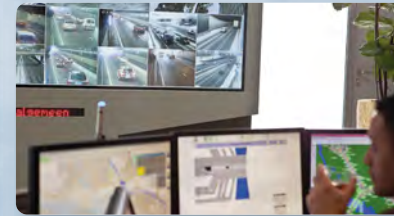
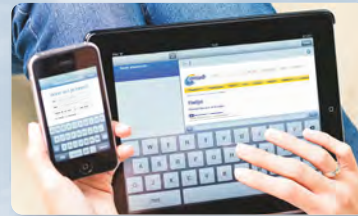


# Better informed on the road

Roadmap 2013 - 2023

Summary



# Foreword

**Every road user is unique, every journey is unique. Our mobility choices depend on where we want to go, the time of day and our personal situation.**

We are convinced that road users in the Netherlands will be better served when the cooperative relationship between service providers, public authorities, industry and the automotive sector is intensified and renewed. Needless to say, the collective interests of quality of life and safety must be safeguarded at the same time. Our mission is therefore to realise a smart and consistent mix of information using smartphones, navigation systems and collective information channels on, above and alongside the road. We believe that this will contribute in a positive way to accessibility, safety and the quality of life in and around the infrastructure in the Netherlands *and* to increase the (international) competitiveness of the Dutch business sector.

This goal will not be realised automatically. The intended changes will have a significant effect on public and private responsibilities and the related mission statements. For that reason, it is crucial that there is solid collaboration between public authorities and the business sector. We need to work closely together in the coming years so that we have the confidence to invest publicly and privately and clearly shape our changing collaborative relationship.

Minister Schultz expressed this objective in her letter to the Lower House (*Better informed on the road [Beter geïnformeerd op weg]*, Parliamentary Paper 31305, 202) on 7 February 2013. In that letter, she announced an Action Programme consisting of a *Roadmap [Routekaart]* and an

*Implementation Agenda [Uitvoeringsagenda]* in which the business sector, public authorities and knowledge institutes all collaborate closely in order to further develop the services required to provide road traffic/travel information and traffic management. Collaborating closely means not just working together but also extending an open invitation to interested parties to take part and to be receptive to new developments, services, products and organisations that will be relevant for the duration of this *Roadmap*.



This *Roadmap* is the first product of the Action Programme. It outlines a strategic course of action aimed at giving the business sector and road operators a sense of continuity and reassurance. The *Roadmap* was developed under the supervision of an informal consultative group, whose members (road operators, service providers, industry and research) - in a personal capacity - helped to define a strategic course of action. Our group took its name from the date on which we first met, and as the *5 November Group* we warmly welcome this directional document and invite everybody to work with us to realise its objectives.

We are proud of this *Roadmap*, which we presented to the Minister of Infrastructure and the Environment on 4 November 2013. Given the complexity and mutual dependency required to realise the objectives, it is essential that we pursue public-private cooperation. For us, the *Roadmap* is the start of an intensive joint effort aimed at realising innovative mobility solutions so that the Netherlands continues to have a good quality of life and remains accessible and safe. The *Roadmap* was developed as a strategic perspective for the joint *Implementation Agenda* of public authorities and the business sector. We look forward to working hard on developing and realising this agenda in the time to come.

Ab van der Touw	<i>CEO Siemens The Netherlands</i>
Carlo van de Weijer	<i>President Traffic Solutions, TomTom Director Smart Mobility, Eindhoven University of Technology</i>
Chris de Vries	<i>Director Management and Implementation, Province of North Holland</i>
Eric Kuisch	<i>Director Netco, KPN</i>
Jan Casteleijn	<i>General Manager Imtech Traffic &amp; Infra</i>
Jan Hendrik Dronkers	<i>Director-General Rijkswaterstaat (Department of Waterways and Public Works)</i>
Jan Hendrik Sweers*	<i>CEO Vialis</i>
Jan van der Wel	<i>General Manager Technolution</i>
Jannet Wiggers	<i>Board Member SRE</i>
Joost van Gils*	<i>Board Member Economy and Mobility, Province of North Brabant</i>
Leo Kusters	<i>Managing Director Mobility, TNO</i>
Michèle Blom	<i>Director of Roads and Traffic Safety, Ministry of Infrastructure and the Environment</i>
Nico Anten	<i>Managing Director Connekt</i>
Petra Delsing	<i>Director City Management, The Hague City Council</i>

\* Membership as of 2 July 2013. Joost van Gils has since been appointed Director Culture & Society and Internationalisation at the Province of North Brabant. Jan Hendrik Sweers stopped working for Vialis on 1 September 2013.



m alaisen



# Summary

## Why this Action Programme?

### Making the most of the available opportunities

Improved traffic flow, safety and quality of life. All of these things are possible when road users have access to better information and advice about the traffic situation, with more information geared to the individual. This demand-driven approach means that collective intervention by road operators can be downsized and targeted at those moments when it really matters. The business sector can respond to that demand by introducing innovations and pioneering technologies that are also attracting a great deal of interest internationally.

