Dear Readers,

The urban mobility agenda has been very busy in recent weeks. The public consultation on the European Commission Green Paper titled “Towards a new culture of the urban mobility” and published in September 2007 ended on the 15th of March. The PAC CIVITAS members met in Ljubljana in February and in Preston in March to work on a common response to the 25 questions of the Green Paper. After analysis of the contributions received, the EC will publish its action plan during next autumn. This will certainly be the most relevant document on urban and sustainable mobility for reflection produced by the EC in recent years. The CIVITAS family will most surely give full consideration to this action plan.

The next MOBILIS Workshop and Political Steering Group will be held in Odense the next 22 and 23 May respectively. It will be the opportunity for the City of Odense to present their concrete actions in terms of cycling good practice. The Workshop will be the occasion for the participants to exchange experience and best practice in the field of cycling and during the Political Steering Group, the policy makers from the 5 MOBILIS cities will present their local approach to cycle mobility development and its integration within the local policies notably in relation to Transport, Urban Planning and Health.

You are of course welcome to attend these events organised in Odense and for further information, I invite you to go through this tenth CIVITAS MOBILIS newsletter.

Alexandre Blaquiere
Project Coordinator

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Public art in the streets
- How to close a street in an aesthetic way

You find art in parks and on squares in the city but not often in the suburbs – and especially not art as a way to close a street. In Odense it is no longer the case. In the residential area Bolbro art is now used to close four streets. The implementation of art is part of the project “Implementation of environmental zones in Odense”.

Bolbro is one of the project areas in Implementation of environmental zones called Living Streets. The purpose of the project is to slow down traffic in residential areas and to give back the streets to the residents. In Bolbro it has been necessary to close four small streets to stop traffic taking short cuts. “It is of course always drastic to close streets. For the residents affected by the traffic it has been a positive action. But those using the short cuts have had to find alternative routes and we can’t avoid some body getting irritated with the closings”, says measure leader Mette Fynbo.

Closing streets is not only a drastic action but is also very difficult to create beautiful environments in the area of the closed street. In Living Streets the focus has been making urban space non-traffic focused. For that reason the closed streets have not been closed with the traditional bars or concrete basin. “We have looked for a solution to close the street in a way that the public can use the areas for other purposes. We asked a local artist to create public art with several purposes to close the street, and we think that the art made by Borge Meibom is very successful”, Mette Fynbo says.
The local artist Borge Meibom has used burned wood and rocks in his work to make solid and beautiful sculptures. The art is not only for looking at – it is also designed to play on. Hopefully the children will go out and play in the streets again after the implementation of the environmental zones and also use the art for playing. “Bolbro is a neighbourhood with both residential development and block of flats, and I hope that the art can give identity to the neighbourhood. I hope the art will bring pride and joy to the residents of Bolbro”, says Borge Meibom.

The young people in Bolbro have embraced the art and are very positive. Also families with children are very happy about both the street closings and the art which they hope in a combination can make Bolbro more attractive for new residents.

Closing streets with art is a new thing in Odense but it might also be a solution in future projects.

For more information, please contact Kristina Edrén, kme@odense.dk
Air-pollution measurement in Debrecen

Under the coordination of the Ministry of Environment several air-quality measure points have been set up in the city of Debrecen. The measure points are connected to an on-line system to provide actual data anytime. This system will be extremely useful when measuring the impact of the developments made under Civitas II at the end of the project.

The VMS (Variable Message Sign) display has been purchased for the P+R facility at the Fõnix hall. Installation will start in a few days. Afterwards, car drivers entering the city from the north will see useful information concerning P+R possibilities.

For more information, please contact László Krajczár, krajczar@ph.debrecen.hu

A new parking policy in Toulouse: some very interesting results

Since 2005, the City of Toulouse has been implementing a new parking policy in the city centre. The creation of a residents fare represents the backbone of this new policy which is considered as a very important lever in order to improve the transport and living conditions of the inhabitants of the city centre. The first objective was to consider 4 neighbourhoods in the city centre but it turned out that the measure was very successful and it has been decided to implement the new parking policy in 14 extra neighbourhoods within the MOBILIS project timeframe.

