

CIVITAS Study Tour – Nantes, 24th February 2015

RETHINKING BUS NETWORK DESIGN AND OPERATION



Minutes

The study tour officially started with an introductory session at the headquarter of Nantes Métropole in the city centre. Some participants had also the occasion to join an informal dinner the evening before.

Sebastien Rabuel, Transport Investments Director at Nantes Métropole, welcomed the group together with his staff and a delegation from SEMITAN, the local public transport operator.

In his presentation, [Urban Transport Policy in Nantes](#), Sebastien explained the role and competences of Nantes Métropole in managing urban and suburban mobility and of course in implementing a proper mobility policy. Nantes is quite famous in France and the EU for having re-introduced the tramway already in 1985.

Their strategy, condensed in the Urban Mobility Plan, is based on 4 main axis:

- “short distance” city (reinforcing a plurality of centres in terms of presence and mix of functions);
- high quality public spaces designed in particular for pedestrians and cyclists
- linking living centres together (improving mobility networks)
- encourage and support people to change their mobility behaviour

The overall public transport “structural” network was presented, including the main features of the Busway (a bus at high level of service or BHLS introduced in 2006) and the Chronobus project.

The session continued with Damien Garrigue, who presented in detail the [concept and characteristics of the bus network](#). Here below, some key aspects that were further explained and commented during the presentation:

- the Busway project aimed at improving the level of service and frequency of surface public transport, primarily by reducing conflicts with private traffic (in particular at junctions). The idea was **to replicate the approach that made the tram a success**.
- Nantes extensively used **roundabouts and priority lanes** and this was **not a problem outside the ring** because of sufficient availability of road space. **Inside the ring** the approach was again to reduce the space for cars and give priority to PT but **conditions were different** (road space limited). Nantes used dedicated and alternating dedicated central lanes and small roundabouts on a large scale but this was not sufficient.

- **Special traffic lights** were introduced at junctions and roundabouts. Nantes tested for the first time this type of solution and signals in France, being allowed by national authorities (the standard is now approved and in use in other cities in France).
- Several other elements guided the Busway approach: real-time information, ticketing machine, big shelters, station docking and also **design and image of the system**.
- When in 2009 the Chronobus project started this was supported by a **strong political choice**.
- Nantes Métropole and SEMITAN teamed together again and tried to transfer part of the Busway concept and tools into the Chronobus but this was not so easy: the **approach was therefore very pragmatic**. They **concentrating on every single problem/issue, trying to be innovative, adaptive and looking for practical solutions**. Several tools were invented from scratch (temporary bus lanes) some others, quite common in other countries (e.g. LTZ in Italy), were simply transferred.
- The task was facilitated because of the competences/responsibilities of Nantes Métropole: they were able to influence also the other modes, avoiding the presence of cars in some areas (1.000 parking slots were removed). Moreover, they quickly coordinated works with interventions on the underground service network (anticipating the renewal).
- The **whole process was very fast** to cope with “electoral periods”: 2009 decision, 2010 1st programme, 2012 opening (i.e. quick studies and works).
- **Inside the LTZ** private car traffic dropped from 20/30.000 veh/day to the current level of **5.000 veh/day**. Supplementary advice/campaigns were needed (made in collaboration with the local police, without using sanctions).
- **Timetables** were at first built with estimated times but after replaced with real/implemented times.
- Priority at traffic lights is based on an **RFID system**, i.e. to real-time bus approaching and not controlled by a central system.
- Today **public subsidies** (around € 5,00 per bus/km and € 7,00 per tram/km) cover 60% of the total costs, but the target is to reach 50% in the coming years thanks to improvements in PT quality.
- Nantes removed many parking slots inside the city but more than 7.000 parking slots were built at **Park&Ride interchanges**.
- The involvement of citizens and stakeholders was fundamental. Politicians are directly involved. For the 7 Chronobus lines around **80 public meetings** have been organised in 2 years.
- **Distance between bus stops** was increased and is now every 300 m. It is quite accepted by the citizens (previous surveys demonstrated that users prefers to walk for 700 m (10 minutes) to reach a high frequency/high quality public transport line).
- For some special users (elderly people) Nantes is thinking at creating on-demand services operated by local associations.

After the presentation, the group started the technical visit. Participants from Parma, arrived one day before, had already a first look at the PT network on their own. Several aspects were analysed during the visit.

Nantes has a proper strategy also for fleet renewal. Instead of simply replacing buses with new ones they also revamp older buses: investing on average no more than € 45.000 per intervention life cycle is extended to from 14 to 20 years, including the comfort for the passengers.

The early afternoon session was dedicated to the presentation of the [Barcelona's New Bus Network](#) by Josep Mension, Director Central Services & Deputy Chief Officer of TMB Bus Network. The very detailed and complete intervention presented a number of steps, both for

planning and practical implementation aspects, Barcelona had to take for the realization of the project.

Successful factors were again

- a strong political will
- an innovative “underlying concept” for the network (the combination of the orthogonal route and the hybrid BHLS hub/grid & spoke models)
- an incremental/gradual implementation (without a shocking change)
- a network that maximize connectivity and is easy to understand at the same time
- an in-depth analysis and realization of interchanges areas (also for the specific signposting)
- in Barcelona the average bus stop distance is 400 m
- communication and promotion of the new network

During the roundtable a number of aspects have been further analysed and debated:

- road space availability and practical solutions for modifying the current organization was one of the most debated topics.
- Parma argued that in some specific context like medieval towns with narrow roads it is not so easy to reshape the functional elements and give priority to public transport; Burgas highlighted the need of constantly involving the citizens whereas for San Giuseppe Vesuviano limiting road space use by private traffic is also a way to reinforce safety & security for pedestrian and cyclists.
- The importance of implementing changes instead of waiting too long or targeting complete redesign of the network was also remarked.
- Integrated measures introduced consecutively lead to top results and increase public transport attractiveness and preference.
- For Reggio Emilia the Chronobus and Barcelona experiences in BHLS demonstrated the importance of focusing on high quality and high performance of public transport. In that sense, step-by-step implementations and clear strategic projects (i.e. concentrating resources) gives better results.
- Overall the group agreed on the need of simplifying the bus system and service offer in order to be understandable and easy to use by the passengers.

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