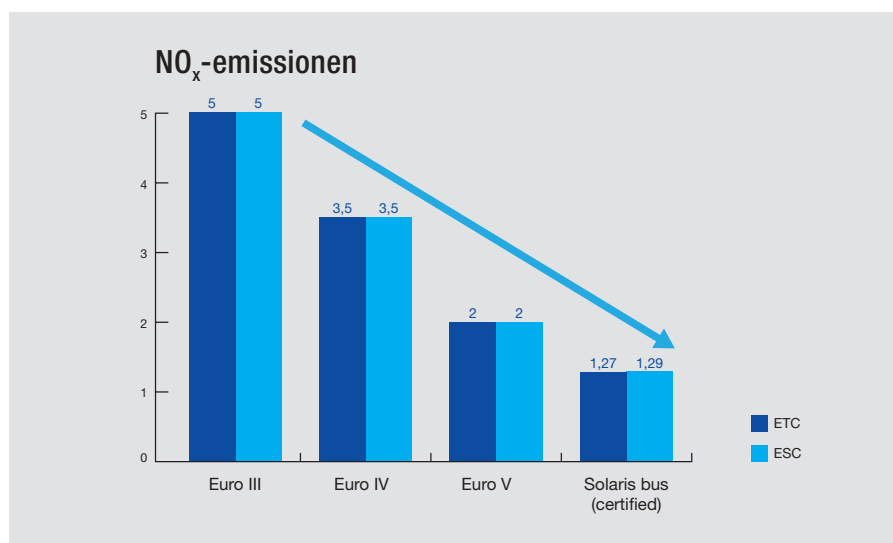
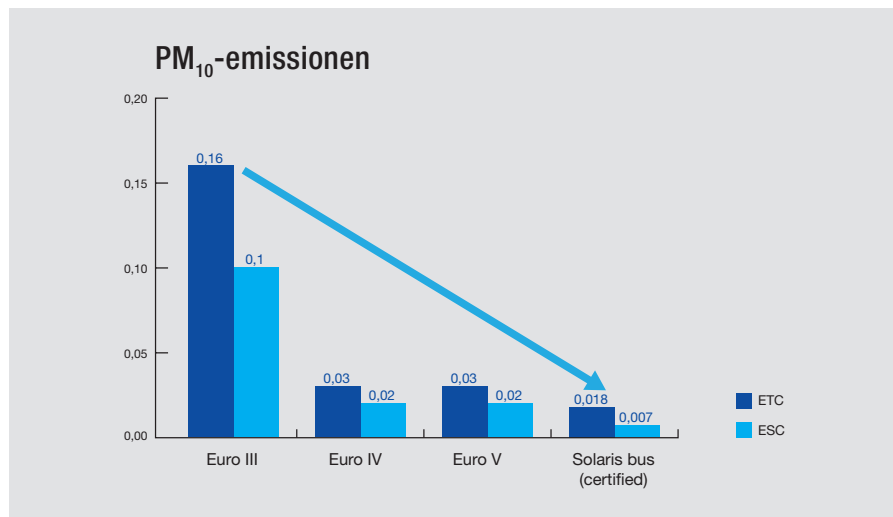
*Ms. Anca Boagiu, Ministry of Transportation, visiting RATB exhibition stand at INFRATRANS 2011, accompanied by the Mr. Adrian Crit, RATB General Manager*



# Clean Vehicles

## BREMEN, Germany

There is a special role for heavy duty vehicles (HDV) – delivery vehicles, trucks and buses – in local clean air quality management. These vehicles with large Diesel engines contribute more, proportionally, to air quality problems – not only with particulates but also Nitro-Oxides (NO<sub>x</sub>). Here, the contribution of heavy-duty vehicles may reach 50% of the concentration level, even though the proportion of HDV in the entire fleet is usually below 10%.



### EEV DIESEL BUSES IN BREMEN

Buses have an important role to play because they are an almost continuous inner-urban operation, under direct control of public authorities. They have an important function demonstrating what can be achieved in the heavy duty vehicles sector.

With the support of CIVITAS, in 2006 Bremen purchased the first available series Diesel buses fulfilling the most ambitious emission standard EEV (Enhanced Environmental Vehicle). At a time when it switched from the minimum standard of Euro III to Euro IV, these buses showed emissions of particulates at about 90% below the Euro III and NO<sub>x</sub> emissions about 78% below the Euro III.

Previously, only CNG buses fulfilled the EEV standard – but they involved higher investment costs, new refuelling infrastructure and operational disadvantages (e.g. range).

The EEV Diesel buses had smaller additional investment costs (about 2.5% of procurement costs). The important message behind introducing these buses was: There is no cost or operational reason not to go for this ambitious emission standard for urban buses.

## INTRODUCTION OF THE FIRST BUS FLEET

The first serial EEV-Diesel bus was presented in the Hanover international duty vehicles motor show in 2006 (IAA Nutzfahrzeugschau).

When the first fleet of 10 EEV buses of BSAG was introduced, even the Secretary General of the International Association for Public Transport (UITP), Hans Rat came to Bremen.

In 2006/2007 European cities were dealing with the implementation of clean air measures in the field of transport (to fulfil the EU requirements on air quality) and the Bremen EEV buses got a lot of attention at the national and European level. There were also chances to present the Bremen approach. Bremen presented in one of the regular meetings to all the transport representatives of the German States and the Federal government of the Social Democratic Party, (which at this time appointed the Federal Minister for Transport).

The City of Bremen and the public transport operator, BSAG, took opportunities to present these buses as an element of cost-efficient reduction of local pollutants. Together with further presentations of the EEV bus and the Bremen approach in general to mobility, there was quite some impact on the procurement policy for buses in German cities. Within a short time, further manufacturers offered Diesel buses with the EEV standard – as calls for tender showed the interest of the cities in clean buses. The share of EEV buses in the procurement of urban buses in Germany increased strongly. The demand created more competition and thus, the additional costs of EEV buses came down.

“  
25 new EEV buses emit as  
much as one old bus!  
”

The public transport operator of Bremen (BSAG) made a personal commitment in 2007 to only purchase buses that at least fulfilled the EEV standard. Comparing EEV buses with the buses going out of service clearly shows the technical progress – 25 new EEV buses emit as much as one old bus!

By 2011, the ongoing regular replacement of BSAG buses by EEV buses had led to a reduction in emission of NO<sub>x</sub> and PM<sub>10</sub> in the entire Bremen bus fleet by around 75 %.



