

Smart road charging changes mobility behaviour and leads to less congestion

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The city of Leuven and a consortium of companies including IBM, NXP, Touring, Mobistar, Magic View, NSL and Transport and Mobility Leuven (TML), presented the results of the pilot project “Smart Mobility”. ‘The test results prove that steering the mobility in our city by “smart mobility” could actually work.’

The pilot project, including a behavioural experiment, ran from September 2011 tot January 2012 and consisted of three periods of two months each. During the first period, the normal mobility behaviour of the subjects was benchmarked. The actual test took place in the second period. The subjects drove around and their journeys were taxed based on road type, time, distance and environmental characteristics of the vehicle. The test persons could follow the fictitious pricing of their route on their personal On-Board Unit, but they were also able to check an overview of their journeys and the price they would pay for it online. In the last period, the road charging was turned off again to check whether the subjects relapsed in their old mobility habits.

During the actual test, there was a detectable change in mobility behaviour of the drivers. Over half of them improved their personal behaviour because they choose to drive cheaper. But three-quarters of them relapsed after the road charging was suspended. All subjects together drove 5% less on local roads during peak periods, and in total about 60% of the time they drove during off peak periods. Since fictitious costs per travelled kilometre were calculated, the test persons were more conscious about their mobility. They thought about alternative forms of transport such as cycling or public transport. Also, test subjects left before or after the rush hour to avoid traffic jams, and consequently a higher cost per kilometre travelled.

Sven Maerivoet, project leader at TML: “If we would extrapolate the results of the trial, we observe that there would be less traffic or less traffic jams in and around the city of Leuven. This really impacts the cost for society. Less congestion means less economic loss, but also reduces the emission of greenhouse gasses.”

By setting a price based on road type and time, test drivers found it cheaper to avoid peak traffic and cut-through traffic. This increases the quality of life along the local roads. Something Dirk Robbeets, alderman Mobility of the city of Leuven confirms: ” We noticed a reduction in the cut-through traffic and also saw more people driving in the off-peak hours. It is clear that during the trial, the test drivers made advantage of the price difference in the hierarchy of roads (motorway, main road, local road, etc.), and of the different periods in which the pricing applies. One of our objectives for this test was to map the mobility characteristics so that we can adapt and adjust our mobility policy accordingly. The test results prove that steering the mobility in our city by “smart mobility” could actually work.”