The most outstanding results (evaluation made through a dedicated survey at the end of 2007) are the following:
- the number of parking lots has decreased by 13,5% (from 13,400 parking lots in 2003 to 11,600 at the end of 2007) in the new parking policy area,
- 4300 households have subscribed to the residents fare,
- the occupation rate of the parking lots is 76% (was 92% in 2003),
- the rotation rate has been increased by 30%,
- the necessary time to find a parking place has been considerably reduced,
- 80% of the residents said to be “satisfied” or “very satisfied” with the new parking policy.

The final evaluation report of this measure is under production and the City of Toulouse is now thinking of extending the measure outside the city centre.

For more information, please contact Arnaud Turlan, arnaud.turlan@mairie-toulouse.fr
Waiting for the results of biofuel tests in Debrecen

Research never stops at the University of Debrecen. At the Centre for Agriculture and Technical Studies tests concerning biofuel is still in progress. Final results are to be expected by the end of April. Hajdú Volán, the mass transportation company of Debrecen has already finished the conversion of 7 buses to CNG. As soon as there will be results concerning biofuel tests and the company will be granted the permission to use biofuel in their buses, the new vehicles can enter the mass transportation of Debrecen, hopefully in the coming months.

For more information, please contact András Teleki, telekia@hajduvolan.hu

Launch of a bio diesel experimentation in Toulouse

Since the beginning of February 2008, 130 buses are running in Toulouse with 30% biodiesel. This experimentation which has been launched in the frame of the CIVITAS MOBILIS project is completing the efforts already realized in the development of the CNG bus fleet and the equipment of the diesel buses with some last generation soot filters. With this experimentation, Toulouse is getting close to its objectives to have a 100% clean bus fleet by 2009. Together with the recent opening of the new bus depot of Langlade, the Public Transport Authority decided to launch a bio diesel experimentation. Today, one third of the public transport bus fleet (almost 150 buses) is now running in Toulouse with 30% bio diesel. In France, at the time being, the part of bio diesel within the fuel is limited to 30% for companies and public transport operators meanwhile it is limited to 5% for private cars.

In new depot of Langlade, a tank is now dedicated to refuelling the buses running with bio diesel. The buses which are running with bio diesel are the oldest ones of the fleet (the last generation diesel buses are equipped with soot filters).

The experimentation is supposed to last at least until the beginning of 2009 when a balance will be established in order to know where does the public transport operator should go in terms of use of biofuels. Tisséo-SMTC also envisages using biogas when all the necessary legislative conditions will be gathered.

For more information, please contact Jonathan Turgy, jonathan.turgy@smtcat.fr
The ABiCi bicycle education project in Venice

The ABiCi bicycle education project in schools has been highly successful. In autumn 2007 elementary schools on the Venice mainland and in the historical centre were sent leaflets inviting them to sign up their classes for a bicycle education course. Over 100 schools signed up, more than the courses currently available (80 courses) though the City is now trying the extend the project to all classes on the waiting list.

The courses are run by FIAB (the Friends of the Bicycle Association) and are based on an illustrated workbook in the class and also on bicycle outdoors. The students receive bicycle riding ‘licenses’ at the end of the course following a fun quiz.

The teachers and students are so enthusiastic about the course, made possible by CIVITAS co-financing, that FIAB and the City of Venice are currently looking into the possibility of running it again next year.

For more information, please contact Gabriele Vergani gabriele.vergani@comune.venezia.it

Another district connected to the cycling network in Debrecen

Reaching the city centre by bicycle is becoming more and more convenient in Debrecen. In the northern part of the city, a one kilometer long bicycle lane has been created with the appropriate road signs in recent months. This enables many inhabitants of the northern suburbs to access the city – and more closely, a campus of the University – more securely. One of the most densely populated parts of the city – called Tócó – has been subject to the same development as well. Over 3 kilometres of bicycle lanes have been created around the district. This development means an easier and more secure way to access the city centre for over 40.000 inhabitants. The
plots for other alternative development solutions have been defined as well, and implementation will start within forthcoming months.

For more information, please contact László Krajczár, krajczar@ph.debrecen.hu

Towards the improvement of public transport management system with the use of GNSS / Galileo

As a partner of the MOBILIS project, the SME group CE-CILE carried out a set of measurements in summer 2007 in order to assess the further improvements of the use of the navigation satellite systems in the management of public transport fleets. In view of the arrival of the future European Navigation System Galileo, data has been analysed in order to determine what Galileo will bring to future public transport positioning needs.