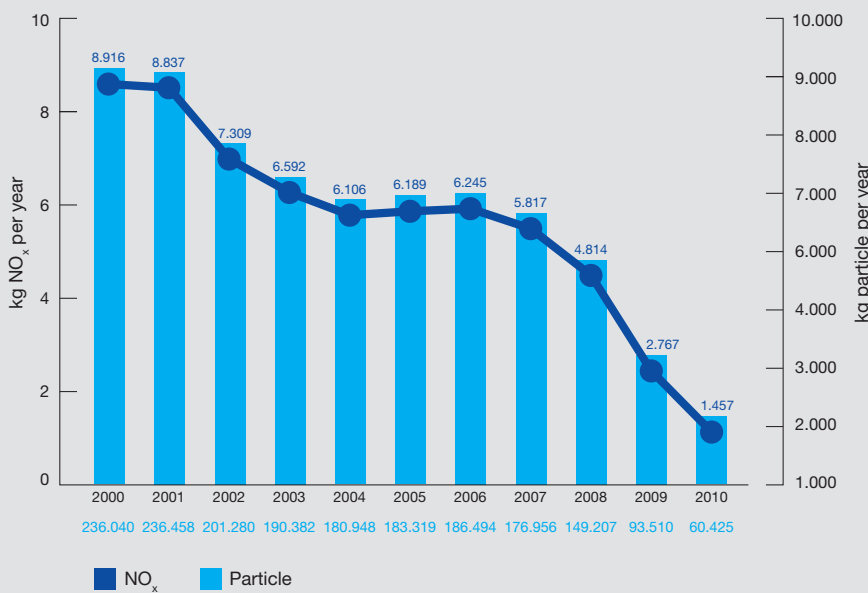
*Introduction of the first fleet of 10 EEV buses*

With its communication measures, Bremen and BSAG helped other cities and operators to follow the same path towards better air quality. There were a couple of presentations in Bremen to administrative experts and leading transport politicians on site visits (including the Federal Minister for Transport and his deputy) as well as presentations in other German and European cities. In the period after introducing the first stage of the European Clean Air Directive in 2005, there was uncertainty amongst German cities about appropriate measures to reduce PM<sub>10</sub> and – with regard to the later requirements – NO<sub>x</sub> emission.

It was also an important question for German cities, which requirements to set for clean air zones and for own procurement policies. In 2006, Bremen committed to procuring only EEV buses (instead of the state-of-the-art Euro IV buses available in 2006). This especially helped in the reduction of Nitro-oxides.

Bremen used this policy as a model case study for many other German cities and public transport operators. Moreover, within the CIVITAS community, Bremen contributed to the question of how to quickly reduce the emission level of the public transport fleet.

**Total emission of the Bremen public transport bus fleet (NO<sub>x</sub> and PM<sub>10</sub>) and the reduction since introducing EEV buses in 2005**



**COMMENT ON THE TOPIC**

**Ralph Pütz**

Head of Division Motor Vehicles, Trolley Buses, Depots and Workshops – Association of German Transport Companies (vdv)

*“Bremen was one of the first cities that purchased serial Diesel buses fulfilling the EEV emission standard. That happened in a time when air quality management became a hot political issue. The practical operation of these low emission buses in Bremen had an important role as showcase. Thanks to the exchange with other operators and with other transport authorities, the practical experience with EEV buses in Bremen influenced the procurement policy in Germany. The share of Euro V and EEV buses in the public procurement of urban buses increased drastically.”*





# Clean Vehicles – about gas and more

## PALMA DE MALLORCA, Spain

“L’Empresa Municipal de Transports” (EMT) is the public transport provider of the City of Palma de Mallorca on the Spanish Mediterranean island of Mallorca. In order to decide what kind of fuel their buses should run on in the future, the company sought expert knowledge from CIVITAS and took advantage of the CIVITAS Activity Fund. They commissioned a feasibility study and collected information from European cities within the CIVITAS community.

### PALMA DE MALLORCA SEEKS CLEANER BUSES FOR THE CITY

#### Overall objective

The feasibility study focuses on the large-scale introduction of clean vehicles in the EMT bus fleet. Previously, the City of Palma evaluated the introduction of 12 CNG buses (IVECO). The planned large-scale introduction of clean buses should serve as an example to other local fleet owners and convince them of the benefits of clean fuels.

#### Current situation

The City of Palma de Mallorca has 396.560 inhabitants and is the capital of the island of Mallorca, with 800.000 inhabitants. More than 50 % of the population lives in the Palma metropolitan area. Mallorca is a major holiday destination with over 9 million tourists a year, all of them pass through the City of Palma at arrival and many of them return to visit the attractive historic city centre.

The island has a high car ownership rate with 900 vehicles per 1000 inhabitants. Mobility culture is still very much based on the private car, with a modal share of 58 % of trips on the island. The municipality of

Palma de Mallorca seeks to improve air pollution for their inhabitants. It tends to be particularly problematic in the summer months when temperatures are well above 35 °C, along with wind drifts and low precipitation. Under these circumstances, the air conditioning systems in the buses need to be effective. Their consumption of energy was one of the topics discussed with international colleagues.

To improve accessibility, attractiveness, environment and health, the different levels of government have designed a favourable legislative and political framework for the promotion of sustainable mobility. This is shown by the recent adherence of the municipality of Palma de Mallorca to the CIVITAS Forum Network, by signing the CIVITAS Forum Network Declaration.

#### Generation change of vehicles

The current EMT bus fleet consists of 201 buses, of which 150 are EURO II, 11 are EURO IV and 40 are EURO V. The 12 new GNC buses tested during this project are to EEV standard and form an expansion of the bus fleet. The future 100 new CNG buses should replace existing EURO II buses and have a high visibility in the capital of Palma



and therefore, on the whole island. The option of CNG buses became economically attractive because of the recent realisation of a new pipeline transporting CNG from the mainland to the island of Mallorca. The liberated gas market offers attractive prices compared to current diesel fuel prices.

#### Learning about clean propulsion

The two day site visit in Bremen started with a visit to BSAG, the main public transport provider of the city of Bremen.

The most interesting lessons learned from this visit were:

- The strategy and results of fare policies: semester tickets cultivate loyalty among university student customers and the electronic best-price BOB card integrates different public transport services provided by different companies. It offers an intelligent fare calculation mechanism and the delay of real payment (to the end of the month) and a direct link to the card holder's bank account.
- There has been a reduction in travel time experienced on bus routes since the application of intersection priority for buses (traffic lights) and entry to the bus

through any door – not just the driver's door – until 8 p.m. The applied technology and control systems were explained in detail which helped to gain a better understanding of the operation.

“  
The site visit provided a wealth of information on workshop operation as well as flexible personnel planning or ticketing options.  
”

- A reduction in costs was gained due to the increase of travel speed (i.e. less vehicles were in operation to fulfil the same amount of service), and the progressive reduction of drivers by avoiding employing new drivers when older drivers retire.
- The results of the externalization of ticket controllers, lead to a reduction of fraud.
- Flexibility in staff planning in order to cover demand peaks (the need for additional drivers) and also, the possibility for 50 % of the drivers to switch from trams to buses.

The information acquired was very useful for EMT since some of its current and future problems relate to:

- Slow travel speed - traffic and boarding buses only from the driver's door
- Ticketing fraud
- Lack of flexibility contracting staff and scheduling maintenance works
- Difficulties in fare integration with other public transport providers of Mallorca (almost 100 % of interurban lines integrated in one single fare system)
- Future creation of a tram line in Palma that connects with many bus lines



Site visit in Palma de Mallorca

“  
 To see how another company has faced similar problems gave a very clear direction on how to tackle some of the existing problems in Palma.  
 ”

To see how another company has faced these issues and overcome them gives a very clear direction on how to tackle some of the existing problems in Palma.

