

LATEST NEWS:

The Southeast Brabant automotive test bed is growing fast!



Southeast Brabant: where the opportunities are!

Southeast Brabant has emerged as the main focus for innovation in the automotive sector in the Netherlands. The concentration of scientific and technical expertise has made the region the primary test bed for automotive technology. The latest advances relate to live issues like navigation system route directions, experimental mobility payment schemes (including reward and payment methods) and the integration of roadside and in-car technologies. The steady succession of successful projects is the result of close collaboration between the business

community, knowledge centres and educational establishments, and the government, an arrangement that has come to be known as the Triple Helix. The Cityregion Eindhoven (the SRE) have played a crucial facilitating role in these developments. The role of the SRE is to encourage enterprises engaged in the development of groundbreaking technologies in Southeast Brabant, with the ready availability of test facilities forming a significant incentive. In short, this means opportunities for business!

In-car test bed

The Southeast Brabant region has historically put a premium on technical innovation. The region, which takes in Eindhoven and Helmond, has developed into a significant European centre for advanced technology and markets itself as a Brainport.

Problems of mobility, accessibility and traffic safety are on the increase in Southeast Brabant, with quality of life falling off as vehicle numbers rise. The SRE have responded by drawing up a comprehensive vision for traffic management in the area. There is a lot more to this than simply better use of the existing roads. The development of new technological solutions is of vital importance, and innovation is expected to make a major contribution to improvements in mobility and accessibility.

It is this combination of transport difficulties and the local development of innovative products to resolve them that give the region its edge as a site for transport experimentation. Southeast Brabant has the potential to take a leading role in the development of dynamic traffic management in the Netherlands and in Europe as a whole. Transport Minister Camiel Eurlings has tasked the province of Noord-Brabant and the SRE with the responsibility of identifying and supporting promising avenues of progress in in-car technology. Their concrete response has led to the selection and subsidy of the following six projects:



- **TomTom I: Improved traffic information using in-car systems;**
- **Falkplan-Andes BV: Transport Navigation System;**
- **Peek Traffic BV: Practical implementation of cooperative systems;**
- **DTV Consultants: Odysa in-car traffic flow smoothing;**
- **NXP: Practical testing of road pricing;**
- **TomTom II: In-car roadworks response.**





Eindhoven Region = Brainport

A unique symbiotic relationship between manufacturing industry and cutting edge technology has developed in the Eindhoven region. The region is strongly knowledge-based, innovative and oriented towards high-tech products, and is characterised by vigorous industrial activity. The Triple Helix, a three-way collaboration between the business community, knowledge centres and educational establishments and government, provides the foundation for Brainport. The collaboration has proved highly effective and has emerged as a significant distinguishing factor in the region's recent progress. Participants benefit in real terms not only in the setting of the agenda but also in its concrete implementation.

The network of companies, educational establishments, research centres and government agencies facilitates collaboration on the regional, national and international levels. The ELAt (Eindhoven-Leuven-Aken) triangle is of international significance. The expansion of research institutes, centres of expertise, industry and knowledge-intensive businesses has in part due to a high level of private investment, and the outcome sees Eindhoven taking third place in the rankings for leading European centres of innovation.

Freedom to innovate

A highly competitive environment is a prerequisite if the region is to achieve its ambitions, and an openness to innovation and the encouragement of an entrepreneurial attitude are seen as vital driving forces. New knowledge, and in particular novel combinations of knowledge and multi-partner collaboration deliver the innovative element. The Southeast Brabant region aims to serve as a springboard for the Netherlands as a land of innovation.

Automotive Industry

A number of major players in automotive technology are active in the Southeast Brabant region, leading to an unrivalled range of research avenues: alternative fuels, tyres, collision behaviour, vehicle construction, experimental and virtual test methods, advanced drive mechanisms, integral safety, injury behaviour, environmental effects, novel transport systems, GPRS communications, navigation based on in-car and ex-car communications and vehicle dynamics. Many automotive companies have an established physical presence in the region, including:

Eindhoven	Helmond
TomTom	Automotive Technology Centre
NXP	TNO Automotive
IBM	Dutch Defense Vehicle Systems B.V. (DDVS)
Falkplan-Andes	TNO ACTS
Philips Research	Benteler PDE Automotive
Technische Universiteit Eindhoven	High Tech Automotive Campus
DAF trucks	Koninklijke Nedischroef Holding
VDL Bus	Fontys Automotive Bachelor's Degree Course (2010 onwards)
High Tech Campus	Nonox Gas-Engines
TNO Industrie	