Technology and society are developing all the time. Within ten years, around 60% of the Dutch fleet of vehicles, or rather the drivers of those vehicles, will be digitally connected. That trend is set to continue, and over a period of 15-20 years almost the entire fleet will be permanently connected to other vehicles or online services. In the longer term, we will also begin to see automated vehicles on our roads. These developments will offer countless opportunities for a more high-quality information supply to road users, and more cost-effective (public) traffic management. With the *Better informed on the road* Action Programme, public authorities and the business sector want to work together on an approach that makes the most of all these opportunities.

This will enable the Dutch business sector to retain or even extend its leading position in Europe. After all, good accessibility is an essential pre-condition for economic growth.

### The mission

The development of road traffic/travel information and traffic management is not new. Over the past years, these domains have been professionalised and that trend is continuing. But at the moment there is certainly room for improvement in the synergy between initiatives and investments made by market parties and road operators. At the same time, the dividing line between traffic management and mobility management (influencing the demand for mobility, often *pre-trip*) is becoming blurred by technological developments and the emergence of information services targeted at individuals. More and more cooperative services are emerging. All of these developments require open (European) standards and greater collaboration. Our mission is therefore to realise a smart and substantive consistent mix of information using smartphones, navigation systems and collective information channels on, above and along the road. However, this smart mix cannot be realised automatically. The transition will have an effect on public and private responsibilities. Public authorities and the business sector will have to tackle these challenges together.

## The perspective

Bearing in mind our starting point, our mission and the anticipated trends, we see the future in the following way:

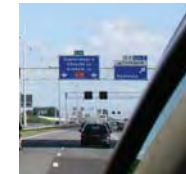


**1 Market parties** will focus on providing (information) services that are geared to the needs and wishes of individual road users. These services will enable those road users to make the best possible choices when using the road network - before, during and after their trips.

Thanks to these services, road users will be able to travel from door to door quickly, safely, comfortably, in an environmentally friendly way and for an acceptable price. Furthermore, market parties will continue to supply the systems needed by the road operators to manage traffic.



**2 Road operators** will facilitate the choices of the individual road user to the maximum by making sufficient road capacity available within the social pre-conditions for safety, quality of life and accessibility. When these pre-conditions are threatened, such as in the case of crises and calamities, or when individual choices are counterproductive for large groups of road users, public authorities can intervene collectively by enforcing local traffic measures (orders and/or prohibitions).



**3** More than ever, support of the road user with information, advice, orders and prohibitions will become a joint **public-private effort**. The reliability experienced by road users ultimately depends on the consistency between the information and advice they receive and the actual situations they encounter on the road. This advice will take on more and more of a multimodal character. The social importance of a stable supply of information to road users will therefore necessitate public-private coordination and supervision.

## The perspective



**4** As part of this joint effort market parties will play a greater role in gathering, processing and enriching data (for road operators and other private parties). Moreover, communication with road users will largely take place by means of non-roadside-based information channels such as navigation systems, smartphones and technology in the vehicle.

# The approach

## Roadmap and Implementation Agenda

On 7 February 2013, Minister Schultz announced the *Better informed on the road* Action Programme. This Action Programme consists of a *Roadmap* and an *Implementation Agenda* in which the business sector, public authorities and knowledge institutes will work together to develop the services required for road traffic/travel information and traffic management. The first product of the Action Programme is the *Roadmap*, which outlines a strategic course of action aimed at providing both the business sector and the road operators with continuity and reassurance. This *Roadmap* was developed under the supervision of the *5 November Group*.

One essential feature of the Action Programme is that the *Roadmap* and the *Implementation Agenda* have been developed in public-private collaboration and in relation to each other. Neither of the two documents is static - after all, technology and society are developing all the time.

This means that there is space to implement interim adjustments and that the Action Programme will be implemented in phases. The course of action defined in the *Better informed on the road* roadmap stretches over a period of 10 years (2013-2023).