The second day was dedicated to visiting VWG, public transport provider in Oldenburg. The most interesting lessons learned from this visit were:

- The introduction of CNG in to the VWG fleet, with a clear explanation of the strategy; why, how and what benefits were brought. The positive outcomes of CNG technology are seen to be the cost reduction in operation, improvement of citizen perception of the service – away from the negative image of diesel buses, the reliability of technology and the acceptance of drivers. This strategy and its outcomes perfectly suit the ongoing strategy in EMT de Palma regarding fuel diversification and the progressive introduction of CNG.
- Technological aspects of CNG buses and the compression-filling infrastructure related to this new fuel. Detailed explanations and interaction between companies helped to understand which barriers must be taken into account, such as gear change manufacturers, pressure values, vehicle reliability and maintenance planning.
- The reduction of operation costs by externalizing fleet and drivers to private companies, which could be a possible way for EMT to reduce costs, if the

budget falls. The way VWG deals with this issue is very interesting because the company maintains, untouched, control over the vehicles (prices, warranties, maintenance operations), and drivers subcontracting allows for a better efficiency of human resources (adapted to transport demand throughout the day and the week).

This second day mainly helped EMT to better understand CNG technology and to plan future developments, such as large scale CNG bus introduction and the construction of compression-filling infrastructure. The externalization of costs was an unexpected lesson learned that will probably be taken into account if future budget restrictions occur.

Brief conclusions of the Palma study:

- Results of the feasibility study showed that with a EUR 4.1 million extra investment, the reduction of operation costs would reach EUR 9.1 million in 10 years (present value, with a discount rate of 3.5%).
- Within 4–5 years the extra investment would have paid off.
- The choice of CNG technology would also bring an estimated saving of EUR 0.54 million in health costs related to emissions in 10 years. Noise reduction would have further improved externalities.
- Considering the higher stability of Natural Gas prices compared to Brent Oil prices, the best choice is to invest in 58 CNG buses.

Palma remains a valid example for the opportunities, as well as the challenges, of such CIVITAS endeavours. The city council postponed any further decisions concerning the EMT investment in the face of the current economic crisis.





# Municipal Bicycle Rental System

## KRAKOW, Poland

The bicycle is one of the most sustainable and clean transport modes. Nevertheless, its role in transport systems in European cities still remains very disproportionate. In some countries, citizens simply cannot imagine their everyday lives without bicycles, whereas in others, the percentage of use in modal split hardly reaches 1%. There are many methods to try to change this situation. One of them may be implementation of public bicycle rental systems.



*Thoughtful detail: town map on the rental bicycle*

Public bicycle rental systems are very popular in Western European countries like France, Germany, Denmark, Italy, and the Netherlands. The bicycle rental systems in these countries can be considered to be good practice in terms of their size, coverage of area, and popularity among citizens and tourists. In contrast, there are few existing examples in Central or Eastern Europe. The city of Krakow, located in the south-

ern part of Poland, decided to change the image of bicycles in Poland by implementing the Public Bicycle Rental System “BikeOne”. This was possible thanks to the CIVITAS Initiative and the CIVITAS CARAVEL project (2005 – 2009). It was the first Public Bicycle Rental System in Poland.

When CIVITAS CARAVEL ended, CIVITAS CATALIST focused on the transfer of activities towards sustainable mobility. Amongst many other cities, the City of Rzeszów came to visit the City of Krakow in order to learn about the system, and to use the experience from Krakow to bring public bicycles to Rzeszów.

### HOW TO START?

### HOW TO AVOID MISTAKES?

There are different strategies to implement public bicycle rental systems. They can be founded on a private, public or public-private partnership business basis. They can also be differentiated into service and self-service with various target groups (including citizens and tourists, etc).

The implementation of a bicycle rental system is a serious undertaking with a po-



tentially strong impact; both on the image of the city and lifestyle of their inhabitants and visitors. Thus, it should be carefully planned from the very beginning.

“

In terms of priority, is to engage all the necessary stakeholders in the implementation process from the first step.

”

The first step should focus on detailed research of existing systems (through site visits, e-mail and phone correspondence). This is helpful for the future because it provides an overview of various solutions applied by different cities with reference to the differences in climate, geographical and topographical conditions.

Another crucial aspect is connected to financial and political support – how and where are they sought?

Last, but not least in terms of priority, is to engage all the necessary stakeholders in the implementation process from the first step. Only in this way can each of the interested groups be assured that their needs and expectations will be met. Or, if it is not possible to meet them, their representatives can work on the second best solution (leaving little space for future complaints).

### SHOWCASE: THE CITY OF RZESZÓW VISITS THE CITY OF KRAKÓW

Krakow's Bicycle Rental System, BikeOne, became quite famous very quickly throughout the whole country. Soon after its official launch, the representatives of the city of Rzeszów (a medium-sized city in the southern east part of Poland) participated in a site visit to the City of Krakow. It was organised by the representatives of the Municipality of Krakow, (directly



One of the Public Bicycle Rental System stations in Krakow



responsible for the implementation of the system) and the Sanmargar Company - the BikeOne system's operator.

The site visit focused on the practical, organisational and technical aspects of implementing a bicycle rental system.

The Sanmargar Company presented their experience in starting-up a new scheme including all the technical aspects (bicycle stations, bicycles, bicycles' equipment etc.) and Krakow explained how it dealt with all the formal issues connected with the implementation of the system from an administrative and financial point of view. Rzeszów received a lot of useful tips and advice, together with some warnings about potential problems that can be difficult to overcome.

#### **CIVITAS (RENTAL) BICYCLE PROMOTION IN CO-OPERATION WITH IZUM IN BELGRADE, SERBIA**

Seeking a business case in Sustainable Mobility, the Serbian graphic designer, Kosta Ćirić, took part in a CIVITAS car-sharing workshop in Bremen in 2008.

Upon return to Belgrade, he founded the NGO "IZUM" on sustainable urban mobility and began to focus on the growing market of rental bike systems.

He developed a marketing plan for a public bike rental system. In order to initiate a discussion for better cycling conditions and to find partners for his idea.

In April 2010 he organised a meeting in the Belgrade City Hall. The meeting mobilized around 30 people including the assistant mayor, heads of the traffic department and the Urban Planning Institute of Belgrade. Also, there were several NGO representatives present at the event. The City of Bremen presented good examples of bicycle traffic and promoted the CIVITAS Activity Fund since Krakow could not join the meeting.





# Innovative Soft Measures

## ANTALYA and SAKARYA, Turkey

The Turkish cities of Antalya and Sakarya are subject to very fast urbanisation, and as a result, motorised vehicle use is increasing rapidly. The consequences are a growth in GHG emissions and the related negative social and environmental impacts. To tackle this problem an acceptable, attractive, safe and sustainable alternative must be widely available. The cities of Sakarya and Antalya participated with the CIVITAS CATALIST cities of Rotterdam and Graz, as well as consultancy agencies ICE and SUM-Turkey in an active threefold workshop.

### SITUATION BEFORE THE PROJECT

Antalya and Sakarya are mid-sized Turkish cities with greater metropolitan area populations of 1.1 million and 400,000 people respectively. Similar to other Turkish cities, Antalya and Sakarya are subject to very fast urbanisation, and as a result, motorised vehicle use is increasing rapidly.

