

CityMobil conference 'Smart mobility for better cities'

More than 120 representatives of public authorities, industry and research centres attended the CityMobil conference 'Smart mobility for better cities' in the French coastal town of La Rochelle on 13-14 May, which is the site of the new CityMobil demonstration of an automated system operating in a mixed traffic environment. The conference marked the launch of the demonstration by the Mayor of La Rochelle and President of the La Rochelle conurbation, Maxime Bono.

The conference offered a broad and interesting programme of speakers, drawn from within and outside the CityMobil consortium, showing the latest developments and future plans with regard to the development and deployment of automated transport systems. Some of the systems presented during the conference were on display in the exhibition set up alongside the conference.

The conference opened with an inspiring and anecdotal account by a leading professor of a research team's efforts to 'ride' an automated vehicle from Italy to China. This was followed by a contribution from the European Economic and Social Committee offering some useful tips and hints on where to focus future efforts regarding the deployment of automated systems. From the research and academic side, there were presentations on the opportunities and barriers to the deployment of automated systems and on the potential role and contribution of (semi)automated transport systems to urban mobility, based on real city simulations.

The session showing the main systems in public operation was a highlight of the conference programme. The systems presented by the developers themselves in most cases were the Heathrow and Masdar Personal Rapid Transit schemes, launched in April 2011 and November 2010 respectively, the Rivium Group Rapid Transit service operating for many years in a Rotterdam suburb, the La Rochelle demonstration which had commenced just one day before, and the Hi-tech bus service in Castellón.

The main issues emerging from the lively discussion revolved around the inter-connected issues of cost, funding, business case and procurement. The unit cost of Heathrow's ULTra and Masdar systems are high, compared to a bus for instance, due to the significant development costs involved in such a new transport concept and the small-scale nature of the network. However, in the case of ULTra, the unit cost would drop significantly were the network to be upscaled. Furthermore, automated systems have the advantage of being able to introduce additional capacity at little extra cost. Procuring such advanced transport systems is not easy due to the general lack of awareness and/or scepticism among public authorities (or the consultants advising them). This is compounded by the uncertainties about lifetime costs and the risk averseness of the public sector and general preference for tried and tested solutions with low risks. These factors lead some to believe that private developers or land owners may be more likely to invest in advanced transport systems, in the short to medium term at least.

There are nevertheless many public authorities who do recognise the potential of automated systems and some of these attended the conference to present their experiences and future plans. The municipalities represented came from Scandinavia: Vantaa (Finland), Trondheim (Norway) and Uppsala (Sweden). In all cases, the interest in advanced transport systems dates back many years and each had benefited from the support of CityMobil to move this interest forward: Vantaa and Trondheim were the sites of a CityMobil cybercar showcase whereas Uppsala was the subject of a

PRT feasibility study. Today, all three cities still enjoy significant municipal support for advanced transport systems and this is being pursued through further studies and/or seeking investment partners.

It was only possible for a small selection of the many results from CityMobil to be presented during the conference. These included technological developments and operational issues as well as tools designed to guide a potential customer who is considering automated systems, namely, the City Application Manual and the business case tool. The work of CityMobil on certification was also introduced and this sparked some debate. The certification procedure developed within CityMobil is based on an acceptable safety threshold that is twice as stringent as for the car. The developed procedure was adopted by the former CityMobil demonstrator in Rome and a substantial amount of knowledge has been built up through this application.

The panel session brought together representatives from the public sector, research and industry to debate the prospects for the deployment of automated systems in the next 10 years. The main points raised by panel members and during the discussion included the following:

- i. Whilst some technical issues remain, they do not constitute a substantial barrier to deployment.
- ii. Greater care needs to be taken to relate the automated applications to real problems for which they provide the most appropriate solution. They must be an integrated part of a sustainable transport chain.
- iii. The key to success will be convincing the population that the new technology is a sound, practical, affordable and desirable way forward.
- iv. Unless speeds are very low, automated vehicles will have to have dedicated lanes and this will require new infrastructure.
- v. Fundamental changes in transport options enabled by increased automation will lead to new behaviour. This may result in new approaches to enforcement, etc.
- vi. The problems which automation will address will primarily relate to congestion and energy security. Safety and climate change problems will be reduced by the increasing deployment of driver support systems and electric/hybrid/hydrogen power.
- vii. The complexity of transport problems and uniqueness with respect to each city will not lead to simple one-size-fits-all solution.
- viii. The problems of accepting new technology may be compounded by a general resistance to change, and a single event, such as a job or residential change could trigger a personal review of circumstances.
- ix. There is evidence that the car is no longer the status symbol that it once was. The future will have much less car ownership in urban areas, and this will release money for other transport alternatives. The on-demand potential of new automated systems together with enhanced personal communication systems will provide a sustainable future.
- x. It was considered that automated systems will become a significant part of future urban transport. However, there was some disagreement between panel members as to the pace of potential change because of the barriers which need to be overcome.

The final presentations of the conference were very apt for the closing session as they presented opportunities for moving forward with advanced transport systems from both a demonstration and deployment perspective. A representative of the European Investment Bank outlined the funding and investment schemes offered by the European Investment Bank for energy efficient transport solutions. A presentation by the European Commission's DG RTD on future EU research and

development opportunities indicated that there would probably be a research topic on automated systems call in the next call of FP7 due out in July 2011.