Electronic equipment has been installed on the buses of two lines of the public transport network. This equipment has permitted collecting the GNSS measurements automatically alongside the route of the buses over one month, and to determine in a very accurate way the current performance of satellite localisation systems (GPS/EGNOS). Then, a simulation tool enabled the extension of this analysis to the whole public transport network and to forecast the performance of the future Galileo system. The objective was to evaluate the added value of the new system and to measure the gains in terms of service quality, investment and maintenance costs. The study conclusions integrate some recommendations for the conception of the future surface public transport management systems, and identifies some opportunities for the development of new services based on buses and travellers location.

For more information, please contact Baptiste Godefroy, baptiste.godefroy@polestar-corporate.com

The car-sharing system is increasingly popular in Debrecen

The car-sharing system is up and running under the URL http://utitars.debrecen.hu. Its increasing popularity can easily be seen if we look at the number of registered users: in just three months it has reached 300 – and still counting. Several arrangements have been made in recent months, making life easier for the people involved – and the environment cleaner. Although the vast majority of the registered users are students, other inhabitants have registered as well, many of them living outside Debrecen. Hopefully, in several months, the system will be as useful for commuters as it is for students.

For more information, please contact László Krajczár, krajczar@ph.debrecen.hu
Making decisions about waterborne traffic in Venice

What kind of effect would closure of a lateral canal for dredging work have on waterborne traffic circulation? What would happen if a barge was parked on the canal outside a palazzo during restoration works? What would happen if a certain number of private tour boat operators were allowed to transit? The dynamic decision making support model firstly directed by the Commissario for Waterborne traffic in Venice and now the responsibility of the City of Venice with Forma Urbis has now been completed and it is therefore now possible to simulate the above situations before making decisions. The system has been designed in such a way as to be updateable in a sustainable and perpetual fashion through the standardisation of periodic updates and the interception of administrative acts that affect traffic circulation.

For more information, please contact Manuele Medoro manuele.medoro@comune.venezia.it

Delay in the implementation of the pedestrian zone extension in Debrecen

There are dark clouds over the extension of the pedestrian zone in Debrecen. Suitability plans for the extension of the pedestrian zone in the city centre have been long ready. Unfortunately, the implementation will not be finished until the end of the Civitas II Project. Not only the construction permission is missing but due to the very restricted city budget for 2008, implementation cannot be started this year. Hopefully, in 2009, the extension of the pedestrian zone can be started and in several years Debrecen will have a bigger and cleaner city centre.

For more information, please contact László KRAJCZÁR (krajczar@ph.debrecen.hu)
Biodiesel usage in fuel injection systems at low temperatures

The influence of fuel temperature on the injection process on a bus engine MAN D 2566 with direct injection M system was investigated. The tested fuel was neat biodiesel (B100) produced from rapeseed oil at Pinus, Race. The injection characteristics of B100 are compared to those of mineral diesel D2.

For low temperature testing, a special cooling system was developed to maintain the desired pre-set constant temperature conditions, Figure 1.

Two separated cooling systems, conditioning the fuel injection pump and fuel, respectively, were used. The fuel injection pump was placed into an isolated metal case. Plate evaporators, which were the part of a refrigeration system, were used as inner case walls to maintain temperatures well below the ambient one. A proportional-integral-derivative controller was applied for temperature control, which allowed tolerances of the set temperature to be within ± 0.5°C. Injectors were mounted on the test bed out of the cooled case in order to enable simple fuelling measurement, and were connected to the injection pump by thermally isolated standard high pressure tubes. The fuel supply formed the second cooling system. A large fuel tank (50 litres) was placed into the refrigerator, which allowed the temperature to be controlled between -30°C and ambient temperature. An ice-cooled heat exchanger, i.e. tube coil frozen within the ice cube, was placed next to the fuel tank. It served for cooling the fuel flowing from the injector pump back to the fuel tank. This back flow, however, was not directed into the tank, but it was mixed with cool fuel from the tank in a 3-way mixing valve, and fed to the fuel pump. This enabled accurate fuel temperature control at the injection pump inflow and extended the duration of continuous testing, especially when the fuel in the tank was under-cooled well below the desired fuel supply temperature before the testing.

The influence of fuel temperatures on fuelling has been investigated experimentally for the whole injection system, including injection assemblies I through VI, Figure 1.

Experiments have been done at two engine operating regimes (rated and peak torque conditions). Both fuels, B100 and D2, have been tested.