The urban transport sector is already a significant source of GHG emissions in these cities. Continued growth in the use of motorised vehicles has consequences that include associated increases in GHG emissions and the related negative social and environmental impacts (such as traffic congestion, accidents and air pollution). Enabling greater use of non-motorised transport (NMT) – as a modal alternative to motorised transport for some people and journeys – would reduce growth in transport-related greenhouse gas (GHG) emissions. For this to occur there must be an acceptable, attractive, safe, and sustainable NMT alternative that is widely available.

The first site visits and data collection (before the workshops took place) found both cities have a significant number of

cyclists in the city, but there is no or inadequate infrastructure for cycling. Therefore, the user surveys showed that road safety is a major issue. The number of cyclists involved in accidents is significant. This is a real barrier to achieving a modal shift towards more bike use. The “cycling inclusive” workshop aimed to train the city personnel on how to plan and design safe cycling infrastructure and make cycling a part of urban transport policies.



Antalya, “off-street bike lane”

### CIVITAS CATALIST ACTIVITY FUND

The Turkish cities of Antalya and Sakarya cooperated with consultancy agencies, Center for Sustainable Transport (SUM-Turkey) and Interface for Cycling Expertise (I-CE) to develop a high quality plan to address these issues. As part of the plan, they required additional funds from the CIVITAS Activity Fund.

“The goal was to use the workshops to actively involve local officials so they could learn from external experts using local examples.”

To put the plan into practice there was a preparation period, three workshops of several days and a follow-up period. The goal was to use the workshops to actively involve local officials so they could learn from external experts using local examples. Each city prepared and did their workshop separately.

There was quality control throughout the project by the consultancy agencies. The CIVITAS CATALIST cities of Rotterdam and Graz shared their experiences and knowledge about local issues and political involvement, and delivered technical advice.

### PREPARATION AND WORKSHOPS

During the preparation period, data was collected about cycling in Antalya and Sakarya, such as road safety figures, modal split survey, complaints from cyclists. Participants were identified and selected by their required roles, skills, local and global knowledge, etc.

Each of the workshops consisted of three days. In each workshop, external and internal experts presented ideas and solutions and discussed various subjects. The local situation was showcased and previous findings and conclusions were used to set up new goals and actions.

In the first workshop, the local situation was analysed by identifying origins and destinations, and the main criteria for a successful pilot was defined. In Sakarya, the strengths were seen to be the political support and the flat topography. The lack of public awareness and a suitable cycling infrastructure was identified as the weaknesses. The first workshop identified the lack of information and set-up actions for the next workshop.





The second workshop was very practical. Local and external participants analysed, discussed and designed the corridors, road sections and intersections. Criteria for route selections were existing cycle routes, congestion, barriers, and financial possibilities.

In the third workshop in Sakarya, Rotterdam shared their experience. The main topic on day one was bicycle policy. On day two there was a traffic design engineer from Rotterdam who showed ideas for bicycle infrastructures. Other topics were how to deal with roundabouts, type of concrete, width-distances and surface colouring. The design experts used the additional days to test and to improve the drawings of bicycle infrastructure.

**FOLLOW-UP**

The cities of Antalya and Sakarya, Rotterdam and Graz, Center for Sustainable Transport (SUM-Turkey) and Interface for Cycling Expertise (I-CE) successfully carried out the project with an overall goal to promote cycling through a series of workshops, with a multidisciplinary team of city officials and other stakeholders.

“  
The short-term goal was for Antalya and Sakarya to have well designed, newly constructed cycle paths and auxiliary facilities.  
”

The final designs of the pilot routes for both cities are continuing. SUM-Turkey and I-CE is still assisting the cities with the design process. The implementation was carried out in 2011. The short-term goal was for Antalya and Sakarya to have well designed, newly constructed cycle paths and auxiliary facilities (bicycle supply and repair/maintenance, bicycle rental and parking). Antalya and Sakarya will become an exemplary bicycle-friendly city creating positive publicity for the city.

The long term objective is to reduce traffic congestion in both cities and as a result, mobility for commuters will be increased helping to reduce health problems. Additional employment will be created through selling/renting/manufacturing bicycles and repair services.

**CONCLUDING REMARKS**

These actions made possible through CIVITAS CATALIST show the practical use of additional funds from the European Union. A city requested knowledge and means from outside its borders to improve its local situation. A city such as Rotterdam has this experience and was of service. Additionally, the consultancy agencies ensured high quality. The example of the workshops in Turkey also shows the geographical extent of the spread of knowledge by CIVITAS CATALIST.



Antalya, “on-street bike lane”



## Car-sharing

### LUXEMBURG, Luxembourg

Most of the cities share the problem of having too many cars in a limited amount of street space – but what can be done? The traditional solution was to create more costly parking spaces – only postponing the critical point. A more efficient approach is to support car-sharing services. Car-sharing is for many European cities a very innovative and comparatively unknown element of sustainable transport strategies.



*Car-sharing in Luxembourg*

In some EU countries, like Germany, the Netherlands and Belgium, there are cities with an already established level of car-sharing, however, at the same time, many other cities in Europe have no car-sharing services at all. The benefits are proven – but the awareness about this innovative element of sustainable transport strategies is often low. European exchange helps to overcome this barrier.

Car-sharing is usually privately operated by service providers. The combined experience of municipalities with the practical experience of the operator is of high value. In order to be successful it does require a lot of groundwork.

This is a starting point of CIVITAS CATALIST transfer activities. Along with many other cities, the City of Luxembourg uses the Bremen experience to bring car-sharing into its own city.

## HOW TO START? HOW TO AVOID MISTAKES?

Car-sharing services on a larger scale are usually organised on a private business basis. Thus, any strategy for implementation needs a business model and a correct understanding of customer needs. It needs to include the city administration as well as an operator.

Thus, the transfer strategies need to be different from those CIVITAS areas dealing with public administration issues in the transport sector (like cycling, public transport, clean air management etc.). Within CIVITAS CATALIST, the City of Bremen is one of the reference case studies.

## SHOWCASE: LUXEMBURG

The City of Luxemburg has followed closely the development of car-sharing in Bremen and other cities. In 2002, there was a car-sharing presentation in the City of Luxemburg by Bremen. But it took some further investigation and a few more years to create more interest in car-sharing amongst the decision-makers of Luxemburg.

In 2010 François Bausch, the councillor responsible for transport in the City of Luxemburg, saw car-sharing as one of the core elements for the future as part of a package of measures that included infrastructure, intermodality, parking management and spatial planning.

The city wanted to find better solutions, to get car-sharing started in Luxemburg – and contacted the City of Bremen for some practical assistance.

The information and support required went far beyond what can be learned from presentations at conferences or found on the Internet.

Within the framework of CIVITAS CATALIST, Bremen organised an in-depth thematic workshop in Brussels. Participants from Luxemburg were present, including representatives of the municipality and a public transport operator.

“

The site visit provided a wealth of information on workshop operation as well as flexible personnel planning or ticketing options.

”

The workshop focussed on practical, organisational and political aspects of car-sharing implementation. Cambio Belgium participated in the meeting and presented their experience of starting-up a new scheme. The Brussels public transport provider, STIB, showed their co-operation with car-sharing from practical experience.



Car-sharing in Luxemburg



Exchange on car-sharing

Bremen presented the practical support from the municipality – and the implementation of the municipal “Car-sharing Action Plan” – with the target to quadruple the number of car-sharing users in the City of Bremen to at least 20,000 by the year 2020.

