

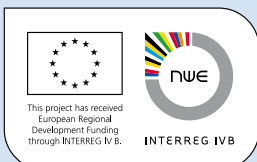


BAPTS

High-quality public transport
services for Europe



Lille Métropole
COMMUNAUTÉ URBAINE



4TH BAPTS PARTNERSHIP MEETING/WORKSHOP/SITE VISIT

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20 – 22 October **2009**

4th

BAPTS Partnership Meeting/Workshop/Site Visit in Lille Métropole

The fourth BAPTS partnership meeting was hosted by the French partner Lille Métropole. The thematic part of the meeting and the attached transnational workshops were specifically targeted at the question how cities and public transport operators can develop, implement and operate innovative ticketing and infotainment systems. A related site visit gave valuable insight as to how biological waste is used in Lille to produce biomethane gas. This renewable energy source powers the bus fleet of the entire Lille conurbation. Furthermore, partners were able to see how driverless metros can be successfully operated.

Background information:

Lille is an important transport hub in the European high-speed rail network: it lies on the Eurostar line to London and the French TGV network to Paris, Brussels and other major centres in France such as Marseille, Lyon, and Toulouse. It has two train stations, which stand next door to one another: Lille-Europe station (Gare de Lille-Europe), which primarily serves high-speed trains and international services (Eurostar), and Lille-Flandres station (Gare de Lille-Flandres), which primarily serves lower speed trains.

The Lille Métropole has a mixed mode public transport system, comprising buses, trams and a driverless metro system, all of which are operated under the Transpole name. The Lille Metro is a VAL system (véhicule automatique léger = light automated vehicle) that opened on 16 May 1983, becoming the first automatic metro line in the world.

Public Transport is a key priority for Lille Metropole. Therefore on 17 April 2009 the Lille Métropole Council has approved new investments of about 1.7 bn € for the public transport network spread over a period of the next 15 years.

Between 20 and 22 October 2009 23 BAPTS partners met in Lille at the occasion of the 4th BAPTS partner meeting. Due to the existing strategic partnership this time the workshops were also attended by representatives of the fellow INTERREG IVB NWE project RoCK (Regions of Connected Knowledge).

Besides the discussion of regular administrative issues, the meeting was thematically dedicated to work package 4 (Intelligent Transport Systems) taking into account the increasing relevance intelligent transport systems (ITS) have on stimulating the use of public transport systems. The meeting has particularly featured the knowledge exchange on the development and implementation of innovative ticketing systems and the application of infotainment systems. This thematic scope reflected on the

already existing knowledge and the BAPTS activity profile of Lille Métropole.



The BAPTS Road Show at the Lille Métropole head quarter

Background information:

Most public transport journeys require the passenger to have purchased a ticket in advance or at the start of the journey. If the purchase of a ticket is difficult, confusing, or time consuming, then this is a disincentive to travel by public transport. Similarly, if the validity of the ticket is not easy to understand, constricts flexibility or if a number of separate tickets, all needing to be purchased and validated separately, are required for different operators or means of transport then this can also act as a disincentive.

Conversely, if payment for public transport can be quick and simple, this can encourage people to use public transport. If pre-paid tickets can be used flexibly, or if several legs of a journey can be incorporated into a single ticket this may encourage the use of public transport. The same goes for integrated and real-time travel and passenger information, both before and throughout the journey – even more when the travel information is coupled with additional information and urban services.

20 October 2009

Already at the 20 October meeting the partners were taken on a guided city tour in order to experience the rich and interesting history of the city of Lille. Of particular interest was the function of Lille as a Northwest-European trade and transport hub already at the time of the middle age.



21 October 2009

On Wednesday, 21 October 2009 the BAPTS partners gathered in order to discuss current administrative issues, to exchange on relevant financial issues, and to plan for the implementation of the transnational work such as the BAPTS student placements, and the staff exchange programme. In this context the partners from Eindhoven, Southend and Darlington presented scope and background for their student placements:

- ➔ in Eindhoven a student will look into new ways to facilitate the intermodal change from individual to public transport,
- ➔ in Southend a student will evaluate varying approaches to mobility communication, marketing and travel plans, and
- ➔ in Darlington the student will be evaluating the varying approaches to using smart technology to increase levels of public transport use and of cycling. Furthermore it will make recommendations for the future use of this technology in urban centres within North West Europe.



The afternoon was dedicated to transnational working within three thematic workshops featuring the topics of integrated ticketing, smart ticketing and infotainment systems. Based upon a comprehensive workshop dossier which was provided to the partners well in advance to the meeting, and applying the focus group method between six to eight individuals discussed identified relevant issues. Before the workshops were started BAPTS partners who already possess advanced know-

ledge on these aspects provided introductory presentations: Yannick Jacob from Lille Métropole explained and outlined the past and planned development of the Lille ticketing systems, Gisela Gräfin von Schlieffen highlighted the key features of the Near-Field-Communication (NFC) ticketing system in the Frankfurt region, and Paul Mathieson from Southend introduced the ongoing UK consultation on smart ticketing aspects.