At rated conditions, the fuellings of B100 for individual assemblies (I through VI) are presented in Figure 2. One can see that above -7°C the differences of fuellings through individual assemblies are within acceptable limits. However, at temperatures lower than -7°C, these differ-
ences rise unacceptably. Only for injection assembly I, being located the closest to the fuel inlet into the low pressure pump's gallery, the fuelling remains acceptable. For other assemblies, the situation becomes worse, as the distance between the gallery inlet and assembly inlet becomes larger. This observation can probably be explained by the increased pressure drop through the fuel filter, Figure 2. This may result in insufficient fuel supply into the low pressure pump's gallery. The increased pressure drop through the filter is a consequence of high viscosity and density of B100 at lower temperatures.

At peak torque condition, the pressure drop and fuellings for B100 through injection assemblies I through VI are presented in Figure 3.

The presented results show that the fuelling for B100 through individual injection assemblies can differ considerably. Obviously, the reason for that lies in the fact that the viscosity and density of B100 rise excessively by decreasing temperatures. The analysis of experimental results shows that the distribution of B100 fuellings becomes very unequal among individual injection assemblies as the fuel temperature falls below the critical one (7°C at rated and 3°C at peak torque regime). Obviously, the viscosity and the density of B100 increase to such an extent that fuel supply to the individual injection assemblies becomes critical. This is caused by the pressure drop through the fuel filter and by increased flow resistance through the low pressure pump's gallery. The heating of B100 would be necessary to avoid these negative effects.

For more information, please contact dr. Breda Kegl, breda.kegl@uni-mb.si

The situation is somewhat similar to that of B100 at rated condition. The critical temperature is here about -3°C. The fuelling through all injection assemblies has also been measured for D2. The pressure drop through the fuel filter is unaffected by temperature changes. The pressure drop through the fuel filter at all tested temperatures is low and constant. For D2 one can see that the temperature has no influence on the fuelling, both at rated and peak torque conditions. For illustration, the fuellings and pressure drop for D2 are presented in Figure 4.
In the frame of the Slovenia EU presidency, the Environmental Ministry and Ljubljana City - as part of the campaign for use of alternative fuels and clean vehicles - organized an exhibition on second-generation biofuels. The exhibition was organized in the framework of the Informal Meeting of the EU Environment Ministers.

It was a very important meeting regarding the future of biofuels in the European Union. In the past many concerns have emerged regarding the fact that increasing use of biofuels is harming the environment and biodiversity. “There are a lot of concerns about the social and environmental impact of biofuels,” European Environment Commissioner Stavros Dimas said on arrival to Brdo (Slovenia). Later he said biofuels production can have negative environmental and social impacts, that is why Europe needs rigorous criteria for their sustainability.

To highlight even more the issue, the Presidency wished to bring the key messages of the ministerial meeting closer to the general public and to individuals, who by their actions can significantly contribute to the sustainable use of natural resources and, thus, help offset climate change. An exhibition on innovative environmental technologies related to second-generation biofuels was therefore organized by the Slovene Environmental Ministry and City of Ljubljana. The participating countries were invited to present their good practices on display boards installed in Ljubljana city centre. Ljubljana presented its achievements on biodiesel production and use in the city, enabled by participation in the CIVITAS MOBILIS project. The Ministers for the Environment visited the exhibition on Saturday 12 April 2008, during an afternoon walk through the centre of Ljubljana.

Environmental ministers also concluded, that due to efforts towards achieving ambitious targets for the share of renewable energies and in particular bio-energy, the rate of forest utilisation is likely to rise significantly. Therefore, a significant challenge is to ensure that forests are used wisely as a source of biomass, including (as appropriate) as a sustainable source of second-generation biofuels, without compromising their multifunctionality by sacrificing their long-term ecological and socio-economic stability and environmental objectives, including the protection and sustainable use of biodiversity, nor compromising the contribution of forests in the fight against climate change and desertification. That was a conclusion of the informal meeting.

For more information, please contact Albin Keuc, albin.keuc@guest.arnes.si
Workshop on car sharing across Europe in Venice

The CIVITAS MOBILIS WORKSHOP on CAR SHARING ACROSS EUROPE was held on the 28th of February at the Palazzo Franchetti institute in Venice.