A number of basic principles guide the involvement of government agencies in Brainport:

People:	<ul style="list-style-type: none"> links with research and educational facilities stimulate entrepreneurship and the regional economy
Technology:	<ul style="list-style-type: none"> support and encouragement, including the creation of an automotive campus where a community of businesses can establish themselves and work together on innovative ventures
Fundamentals:	<ul style="list-style-type: none"> accessibility sustainability traffic safety
Business:	<ul style="list-style-type: none"> creation of employment a pioneering role for government in the field of in-car and out-of-car technology increasing the attractiveness of the region for firms developing a position in this sector encouragement of developments and collaboration within the Triple Helix (subsidy schemes)

Eindhoven Region: the in-car test bed

The Eindhoven region is devoting considerable energy to the resolution of problems in the fields of mobility, accessibility and traffic safety. The "brains" of the region have an important role to play here. The scale of the various problems, the motivation to solve them and the potential of innovative technological approaches to contribute to the solution all combine to make the Eindhoven region an attractive proposition as a "Test bed for in-car technology". In 2009 the SRE, together with the province of Noord-Brabant and the Ministry of Transport subsidised six in-car technology test projects.



1. TomTom I:

Improved traffic information using in-car systems

Traffic information has traditionally been collected using data measured by detection loops built into the roadway. No measurements are collected from roads without loops, which include secondary roads and even some trunk roads, such as the A270 between Helmond and Eindhoven. The A270 therefore rarely features in radio reports on traffic queues, or on navigation systems using traditional RDS/TMC traffic message technology. TomTom have therefore undertaken a test involving 170 commuters driving daily along the A270. The aim of the pilot is to investigate whether a relatively high concentration of interconnected TomTom navigation systems using HD Traffic technology will lead to an improvement in the quality of traffic information.

2. Falkplan-Andes BV:

the "Transport Navigation System" project

Freight vehicles using traditional navigation systems frequently drive into areas where they really shouldn't go, residential areas, city centres and school routes. This can be dangerous, it messes up traffic flows and damages air quality and the lorry drivers find it frustrating. All they want is to reach their destination in the most efficient manner, but this is not always the most direct route suggested by existing navigation

systems. Falkplan-Andes have come up with an innovative navigation system specially designed for freight transport. This system takes account of the size, weight and environmental characteristics of the vehicle. During the test the researchers looked not only at the technical aspects of the truck navigation system but also at the needs of the drivers. The Eindhoven University of Technology will deliver a report of the project findings.

3. Peek Traffic BV:

practical demonstrations of cooperative systems

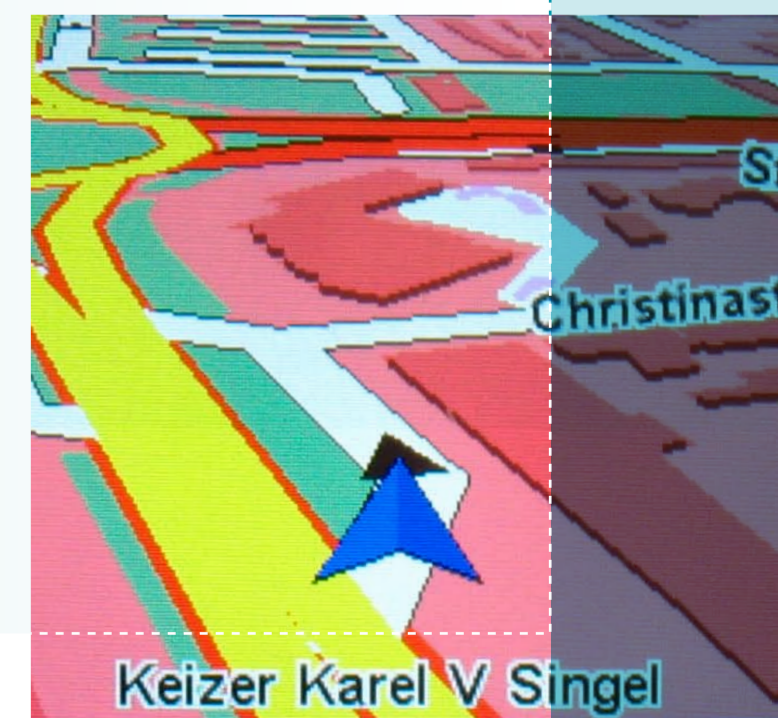
In May 2009 the roads in and around Helmond provided the stage for the first live European demonstrations of cooperative systems on the public highway. The emphasis throughout the "Cooperative Systems On The Road" event was on the introduction of new technologies, services and applications. Cooperative systems are the latest technological direction in traffic and transportation. They allow communication between vehicles and with traffic systems both at the roadside and in traffic control centres. Peek Traffic believe the technology is now ripe for larger scale testing and further development of these systems. The Southeast Brabant region would make an ideal test location, having demonstrated its