“

The site visit provided a wealth of information on workshop operation as well as flexible personnel planning or ticketing options.

”

The City of Luxemburg used the exchange to continue the preparations for car-sharing. A survey was carried out in 2010 to get more information about the needs of (potential) customers. In 2011, further surveys were carried out and business models studied. Car-sharing is planned to be operational in 2012.



## COMMENT ON THE TOPIC

### Jean Schiltz

Director of the Department for Public Services, City of Luxemburg

*“We have followed the car-sharing development already for some time. There is a clear political will to have a car-sharing service in our city – but a lot of practical questions are related to implementing such a new service. So it was good to know that we can contact Bremen as such an experienced city in terms of car-sharing. The CIVITAS CATALIST workshop in Brussels in March 2009 brought many practical insights that we need to digest. It was more than the usual political exchange – it was a starting point for planning in detail how to implement car-sharing in Luxemburg. At such point, the experience of a real car-sharing operator is of high value. I would recommend other cities to look into such practical experience of a real car-sharing operator is of high value. I would recommend other cities to look into such practical experience. Without the CIVITAS CATALIST workshop we would not be as far as we are right now.”*





# Car-sharing / EXPO 2010

## SHANGHAI, China

CIVITAS is a showcase for sustainable transport strategies in Europe and beyond. For the emerging economies, an efficient and environmentally sound transport system is crucial – and it needs expertise from forerunners of sustainable mobility strategies. The World Exposition 2010 in Shanghai with its theme ‘Better City – Better Life’ was a good forum to present sustainable transport strategies and CIVITAS.

Transport is one of the biggest challenges for all cities world-wide. The development of mega-cities creates a huge volume of transport in a very limited space.

The transport system needs to be highly efficient in terms of capacity and affordability. The social and the environmental dimensions of transport become more visible in cities in Asia, Africa and Latin America.

Cities are at a “crossroads” trying to decide between car-dependent development with more roads and highways or development that builds on sustainable mobility.

The CIVITAS Initiative is an example of new thinking – and has an important role to play in city level exchange between Europe and other cities in the world. The CIVITAS Forum Network has already brought together representatives of CIVITAS cities and other cities in recent years.

The selection of Bremen as an ‘Urban Best Practice’ showcase for a permanent presentation at the World EXPO 2010 in Shanghai was a good platform for exhibiting CIVITAS.

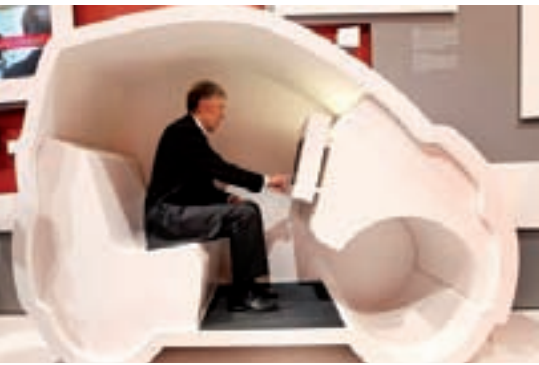


*Road infrastructure in Shanghai*

“

The City of Bremen was selected for its car-sharing service as an example to other cities globally to develop similar services for their citizens.

”



Former President of Federal Republic of Germany, Mr. Horst Köhler, visits Bremen's EXPO showroom

### "BETTER CITY – BETTER LIFE"

The largest ever World Exposition (EXPO) took place in 2010 in Shanghai, China. It was also the first EXPO in a developing country and the first one focusing on urban sustainability – with the theme "Better City – Better Life".

As part of the theme, an "Urban Best Practice Area" was reserved for selected urban sustainability projects. An independent jury led by the director of UN-HABITAT selected about 50 world-wide projects for permanent presentation in the EXPO in Shanghai.

The City of Bremen was selected for its car-sharing service as an example to other cities globally to develop similar services for their citizens – because increasing parking demands are getting to (and beyond) saturation point due to limited public street space.

### SHOWCASE: EXPO 2010, SHANGHAI

With its car-sharing activities, the City of Bremen was selected by an international jury under the presidency of Anna Tibaijuka, Director of UN-HABITAT for an "Urban Best Practice" permanent presentation on the World EXPO 2010 in Shanghai. About 1 million people visited the Bremen showcase pavilion in the Urban Best Practice Area of the EXPO – which focused on the theme "Better City – Better Life".

This focus on urban sustainability was a perfect framework for the car-sharing presentation – limited space is an urgent issue in Asian megacities – and car-sharing can play a crucial role for a new balance between mobility needs and urban space. car-sharing created a lot of media attention in China. Meanwhile, in early 2011, the City government also expressed its interest in supporting car-sharing – with explicit reference to Bremen.



### COMMENT ON THE TOPIC

#### Horst Köhler

Former President of the Federal Republic of Germany

*"This fact became clear to me once again whilst visiting EXPO 2010 last week. The world City of Shanghai offers us many visual examples, with its vast port complexes and bridges, its rapidly growing underground rail network, its dense network of motorways – and its traffic congestion and smog clouds. The EXPO impressively demonstrated how feverishly the People's Republic of China and many other nations are working on improved mobility, and by improved I mean more environmentally friendly. Ecological, clean drive technology was a key topic, including examples that show how much can be achieved if we forget our old habits. The Hanseatic City of Bremen presented its car-sharing model and calculated for Shanghai's inhabitants that, with the same levels of participation as in Bremen, car-sharing could take 180,000 cars off Shanghai's streets – what an amazing contribution to clever mobility!"*



**CIVITAS WORKSHOP ON THE EXPO**

In September 2010, a two day CIVITAS workshop took place on the Bremen stand in the “Urban Best Practice Area’ at EXPO 2010 – presenting best practice for a new mobility culture in Europe and Asia.



**COMMENT ON THE TOPIC**

**Lewis Chen**

Former manager of the Shanghai car-sharing cooperative and speaker on the CIVITAS CATALIST workshop on the EXPO

*“Bremen became famous in the Asian transport world for its car-sharing success. The big cities in Asia are much more densely built. We face big problems with increasing car-ownership – much more than most European cities do. But the solutions are not yet developed on a similar scale. That is why the exchange is so important – to reach the media, the administration, politicians and of course also the public.*

*The car-sharing presentation of Bremen on the EXPO and on conferences is extremely helpful – especially as it shows the involvement and active support of a municipality. Bremen is a well known ambassador of the sustainable transport initiative CIVITAS in Asia.*

*It was a good signal for Asian cities to see what impacts car-sharing can have. It was of great importance that the experience was told by a city. Exchange of experience from city to city counts much. A city is neutral and can tell the own practical details. The presentation of Bremen on the EXPO and the thematic workshops have created some impact.*

*I hope we will be able to keep the momentum and to further learn from such active cities.”*



Opening of a new 'mobil.punkt' car-sharing station in the German and Chinese media (BILD and People Daily)





# Access Management

## ROME, Italy

Access Management strategies aim to control and reduce traffic flows in particular areas of a city in order to reduce congestion and pollution. This is defined according to policies set at the local level, which also improves public transport and the use of sustainable modes of transport. Rome was the first to implement an Access Management-scheme in Italy and the associated Limited Traffic Zone (LTZ) concept, setting a trend which many Italian cities followed.