The City of Venice Deputy Mayor for the Environment, Pierantonio Belcaro opened the workshop and was followed by a welcome from the Giorgio Nardo, President of ASM, and a presentation of the successful car sharing experience in Venice by Claudia Bordenca for ASM and of the local corporate car sharing scheme by Alessandro Leon for the Province of Venice.

The day unfolded with a series of presentations regarding car sharing across Europe. Matthias Fiedler and AnnemieVan Uytven presented an overview of the genesis and state of the art of car sharing in Europe. Robert Clavel from CERTU then presented an overview of car sharing across France followed by Peter Muheim from Mobility car sharing in Switzerland, whose presentation highlighted how car sharing originated in Switzerland and is very advanced in terms of both use and availability.

Following lunch, Alexandre Blaquiere presented the decision making process underway in Toulouse regarding the development of a car sharing scheme while Michael Frömming presented the experience in Bremen, highlighting some interesting aspects of car sharing and urban planning. Claus Bodker presented the system in Denmark, which is solely offered by Hertz car rental company. The well established experience of car sharing in the City of Bologna was presented by Giancarlo Sgubbi and highlighted the integration of such a scheme with limited traffic zones and other sustainable mobility measures. Anna Trentini closed the day with a presentation of the car sharing system in La Rochelle which has recently undergone renewal within the CIVITAS SUCCESS project.

Key messages from the workshop are that car sharing emerges as a niche transport alternative, which complements an efficient public transport system and other measures to bring about modal shift. A number of presentations highlighted that people who use car sharing also tend to use alternative forms of transport or walk more often and generally reduce the number of kilometres covered in the car.

Importance is placed on the integration of car sharing with other forms of public transport, and even with commercial operators such as rental companies, particularly through an integrated smart card.

The presentations are available on the CIVITAS website.

For more information, please contact Jane Wallace-Jones, jane.wallacejones@comune.venezia.it
Upcoming events

Reinventing the bicycle in modern society - mobility culture and travel behaviour

On the 22nd of May 2008, Odense hosts a cycle workshop with the title “Reinventing the bicycle in modern society - mobility culture and travel behaviour”.

The speakers for the day are all experts in the field of cycling. Odense will, as thematic leader in the field of cycling, naturally share its knowledge both in connection to promoting cycling as well as how to become a city for cyclists.

Furthermore, Mr. Troels Andersen will, as the former project manager for Odense Cycle City and present developer at Technical Traffic Solution Inc., give a presentation. He will describe how technical devices can improve and boost cycle traffic in modern towns.

Another issue of cycling is the health aspect. Professor Lars-Bo Andersen, University of Southern Denmark, Institute of Sports Science and Clinical Biomechanics will speak about the bicycle’s importance for the health. He is a national expert in EU cooperation “Health Enhancing Physical Activity”.

CIVITAS-MOBILIS is also represented by Venice and Toulouse giving their input to the theme. Venice will be speaking on the many meanings of the bicycle and Toulouse will give a presentation on their new bicycle renting system, VélôToulouse.

Beside the mentioned speakers from Mobilis cities, we have invited European experts from London, Oslo and Gent. You will find more information in the draft agenda which is available on http://www.civitas.eu.

The workshop will continue on the 23rd of May with a guided cycle tour. The guide is Mr. Troels Andersen. The tour has a limit of 20 persons.

If you need any further details or information please don’t hesitate to contact the Odense team!

For more information, please contact Kristina Edrén – dissemination manager, phone: +45 65 51 27 37, mobile phone: + 45 29 29 27 37, kme@odense.dk
CIVITAS MOBILIS cities and partners

In 2004 the cities of Toulouse (France), Debrecen (Hungary), Ljubljana (Slovenia), Odense (Denmark), and Venice (Italy), and their main local mobility stakeholders established a European partnership for “Implementing Mobility Initiatives for Local Sustainability” – of which the CIVITAS MOBILIS project is the physical result. MOBILIS aims to implement radical strategies for clean urban transport in all five cities and to create a new culture for clean urban mobility in the wider framework of sustainable development. The project will enable the involvement of all relevant stakeholders and the transfer of good practices to other urban communities across Europe.

Altogether 30 partners work on a range of mobility improvements scattered within eight technical and five policy themes during the four years lifetime of the project.

The Main Partners:

**CIVITAS MOBILIS**
- Toulouse (F)
- Debrecen (H)
- Ljubljana (SLO)
- Odense (DK)
- Venice (I)

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