Reaching out to rural areas and with improved connectivity of different transport modes, Lille Métropole Communauté Urbaine has established an innovative transport system, increasingly fuelled by renewable energy sources.

The case
Lille Métropole Communauté Urbaine (LMCU) is a public inter-municipal co-operation body (covering 87 communes and 1.2 million inhabitants) in the Nord-Pas-de-Calais Region, working in close co-operation with its Belgian counterparts (600,000 people living on its Belgian side). Its scope of competencies includes the provision of services and amenities to the urban community in the following areas: town-planning, road infrastructure, mobility and parking facilities, urban public transport systems. Out of its total budget of €1.2 billion, more than one third is spent on transport.

Lille is a very large metropolis covering around 600km². More than half of the area it covers is made up of rural land and small villages. All strategies and plans for the metropolis therefore need to take into account and balance the needs of rural developments and those of dense urban areas.

The challenge facing LMCU was how to best develop the links between its inter-urban and international transport services so that the development is sustainable. High private car use and an unbalanced split in the use of road infrastructure among the various mobility modes led the LMCU to seek to improve inter-modality between all means of transport, limit the growth of private car use, and reduce car use in the city. The final objective of this policy, benefiting from weighty political support, is to double passenger levels by the year 2015.

The urban-rural co-operation
In order to achieve the objective of doubling passenger levels, the Urban Community is running major programmes and projects approved by the Lille Métropole Council in co-operation with its institutional partners, the local population of Lille Metropolis, user associations and regional companies. Improved attractiveness of public transport in Lille, better accessibility, reliability, frequency and speed, and reduced fuel consumption are some of the key aspects laid down in the Urban Mobility Plan (Plan de Déplacements Urbains, PDU), which is the key instrument for planning and co-ordination. It aims to make all the regional transport networks work effectively together (including provision for inter-modal facilities) and to promote less polluting energy sources for private cars as well as for public transport systems and goods transportation. Approved in 2000 by Lille Métropole Council, this plan is being implemented in stages until 2015 with some key measures.

To make public transport more attractive, cohesive and easier to use, tariffs for the various transport systems were integrated and multimodal information set up; it is now possible to travel within the metropolis using a single ticket. Co-operation between Lille Metropolis, the Nord/Pas-de-Calais Area, Transpole and the SNCF made it possible to study concrete measures in favour of fare integration. The bus system was improved by dedicated lanes, a location system and better commercial quality to establish High Service bus routes, and intermodal exchange points in Lille Métropole were set up to link between different public transport services (metro, bus, tramway, regional, national train, high speed train), as well linking with cars, bicycles and walking.

In order to come to a 100% clean public transport system, the entire bus fleet was gradually replaced by buses that run on biogas and/or natural gas. The latter was supported by a pilot
project to use the surplus of biogas produced by the Marquette sewage plant, in the suburbs of Lille. While 80% of the biogas produced by the waste water treatment plant is used internally for heat and power supply, the remaining biogas is being cleaned to obtain a daily volume of 1,200 m³ of biogas usable as fuel in public transport vehicles. Lille has also built a natural gas and biogas refuelling station with a capacity of 150 buses, and introduced a similar facility at the new biogas bus depot.

The issue of sustainable development within Lille Metropolis is controlled at a territorial level through strong local governance and a series of integrated strategies – of which the PDU is just one - which contain clear priorities and conditions for development.

**The results**

The residents of the Lille Metropolis enjoy a wide choice of methods of transport, with the third largest network of services in France. From the first “mongy” tram to the VAL automated underground railway, Lille Métropole has over time built up a strong, integrated transport network, organised to provide continuity over the whole territory and serve the most outlying areas. The modes available include the driver-less metro system (known as the VAL, 45 km), a “no step to carriage” tramway system (19 km), 38 bus routes and 42 main rail routes (including 8 which cross the border with Belgium). Diversifying the travel options within urban areas has enabled the deployment of more buses towards rural areas of Lille.

Lille Métropole has also succeeded in optimising the efficiency and sustainability of the transport services through a shift to renewable and local resources. By the end of 2005, the share of gas buses in the fleet was fifty percent, with the objective to obtain 100% gas buses (approx 400 buses) and corresponding biogas supply capability by 2015.

The total cost of operation per kilometre of biogas buses (with similar gas costs, which is a reality in Lille) is equivalent to that of fossil fuel operation, but with an enormous positive environmental impact. Cost-benefit ratios for biogas are expected to further improve in the future. The setting up of intermodal exchange points further helped to improve travel time and traffic evolutions, while reducing noise levels, inter-modal delays, and private car traffic.

To support efforts to reduce local emissions, there is a need to carry out a modal transfer away from private cars and towards public transport, while at the same time limiting the emissions produced by urban public transport and captive fleets of vehicles.