### ACCESS MANAGEMENT IN ROME

The Rome Sustainable Urban Mobility Plan divides the city into five concentric zones where restrictions for private vehicles increase when driving into the city centre. The inner zone – the historical city centre of Rome (4.8km<sup>2</sup> LTZ) – is protected by a special LTZ subsystem, which has operated since October 2001. It includes 22 “electronic gates” installed on the access roads to city centre. The Access Management system includes Automatic Number Plate Recognition (ANPR). ANPR uses cameras (set on poles) to detect the number plate of each vehicle and verify if it is on the “white list”. If there is a case of a traffic violation the fine is automatically issued, approved by municipal police and sent to the driver’s address. Permits to access the LTZ can be bought for an annual fee and are limited to essential car users (residents and other limited categories).

### EVOLUTION & INTEGRATION

To date Rome has opened 5 more schemes to reduce traffic, (in zones 4.8km<sup>2</sup> to 10km<sup>2</sup>) with support from the CIVITAS framework and the CIVITAS MIRACLES project.

Since October 2005, a weekend night time LTZ scheme (within the central LTZ) has operated from 9.30p.m. to 2.00a.m. on Fridays and Saturdays. On 26<sup>th</sup> July 2006, the LTZ scheme was opened in Trastevere where 12 electronic access gates were installed. The “Trastevere” LTZ was a successful experience; access gates were integrated with a new concept gate signalling system which was applied to all gates, and a public parking area was opened (with 220 parking places), served by an electric bus line for the “movida district”.

To date, the key results in the zones show a 10–15% traffic reduction throughout the day, a 20% reduction during the restriction period, and a decrease in traffic outside the restriction period.



concept in Rome city centre is vital to encourage use of more sustainable modes of transport and to extend the pedestrianised inner zones. To date, the key results in the zones show a 10–15 % traffic reduction throughout the day, a 20 % reduction during the restriction period, and a decrease in traffic outside the restriction period, i.e. while the LTZs are not active. Side effects:

- A 10 % increase of two wheel motorised vehicle traffic flows, and 6 % increase in public transport use
- A fall in access violations from an initial 22 % of the total access flow to 8–10 %
- Pollutant emission data results from traffic in LTZs are even better than traffic flows due to the restriction of older vehicles for LTZ permit holders
- Air quality data shows a significant improvement in LTZ scheme locations

## TRANSFER STORIES

The implementation of the systems has been supported by the Italian Environmental Ministry and by Ministry of Transport. The motivating force for the Italian examples always rests with the commitment of each mayor to comply with the environmental limits imposed by the European Commission. The reason for the success of the Access Management schemes is twofold. Firstly, the technology was robust and has been operating for more than ten years with high reliability. It can be used for other applications (such as Public Transport lane surveillance and travel times monitoring on a specific path). Secondly, the approval for operating such systems gained over the years by Rome and the possibility (granted by a national Directive) to use them for automatic fines increased the interest in Italy for the LTZ concept and for the extensive application of electronic gates across the nation. In Italy, foreign visitors renting a car should be aware that Limited Traffic Zones are in force in almost every major Italian city. Motorists need to know that these zones are areas

where only cars with special permits may enter. For example, rental agencies do not provide these permits for rented cars, and if drivers of hired cars stay in a hotel inside the LTZ they need a daily exemption to drive to/from the hotel. In Italy, the limited zones are usually put in place to reduce congestion and pollution, thus making city centres more pleasant for both residents and visitors. Each zone has its own set of regulations: some are restricted to certain hours, residents only, or to cars with particular permits. These conditions are displayed underneath the road sign which marks the entrance to the zone. The policy in Rome served as a model case study for many other Italian cities. According to the Study on Urban Access Restrictions carried out by the EU (TREN/A4/103-2/2009) in Italy there are about 140 cities with LTZ schemes opened after 2001: 31 of them work with technology similar to the electronic gates in Rome.

## BOLOGNA APPLICATION

The LTZ access is based on an authorising system (like in Rome) and since 2005, the Municipality has activated an IT-based pricing system called “SIRIO”. Ten cameras were installed at the main LTZ access points. Between 7.00 a.m. and 8.00 p.m. every day (except Saturday) the system automatically issues fines to car drivers not authorised to enter the LTZ. In parallel, another IT system called “RITA” (14 cameras) has been put into action for controlling bus lanes 24 hours a day to avoid unauthorised cars driving in PT dedicated lanes and within the historic centre (when forbidden). All streets which access the city centre and bus lanes are equipped with cameras in order to check if the vehicles travelling in the city centre are authorised. Inside the LTZ there is another area called “T”. It is prioritised for public transport; in this area the restrictions are greater than in LTZ and the access is controlled by an IT system. Due to the success of Urban Traffic, the city of Bologna is now going to extend





the LTZ for 14 hectares (+4.4%) and install new “SIRIO” and “RITA” cameras.

### MILAN: ECOPASS & C AREA

The first environmental road user charging scheme was implemented in Milan on the 2<sup>nd</sup> January 2008. The system initially called “Ecopass” was the attempt of the mayor of Milan to cope with the environmental ‘emergency’ in the city. The scheme in Milan is new for Italy. Rome set the trend for Limited Traffic Zone (used to restrict vehicle access to residents and essential users who usually pay an annual charge, supported by pay parking schemes in the surrounding areas) whilst Milan set up a real charging zone.

The new city administration started ‘Area C’, the Congestion Charge, in Milan on 16<sup>th</sup> January 2012. Access Regulations to the city centre apply Monday to Friday from 7.30 a.m. to 7.30 p.m. Access to the “Cerchia dei Bastioni” area is restricted to drivers purchasing the 5-Euro ticket valid for all vehicles. Special terms apply to residents and duty vehicles. The 43 gates are electronically monitored by surveillance cameras. Seven out of the 43 access points are limited to public transport vehicles. Bicycles, scooters, electric cars, vehicles displaying blue badges for disabled people as well as hybrid, methane powered, lpg and biofuel cars (up to 31<sup>st</sup> December 2012) are exempt from the charge. Excluding the above mentioned exemptions, Euro 0 petrol vehicles and diesel fuelled vehicles Euro I, II and III can no longer access the city centre.

### ACCESS MANAGEMENT ACROSS EUROPE

Rome, as part of the CIVITAS community, contributed to the question of how to balance the reduction of private vehicle use without cutting the freedom of moving. An increasing number of European cities are engaged in the design and implementation of demand management strategies based

upon the concept of ‘controlled access’ (more or less gradual interdiction of selected urban areas to traffic).

Even though the current situation is characterized by a high degree of heterogeneity, it is necessary for city and regional authorities to specify their objectives clearly, briefly and simply: Schemes should not be designed in isolation but in the context of the whole mobility policies. Administrations should be flexible and dynamic in their approach to scheme design and development, and the technology used; whilst ensuring scheme performance is as effective as possible.

Acceptability can be enhanced by continuing dialogue with media and where complementary, introducing supporting measures.



