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GOVERNMENT AND BUSINESSES TO INVEST 90 MILLION IN SMART TRAFFIC SOLUTIONS

The Ministry of Infrastructure and the Environment, local governments and businesses will jointly invest 90 million euros in the Talking Traffic Partnership up to and including 2020. The partnership with the traffic industry, telecommunications and internet companies, and automotive companies has been set up to develop and supply innovative traffic applications in the next five years.

The applications provide continuous en-route guidance and assistance to road users, and in the near future also to vehicles. This increases their ability to anticipate traffic situations, which in turn improves traffic flows and safety. The new applications will be seen in practice - on the road and inside vehicles - as from the summer of 2017, when the companies will start supplying road users with the new driving and travel advice technologies.

The government and the market are equal partners in the Talking Traffic Partnership. Together they are able to introduce intelligent traffic systems in cities and their surroundings on a scale that is commercially viable and yields visible results.

A key element of the partnership is the development of a new generation of traffic lights that can communicate continuously with approaching vehicles and cyclists, optimising traffic flows across intersections and the entire urban network. The new technology, for example, eliminates the need for motorists to wait pointlessly for the light to turn green at empty intersections late at night and creates longer periods of green light for large groups of cyclists. Stopping and accelerating of heavy goods vehicles in cities is reduced as traffic lights recognise heavy transport and turn green in time.

Minister Schultz van Haegen (Infrastructure and the Environment) applauds the partnership: "The Talking Traffic Partnership showcases the Netherlands' strengths: government and businesses are jointly taking responsibility to improve the flow of traffic in urban areas using smart new technologies. Innovation should not just be discussed: most of all it requires action. This gives a firm boost to the development of technologies that will enable road users to reduce their time on the road, cut their fuel consumption and stay safe."

OPTIMUM TRAVEL

By using modern telecommunications and cloud technologies in combination with information crowdsourcing, new services will be able to offer driving task support as well as navigation in the entire country and in cities. Motorists do not even need to purchase a new car for this: a navigation system will suffice.

The new services include individual speed advice and warnings of dangerous situations, such as the tail end of traffic jams, sudden braking, slipperiness or a local fog bank, accidents and roadworks. In addition, drivers may be advised about parking spaces available nearby and about the best route to take in the event of roadworks or an accident. Non-stop guidance via navigation and en-route support provide more comfort and cut the fuel consumption of cars and lorries, which benefits the environment and people's wallets.

A key component of the Talking Traffic Partnership is the exchange of information on the current situation on the road, prompting tailor-made, individual advice to road users. Uniformity (safe and useful) throughout the country is key, so that road users receive similar advice wherever they are. Being the national road manager, Rijkswaterstaat will actively work towards a consistent and guaranteed exchange of information together with regional road managers and participating companies to improve safety and the flow of traffic on the road.

The new technologies will be introduced step by step until 2020. The first results are expected in the summer of 2017. Earlier projects on a smaller scale showed a 5 to 24 percent reduction in travel times, emissions and accident numbers. Research has shown that the cost to society can be slashed by around 90 million euros every year with the use of continuously adjusting traffic signal systems at intersections.

TALKING TRAFFIC PARTNERSHIP

The basis of the Talking Traffic Partnership is the combination of technical development and commercialisation, with the government and market as equal partners. In addition, the partnership supports the developments of self-driving transport and mobility as a service. The Talking Traffic Partnership is open to new entrants also seeking to invest in ITS and Smart Mobility and to accelerate these developments and applications. With this, the growing partnership creates clarity and ensures uniformity in standards, architecture, rules of play, privacy, security and ease of use.

TECHNOLOGY

The Talking Traffic Partnership focuses on the optimum use of existing telecommunications services and the availability of devices connected to these services in order to make mobility smarter, more efficient and more sustainable. This is in line with the pragmatic Dutch C-ITS strategy: C-ITS applications may use both cellular technology in current and future telecommunications networks (4G, LTE/-V and 5G) and short-distance communication (ITS G5), depending on the application.