Proto type of a new ticketing machine which was used during test runs in Lille with the aim to make these machines as customer friendly as possible/financed through BAPTS

Background information:

Smart ticketing (or e-ticketing) is a system where an entitlement to travel (or ticket) is stored electronically on a microchip rather than being printed on a paper ticket. In most smart ticketing schemes, the microchip is embedded in a smartcard. For this reason, smart ticketing schemes are often referred to as smartcard schemes, although there is much more to the scheme than just the smart card.

Integrated ticketing can refer to a variety of different concepts, such as the integration between different transport operators, integration between different modes of transport or even transport and other types of goods or services. Integrated ticketing and smart ticketing both have considerable benefits when considered separately. When combined to offer integrated smart ticketing the benefits can significantly increase.

Key findings of the two ticketing workshops:

Overall, all BAPTS partners have considered smart integrated ticketing an important instrument to increase the market share of public transport and to boost the number of public transport users. In the view of the partners smart integrated ticketing is an important instrument to get more out of the existing systems, to reduce the amount of individual car traffic and to address the issue of climate change on a

local and regional level.

However, in order to be successful, integrated smart ticketing schemes must be understood as part of a package of different measures such as the development of travel plans, sustainable urban mobility plans, pricing of car use, parking fares and the consideration of the external costs of transport. Moreover, all BAPTS partners support the further

development of integrated smart ticketing schemes as an important step towards enhancing the use of existing public transport systems, more flexible ticketing, and better overall services. However, partners were united in the belief that services come first, and technology only second. This means that as long as the overall system as such is not fully integrated also the implementation of new technologies will not deliver the expected benefits.

BAPTS partners strongly encouraged all relevant stakeholders to take appropriate action for achieving genuine fare integration across different operators and transport modes – preferably on a national level. In this context, it was argued, that in particular operators should to take an active role and cooperate. In other words, regulation and organisation were considered crucial aspects. Against this background the BAPTS partners also expressed their concerns as regards the UK competition policy because of its negative impact on cross-operator cooperation and subsequently genuine fare integration.

BAPTS understands that smart integrated ticketing schemes should be, wherever possible, operated on a valid business case. Though, at the same time the BAPTS partners underlined that not all services can and will be operated on a profit basis. Therefore a strong co-funding role of the public sector was appreciated in this respect by all BAPTS partners.

The project partners stressed the need to consider and understand also psychological issues and barriers to the use of modern technology as well as the issue of social exclusion. These questions were considered to be particular relevant for those with reduced mobility and for people with different cultural backgrounds.

To make sure also occasional users can benefit from smart ticketing systems, the provision of suitable technologies for ‘On the Spot Ticketing’ e.g. NFC mobile phones was considered a key component. In this respect, BAPTS partners emphasised that all decision makers need to cooperate on this issue and strongly recommended a cooperation between transport operators, mobile phone producers and network providers. Close attention should be given to the work of Lille Métropole (France). Moreover, the BAPTS partners strongly recommended to complement smart ticketing

technology with the provision of additional transport related services such as parking or cycle renting or locking. Besides, all BAPTS partners welcomed the combination of transport services with other ‘urban’ and municipal services such as for example library access.

Concerning European travel the BAPTS partners understood smart integrated ticketing as an important prerequisite towards achieving seamless and convenient public transport travel also across national borders. The BAPTS partners recommended to combine smart integrated ticketing with travel information facilities that help users to plan for genuine door-to-door travel.

As regards European cooperation and further steps the BAPTS partnership discussed the need to support appropriate steps also on an European level, and to provide the framework conditions for a quick installation of smart integrated ticketing schemes, to analyse existing standards and, subsequently, to provide a minimum set of technical and organisational standards. In the view of the workshop attendees actors of the regional and local level should be encouraged to link between the European Action Plan for Urban Mobility (issued in September 2009) and the integrated implementation of smart integrated ticketing and mobility concepts.



Paul Mathieson (Southend) presents results of Focus Group 1

Paul Mathieson from Southend offered to prepare, based on the workshop results, a transnational response to the current UK consultation on smart integrated ticketing. The official BAPTS response was submitted to the UK Department for Transport (DfT) on 28 October 2009.

Key findings of the infotainment workshop:

Key issues of the working group dedicated to infotainment systems were content & service aspects, financing and marketing related topics, as well as the question what the overall added-value of such schemes is.

Throughout the workshop discussions workshop attendees focused mainly on the question what content and services should be provided by infotainment systems. In this regard several questions were raised and discussed:

- ➔ What mix of travel and secondary information should be provided to customers?
- ➔ Can infotainment systems be linked with safety and security aspects (CCTV)?
- ➔ Who is the target audience of infotainment systems?
- ➔ What role can local information play, and does it potentially make sense to develop also a nation-wide infotainment programme that can be broadcasted in public transport vehicles? Closely related was the question if local information can enhance the existence of such media among the public transport users.
- ➔ How can infotainment systems be effectively linked with information of the public transport operator?