### COMMENT ON THE TOPIC

#### Antonello Aurigemma

Cllr. for Mobility, City of Rome

*“Rome was the first city in Europe to introduce a Limited Traffic Zone with the ANPR technology.*

*Since then, through our example, a national Directive for the introduction of Limited Traffic Zones in Italy was issued. Currently in Italy the majority of towns have adopted policies to restrict access with the same technology adopted in Rome, and I can add that recently also Milan has introduced a similar system.*

*At the European level Rome was definitely an inspiration for the other large cities using such technologies, whose technicians came to visit our facilities to get inspiration for their schemes.”*



## E-Ticketing

### TOULOUSE, France

An increasing number of European cities are moving from magnetic tickets to contactless technology-based solutions. This gives innovative future prospects for public transport authorities and operators to act towards intelligent integrated ticketing technologies, where customers appreciate both reliability and convenience of E-Ticketing services.

#### CHALLENGES AT STAKE

With over 16,000 inhabitants moving to the city every year, Toulouse is the fourth largest city of France, with the highest growth rate. To face the challenging implications of this current trend, the Toulouse transport network has been working now for a decade towards modernization, more efficiency, reduced fraud and safer transactions – like all European networks.

To reach those objectives, two main challenges remain. Firstly, interoperability of ticketing systems requires standardization, notably at EU level, while dealing with technological and data protection issues. Although technologies are available, systems integration must be achieved through a coordinated approach to ensure a smooth and wide deployment of ITS systems over all European cities. Secondly, tariff integration is still lacking where it should be the main driver of innovative e-ticketing policies. Indeed, innovative fares and products will make it possible to overcome administrative burdens and to facilitate public transport journeys through one single ticket/card providing “easy to use” ticketing to users.

#### INNOVATING, SHARING AND LEARNING

The CIVITAS programme contributed to those objectives through the CIVITAS MOBILIS project (2005–2009), which aimed to develop an integrated sustainable urban transport policy at the local level, and the CIVITAS CATALIST project which was dedicated to highlight and transfer the lessons learnt during CIVITAS and to accompany new cities through this initiative.

“

Toulouse introduced a new general ticketing system.

”

#### THE CIVITAS MOBILIS EXPERIENCE

Within the CIVITAS MOBILIS project, together with the opening of its second metro line, Toulouse introduced a new general ticketing system and experienced new ticketing and corresponding fare concepts that would better match user needs.





In June 2007, Tisséo – the public transport network of Greater Toulouse – launched its new contactless ticketing system. The Toulouse “Pastel” smartcard had entered into the life of the public transport network users.

In parallel, important works were carried out in the framework of interoperability with the regional public transport authorities. Today, the Carte Pastel enables everyone to travel on different regional public transport networks with one single transport card.

In addition, Tisséo experienced new tariff products made available thanks to the functionalities of the new contactless smart card. The first product targeted companies with commuters that always use or could frequently use the Tisséo network. The product was called ACTIVEO – an annual subscription where the reduced fare is automatically debited at the beginning of each month. This specific fare was tested with various companies that adopted a commuter plan.

Thus, the CIVITAS MOBILIS project actively contributed to:

- Introduction of new targeted fares and contracts adapted to local transport policy (i.e. social priorities for younger & older citizens)
- Proposal of innovative tariffs, making public transportation more attractive and developing customer loyalty
- Implementation of a normalized solution for interoperable ticketing systems at the regional level
- Modern image of public transport through contactless solutions

Today, Tisséo-SMTC continues working towards improving traveller mobility. Building on the success of the CIVITAS MOBILIS experience, the Pastel smartcard is now interoperable with VélôToulouse bike shar-

ing and Mobilib car-sharing systems. Subscribers equipped with Pastel also get a discount on bike-sharing services.

In the near future, Pastel will integrate further services (tourism, education, and so on) and the development of Near Field Communication (NFC) solutions (also planned for Toulouse) will simplify passengers' experience, making mobile payments possible through the combination of multimodal information.

“  
Toulouse having become a  
referenced and recognized city in  
the field of Intelligent Transport  
Systems (ITS) through the years.  
”

#### THE CIVITAS CATALIST EXPERIENCE

Within the CIVITAS CATALIST project and notably, given the experience gained through CIVITAS MOBILIS, Toulouse has been leading the Transport Management System task.

Indeed, having become a referenced and recognized city in the field of Intelligent Transport Systems (ITS) through the years and within the CIVITAS programme, Toulouse has been transferring its knowledge and experience to other cities through the organisation of study visits and workshops, as well as its participation in meetings and conferences.

Inspirational activities involving take-up cities have been funded under the CIVITAS Activity Fund, to support the exchange of good practice to encourage sustainable urban transport at European level.



## CASE 1: ORGANIZING A REFLECTION & PROMOTION WORKSHOP

In November 2010, Toulouse organized a workshop on “Standardization for interoperability of ticketing systems”.

The aim of this workshop was multidimensional:

- Sharing experience of CIVITAS CATALIST partners with French take-up cities and to promote the results achieved
- Gathering European transport practitioners responsible for development and implementation of innovative e-ticketing solutions
- Presenting and discussing “hot” topics such as data standardization for the development of interoperable ticketing systems
- Attracting French cities to join the CIVITAS family with the benefits they can expect
- Encouraging all French take up cities to benefit from the CIVITAS CATALIST project during the last year of its duration

The CIVITAS CATALIST partner Toulouse – together with Bremen and Kaunas – made a presentation on “Interoperability: visions from operators and public transport authorities” and also organised a technical visit to the E-Ticketing installations and maintenance centre in Toulouse. Associations like the International Telecommunications Satellite Organization (ITSO) and the French Association for Mobile Contactless (AFSCM) also brought their expertise to the debate.

Twenty-five participants – including institutions, representatives from French take-up cities and smart ticketing experts – attended the event.

At the end of the day, concrete and valuable practices were shared leading to fruitful and inspirational exchanges. The workshop enabled participants to underline the smart ticketing challenges at stake to reach interoperability through standardization (technological issues, data protection and administrative burdens) and thanks to increased Member States and cities feedback, to highlight the need for the EU to have a common and coordinated approach.

## CASE 2: HOSTING A TECHNICAL VISIT

In April 2009, Toulouse hosted a study visit about the “Integration of Transport Management Systems”, offering participants an opportunity for information and knowledge exchange in the field of ITS.

Two delegations of political representatives and experts from Bulgaria (the City of Plovdiv) and Albania (the Institute of Transport of Albania, the Mission of the Ministry of Public Works and Transport of Albania, the Municipality of Tirana) attended.

Presentation of the Toulouse experience and in-depth exchange of local practices of integrated transport management systems.

The study visit was an occasion for the welcomed cities to learn and get inspiration from the presentation by Toulouse of the new electronic ticketing system and the visit of the E-Ticketing system installations at “Argoulets” metro station.

Given the gap of development and innovation in existence between the Toulouse public transport network, and Plovdiv and Tirana infrastructures at that time, the Toulouse experience generated particular interest from both guest cities for defining their future transport development strategies.



*Presentation and exchange of local practices of innovative E-Ticketing solutions*



*Presentation of the Toulouse experience and in-depth exchange of local practices of integrated transport management systems*



# Talking brings people together

## GRAZ, Austria

CIVITAS is a structured programme of research and demonstration, testing and compiling documentation on the impacts of various integrated packages of measures relating to urban transport. Yet CIVITAS is much more. CIVITAS does not live within a laboratory; it thrives in the real world! It is a mechanism for cities to access and exchange information and to provide policy-level input to the European Commission.