A key element of this partnership is the development and delivery of a new generation of Traffic Signal Systems that communicate continuously with approaching vehicles via the clouds of multiple service providers. The new architecture that has been designed for this and is currently being built and tested ensures the full mutual compatibility of multiple components and pieces of control software of several suppliers. This further opens up the market for traffic signal systems and promotes competition and innovation. The international standards of SPaT and MAP are used to ensure that the automotive industry can quickly implement this form of communication.

Compliance with international data exchange standards and national privacy and security laws and regulations is of course assured. Where these are not yet available, the Talking Traffic Partnership helps develop new standards in Europe. As a result, road users can also avail themselves of similar advice and facilities across the border and businesses can also market new products and services on an international scale.

At the same time, road managers (cities, provinces, Rijkswaterstaat) are actively working on a much more functional and uniform harmonisation of their own rules of play as regards network optimisation and prioritisation at intersections. This cuts costs and ensures that knowledge is shared between governments and road managers and between the market and the government. A new private exchange point for traffic signal systems will be set up for the exchange of intelligent traffic signal system data to and from vehicles and individual traffic signal systems.

PARTICIPANTS

Participants in the Talking Traffic Partnership are Vialis, Dynniq, Swarco, Sweco, KoHartog Verkeerstechiek, Royal HaskoningDHV, Ziut, Be-Mobile, KPN, Flitsmeister, MTVNL and Locatienet, and all authorities cooperating in the Optimising Use programme. A number of these companies work together with one or more subcontractors.

Note to the editors, not for publication:

See the supplement for some examples of Talking Traffic uses.

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See also: www.beterbenutten.nl/talking-traffic

SUPPLEMENT SPECIFIC EXAMPLES OF TALKING TRAFFIC USES

Maximum speed

The driver always sees the maximum speed that applies to the stretch of road where he is at that moment:

- Standard maximum speeds (incl. delivery windows)
- Dynamic maximum speeds in the event of incidents/emergencies
- Adjusted maximum speeds in the event of roadworks

This information is tailored to the type of vehicle (e.g. a lorry or trailer) set by the user.

The driver knows what to expect and how to avoid exceeding the maximum speed.

Potentially dangerous situations

The driver receives timely information about any current and potentially dangerous situation on the route that is expected to inconvenience the driver:

- The distance (or time) remaining until the potentially dangerous situation is reached
How long the potentially dangerous situation is expected to last
- Advice about desirable driving behaviour (lane choice and speed advice), tailored to the driver's own vehicle category and the current traffic situation
- Route advice (an alternative to the planned route will be offered if this offers benefits).

Other delays and inconvenience to traffic are also displayed, such as information about where a traffic jam begins, open bridges and traffic incidents along the route.

Priority

Some groups of road users are given priority at traffic lights if certain conditions are met. This means that these road users are given or keep a green light and can continue driving (almost) without any hindrance. The priority (the time that the traffic light is green) is retained until the entire target group (column) has passed the intersection. Examples include priority for public transport, heavy goods vehicles or groups of cyclists. This improves the flow of traffic and reduces the emission of harmful substances.

Bringing traffic-light information into the vehicle

Road users approaching a traffic light and stopping there receive up-to-date information from that traffic light: the time remaining until it turns green or red, translated into up-to-date speed advice, the waiting time remaining and the cause of any extended waiting time.

All road users know what to expect and the additional information reduces emissions (for example, people are better able to anticipate red and green lights).

Optimising traffic flows

As data from vehicles (type of vehicle, location, direction of travel, speed, destination) becomes available, the current and future amount of traffic at an intersection or stretch of road **. This allows the traffic to use the road even more efficiently as the traffic-light control process is optimised in real time. The goal is to minimise waiting times, travel times and stops by adjusting traffic control.

Parking information

The road user receives up-to-date parking information and is able to adjust his route accordingly. This includes information about the availability of parking spaces, costs, restrictions on height, width and weight, opening hours, etc.

For further information, see www.beterbenutten.nl/talking-traffic