With respect to the financial side of infotainment systems a question was raised on the benefits (new



Brian Carrig (Dublin) presents results of Focus Group 2

customers, image, etc.) of such systems are, compared with their development and implementation costs. Though, this particular question could not be fully answered. Concerning marketing issues all participants agreed that travel information is a valuable 'product' not to be underestimated as regards its market value. Finally, the workshop participants critically reviewed the question if advertisements should be part of infotainment systems, and if so, if customers should be given the option to choose between vehicles with/or without advertisements.

Overall it had to be noted, that due to the newness of this media currently only very little information on successful and particular good infotainment examples is publicly available. This is also the reason why the RMV has, within the scope of the BAPTS project, commissioned an infotainment benchmark study. Upon availability the results of that study will be made available to the entire BAPTS partnership.

Background information:

Infotainment can be perceived as information-based media content or programming that is combined with entertainment content in an effort to enhance popularity with audiences, users or consumers.

With respect to public transport infotainment is a combination of relevant passenger information and commercial content provided either on the vehicle or outside at the stations and stops.

22 October 2009

On Thursday, 22 October, all partners were taken onto a comprehensive site visit tour. At first the BAPTS partners visited a biogas plant just outside Lille (Loos/Sequedin) where the biological waste of the Lille region is used for producing biomethan. When used as a vehicle fuel, this gas creates an environmentally closed loop: waste products are used to create biogas, which is upgraded to biomethane that is used in vehicles, some of which collect the waste materials and return them to the bio-digesters where the process starts again.



Schematic illustration of a biowaste life cycle when used for biomethane production

Background information:

Biomethane mainly consists of carbon dioxide (CO_2) and methane (CH_4), both of which are greenhouse gases. Biomethane production reduces global warming, because it is created in a closed system using waste products that otherwise would turn into natural methane sources released freely into the atmosphere.

Starting in the early 1990s, the city of Lille has brought biomethane production to full maturity in the region. In 1990, the first experiments in selective waste collection took place. In the context of its energy control policy, the community implemented a combined heat and power facility on a sewage treatment site to recover the biogas produced from the sludge. This program provided also for the construction of a scrubbing unit for



The biowaste processed in the plant is delivered by vessels



At the biomethane plant

the surplus of biogas that was previously flared. Biogas-based methane production followed in 1994, with the capacity to fuel four buses. Five years later Lille Métropole decided to progressively replace the entire diesel bus fleet with natural gas and biomethane buses, to be fuelled with the biogas produced from the ecological waste-treatment process.

Background information:

The Lille Metro was inaugurated in 1983 and was the first to use a light automated vehicle system. The metro forms part of a mixed mode public transport system, combined with buses and trams operated under the Transpole brand and covering the Lille metropolitan area. Construction started in 1978 and the first line provide services between the stations 4 Cantons and République. One year later, the entire Line 1 was opened (13.5 km long, 8.5 km underground) with 18 stations altogether on the line. All stations have doors between the platform and the train. Line 2 opened in 1989 and it reached C.H. Dron near the Belgian border on 27 October, 2000. The line is 32 km long and serves 43 stations. Trains are only 2m wide and 26m long and are rubber-tired.

For the year 2015, it is planned to double the capacity of the line 1 by doubling the length of the vehicles from currently 26m up to 52m. The overall cost of this project is 450 millions €.



Afterwards the group was taken to the traffic control centre of the Lille metro. At the traffic control centre the group was given insight as to how the system is operated, what safety and security measures are applied, how the system is integrated into the wider public transport system of the city of Lille, and how the day-to-day cooperation between the operator (Transpole) and the policy is being organised.



Today processes have matured which helps Lille to decrease waste volumes caused by the gradual phasing out of the use of landfills. In addition, it facilitates the increase of the waste management services' energy production and enables the city to develop a 100% clean public transport system operate 150 busses every day. In 2007 the organic treatment centre was opened and biomethane production equivalent to 4 million liters of diesel per year is possible. Starting in 2010 and following in the example of other European countries, Lille Métropole will inject biomethane into its natural gas grid in order to solve the problem of storing the gas at times when there is only Lille or no demand such as at night time and over weekend. This will allow an optimal use of biogas and greater flexibility in its production.¹

After all the 4th BAPTS partnership meeting and the related workshops and site visits proofed also due to the outstandingly good preparation of the colleagues from Lille Métropole to be a major success!

“My first BAPTS experience really made me realise the value of the network.”

Finola O' Driscoll, Senior Executive Transportation Planner, upon her return from Lille

¹ Information on the biomethane plant and the use of the gas for the Lille public transport system is based upon publication material issued by the European project biogasmax of which Lille Métropole is a partner. Further information can be found on www.biogasmax.eu.