*European Conference on Mobility Management  
2012 (ECOMM) in Graz*

### CIVITAS – A FAMILY WITH SHARED VISIONS

The CIVITAS Network is, by definition, a place to learn and share experiences. This learning is accomplished both via peer comparisons to other cities with similar circumstances and through the extensive evaluation that is performed within CIVITAS. Cities are also made aware of future EU funding opportunities. But, evidence shows, from talking to members of the CIVITAS Forum Network, the greatest benefit is simply being part of a “family” of professionals who share in the daily work of developing sustainable urban transport.

### TALKING BRINGS PEOPLE TOGETHER

An old Austrian saying goes “talking brings people together”, and this is not just a phrase, as the showcase of the City of Leoben in Austria demonstrates.

It is not always possible to organize collaboration between cities and the starting point of such co-operation is often very confused. On the one hand, one can find

access to co-operation via all the available media, or the more traditional forms of conferences and workshops, but sometimes, there are also other very special ways.

The City of Graz is not only Austria’s pioneer in relation to implementing EU programmes, but also uses this position within existing networks, such as the Austrian Association of Cities and Towns, to promote Europe. It seems, when it comes to European projects, Graz is always “there”. This refers not only to the city itself, but also to people working in the city.

**An appointment was quickly made and after an initial interview, interest in further co-operation was sparked.**

One day, in a relaxed and comfortable atmosphere outside of the normal business environment, a representative of the City of Graz was asked by a representative of the



City of Leoben whether there would be a chance to meet and to share experiences, which among other things, was one of the tasks within the project CIVITAS CATALIST. An appointment was quickly made and after an initial interview, interest in further co-operation was sparked.

Together with the CIVITAS CATALIST partner Austrian Mobility Research, FGM-AMOR, was brought into the “fold”, which resulted in a well-prepared workshop where the CIVITAS Initiative and possible EU financing programmes were presented. Of particular importance was the urban strategy of the City of Leoben, which was screened and was accommodated from available funding schemes.

Another fortunate circumstance was that, as part of CIVITAS CATALIST, an “Activity Fund” was offered. With this fund, the CIVITAS Initiative encouraged the exchange and/or transfer of experiences between cities involved in the CIVITAS Initiative and cities with a keen interest in an integrated approach to sustainable mobility. It also funded small-scale projects to stimulate the exchange of ideas, expertise and concrete actions in the field of urban sustainable mobility.

### SHOWCASE: MOBILITY CONCEPT FOR THE CITY OF LOEBEN

In the City of Leoben, a concept for the location of educational institutions identified the need to establish two school complexes. Consequently, it was anticipated that this would lead to a dislocation of mobility and influence transport planning and public transport. This brought significant changes in the urban traffic concept, not only for the affected target group (around 1,000 students, their parents and teachers), but for the whole city. Key targets to focus on were: safety and security within the area; reducing private car traffic; and attracting alternative options to car use for travel to school.

To find the best solution for this matter, the City of Leoben worked with the Cities of Graz and Bremen under the umbrella of CIVITAS. Intense knowledge exchange began early through participating at several CIVITAS workshops offered by the City of Graz and in bilateral meetings which explained the benefits of the CIVITAS Forum Network.

“

Leoben was able to develop from being an interested partner to a project partner at the European level.

”

With this co-operation, and with the financial support of the Activity Fund, the City of Leoben was able to develop from being an interested partner to a project partner at the European level.



*Experts exchange on sustainable urban mobility*



By the end, the idea of implementing activities in the field of clean and sustainable urban transport was developed together with the CIVITAS Initiative.

There was intensive co-operation with the City of Bremen including a study visit of delegates, technicians and politicians from Leoben to Bremen and a workshop in Leoben. Representatives of Bremen who took part in the workshop brought numerous ideas and inputs for the concept measures that were carefully worked into the final product of this activity, co-funded by the CIVITAS Initiative's Activity Fund.

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“  
**Leoben gained a large benefit from confronting and debating the subject.**  
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There was also intense co-operation with other CIVITAS partners, such as Austrian Mobility Research, FGM-AMOR. Similar to the City of Graz, FGM-AMOR has been involved in CIVITAS activities since 2002, and has a wide range of experience within the field of European projects. The transfer process experience benefited all partners and Leoben was in good company with the other CIVITAS partners. Further co-operation is planned in the field of mobility.

Leoben gained a large benefit from confronting and debating the subject. Exchanging knowledge really helped in developing a pro-active and effective sustainable mobility concept. Only a few months later, the City of Leoben submitted a proposal for the implementation of the mobility concept via regional-funding, and it was rated number one amongst all submitted projects. This is thanks to the excellent co-operation with the CIVITAS Initiative and its knowledge exchange and networking!



## COMMENT ON THE TOPIC

### **Dr. Wolfgang DOMIAN**

Municipality of Leoben,  
 Head of administration

*“The CIVITAS project was quite short in duration (2 ½ months) but a rather long one regarding sustainability.*

*A really comprehensive measure catalogue was elaborated that led to further activities and fields of actions. Especially the involvement of the partner cities brought along an exchange of knowledge and experiences that helped Leoben to develop key measures for the future mobility concept for the city. The study visit in Germany as well as the participation of the partners at a workshop in Leoben helped us to realise some aspects that we hadn't noticed before but that were essential for a successful concept.*

*Furthermore, we found partners with whom we collaborated perfectly, and we are constantly building a network for future international projects. Due to the participation in relevant conferences organised by the CIVITAS Initiative we gained new ideas and different points of view.*

*The experiences of the CIVITAS project are already integrated in new projects.”*



# CIVITAS CATALIST Consortium Partners

CIVITAS CATALIST, the dissemination and best practice transfer action of the CIVITAS Initiative ran from 2007 – 2012 and was composed by cities, networks in the field of sustainable urban transport and the environment, as well as research and consulting organisations in the field of sustainable urban transport.

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EUROCITIES, The network of major European cities | Brussels, Belgium  
FGM-AMOR, Austrian Mobility Research | Graz, Austria  
Goudappel Coffeng | Deventer, The Netherlands  
Polis, European cities and regions networking for innovative transport solutions | Brussels, Belgium  
REC, Regional Environmental Centre | Szentendre, Hungary  
Roma Servizi per la Mobilità srl | Rome, Italy  
Rupprecht Consult, Forschung & Beratung GmbH | Cologne, Germany  
TTR, Transport & Travel Research | Bristol, United Kingdom



## **MOBILITY SOLUTIONS**

Explore the CIVITAS website, and discover over 100 mobility solutions tested and evaluated by the demonstration cities.

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Read the latest news from the Initiative and its participating cities, and find the most suitable event for you in its up-to-date calendar.

## **NETWORK**

Discover more about the networks that form part of the CIVITAS family: the Forum Network and the CIVINET National Networks.

## **RESOURCES & TOOLS**

Benefit from its vast resources and tools for sustainable mobility implementation, ranging from research results to funding opportunities and from policies to methodologies.

# CIVITAS



[www.civitas.eu](http://www.civitas.eu)



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## CIVITAS INITIATIVE

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If you have general questions on the CIVITAS Initiative please contact the CIVITAS secretariat:

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## IMPRINT

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