commitment to such innovative developments through Brainport and initiatives like the High Tech Automotive Campus.

4. DTV Consultants:

Odysa in-car flow smoothing

Odysa stands for Optimisation through Dynamic Speed Advice, and the system aims to improve the flow of through traffic. This is achieved by advising road users about the recommended speed. Following the recommendations should mean that an entire traffic-light-controlled journey can be completed without stops. DTV Consultants launched the Odysa in-car project on a section of the Eindhoven ring road. The aim of the pilot was to provide speed recommendations to road users via in-car equipment. One crucial aspect of the project was the requirement that the time between the detection of a vehicle and the delivery of the speed recommendation should be no more than a few seconds. The existing wireless communications systems are not time-critical or tied to a specific location, so this criterion makes Odysa in-car flow smoothing unique.



continuation: "Eindhoven Region: the in-car test bed"



5. NXP: Practical testing of road pricing

Working in collaboration with IBM, NXP have devised a practical test for road pricing systems. Both companies are persuaded that road pricing technology is now ready for application in private cars. The in-car system is a world first in road pricing. Completed journeys are priced on the basis of road type, time period and the vehicle's environmental footprint. The system can achieve a stated policy aim of the Dutch government for coming years, namely that every individual vehicle will pay "fairly" for use of the road network, on both major and minor roads. Participants in the test have an On Board Unit installed in their car, allowing all journeys to be recorded and priced. Participants can visit a secure website to inspect the route they have taken and the associated cost. In the second phase of the test, participants might for example opt to set off after the rush hour, or to take a cheaper route. The website will inform them whether their route selection has resulted

in a lower charge. A competitive element will be introduced during the test phase, with rewards going to the drivers who most effectively adapted their behaviour.

6. TomTom II: In-car road works notifications

An all-too-frequent irritation for users of navigation systems is when the suggested route turns out to pass through road works. This can add considerably to journey times and stress. Working in collaboration with government agencies, TomTom are actively developing a "Trusted Partner Map Share Structure", allowing road works and similar events to be notified in-car in real time. Practical testing will start in the autumn of 2009. User feedback during the test period will lead to further optimisation of the service.

Eindhoven - 's-Hertogenbosch Mobility Project

Another project will be launched in the province of Noord-Brabant in the Spring of 2010. The aim is to improve quality of life and accessibility in Eindhoven and 's-Hertogenbosch city centres, by encouraging road users to alter their behaviour by means of road pricing and provision of information. A group of six consortia are competing for the contract for the project, to be awarded in November. The contract clients for the project are the SRE and the province of Noord-Brabant.

Around 1500 residents of the two cities will be taking part in the experiment. Their journeys will be tracked and timed using GPS. Each participant will start out

with a "travel budget", with amounts being deducted for every vehicle movement. The size of that amount will depend on the timing (during or outside the rush hour), the location (a desired route or a rat run) and environmental factors (vehicle emissions, smog). The test will also involve the provision of "information stimuli" consisting of Value Added Services (VAS). Drivers will receive information on the cost of every journey, and alternatives will be suggested. They will also receive up-to-date information on road works and the availability of parking. Speed recommendations will be provided for areas surrounding schools, and additional forms of novel information stimuli are a possibility.

The challenge!

The Southeast Brabant region is the place to be when it comes to technological developments in the automotive sector. The region has established its position as the primary test bed for the Netherlands, and now wishes to play the same role for the whole of Europe.

The region has achieved this position thanks to the unique collaborative venture known as the Triple

Helix. The SRE wish to use the Triple Helix to deliver the facilities needed to create a top-ranking test centre. Innovation is one of the focal points of the SRE's new Dynamic Traffic Management Vision for 2020. We now challenge you to think and act along with us, and help make the Southeast Brabant region Europe's leading test bed for automotive technology!



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