The following are the four goals of the *Better informed on the road* Action Programme, with a detailed description in the right-hand column:

<p>1 Contributing to the Infrastructure and Environment policy objectives for accessibility, quality of life and safety in accordance with:</p>	<p><i>A Structural Vision of Infrastructure and Space (SVIR):</i> improve, maintain and guarantee space for accessibility while putting the user first + safeguard the social frameworks for safety and quality of life, and <i>B Better Utilisation:</i> 20% less congestion; with the focus on the specific regional policy specifications - for example, on an urban and underlying level, where the emphasis is more on sustainability, quality of life and safety.</p>
<p>2 Improving the services provided to travellers</p>	<p>Reliable and up-to-date (multimodal) information services make it easier for travellers to make mobility choices.</p>
<p>3 Improving the (cost) effectiveness and efficiency of public traffic management</p>	<p>Specifically for the network of motorways, a more with less objective applies - a further reduction of vehicle loss hours (5% more effective), in combination with a gradual reduction (10%, 2015-2020 period) of the available resources.</p>
<p>4 Strengthening the competitiveness of the Dutch business sector</p>	<p>Work to achieve more efficient spending of innovation resources on a national scale (not reinventing the wheel; the Netherlands is becoming too small for regional customisation in cost-effective mobility solutions). Stimulate international competitiveness: <i>Dutch mobility solutions as an export product.</i></p>

# Plotting a course together

## Six building blocks

The following six building blocks have been devised to develop the *Roadmap*: four substantive and two process-oriented building blocks. These were worked out in working parties and converted into a perspective and six central transition routes (see the following pages). Together with the agreements on governance and monitoring & evaluation, these are the backbone of the Action Programme. The six building blocks are explained in the table below. The second column in the table outlines the mission. These building blocks

provide opportunities for innovation and efficiency for public authorities and the business sector. The traditional distribution of roles will change, if only by just stimulating market development and through the enhanced standardisation required by a coordinated effort.













In this way, the intensification of pre-competitive collaboration in the Netherlands will ensure that the supply of new technology and services is more consistent with public demand. This will more effectively utilise the creativity in the market. The road user's awareness of all these new services can be increased by means of competition and communication.

1 Facilitating road users in a better way	Working on a new perspective: from supply-driven to demand-driven Coming up with ideas based more on the needs of road users and less on the technology
2 Stimulating market development	Increasing the availability and the use of innovative market solutions Contributing to the export value of Dutch solutions and technologies
3 Target-oriented trials: from testing to application	Working on scaling up tried-and-tested technologies Mass production, no more fragmentation
4 Modernising traffic management	Making <i>space</i> for modernisation in the primary process of road operators (more specifically: Rijkswaterstaat, provincial governments, municipalities) Reducing dependency on temporary financing incentives, such as the <i>Mobility Approach [Mobiliteitsaanpak]</i> and <i>Better Utilisation [Beter Benutten]</i>
A Creating conditions and pre-conditions	<i>Supervision</i> : public authorities and the market working together Making smarter use of options for pre-competitive collaboration Focusing on stability and mutual trust
B Monitoring: are we on course?	Regularly providing management information Based on an objective representation of the progress Organising learning capacity Linking up with the goals and objectives in the Action Programme



## Six transition routes

Six central transition routes have been derived from the building blocks. These routes determine the direction to be taken by the mission and in that way act as the substantive basis for the *Implementation Agenda*.

Transition routes		
	1 From collective influence to a smart mix of collective and individual services	
	2 The changing role of roadside systems	
	3 From local/regional to national coverage for road traffic/travel information and traffic management	
	4 From business to government (B2G) to business to consumer (B2C) and business to business (B2B)	
	5 From ownership of data to maximum openness and availability of data (public and private)	
	6 From government supervision to public-private collaboration and alliances	

### 1 From collective influence to a smart mix of collective and individual services

- The huge growth in private information services (smartphones/apps, navigation systems, use of the PC at home) means that the collective influence (by means of DRIPs, matrix signs) has less influence and is therefore less necessary.
- The development perspective is a consistent mix of collective *and* individual information services.
- This signifies a change in the distribution of roles and tasks between the market and public authorities.
- This mix will look differently on the urban road network than on the motorways *and* will continue to change.

### 2 The changing role of roadside systems

- The above change is expected to lead to fewer stand-alone systems on the roadside. After all, some of the functionality of the roadside systems will overlap with that of systems in vehicles and perhaps hand-helds.
- Cooperative systems also make it possible to introduce new functionalities such as shock wave attenuation and platooning. This type of functionality requires a reliable supervision function from the roadside. In addition, a change will come about in the way traditional functions are introduced. For example, the function of loops in the road surface for the collection of traffic data and automatic incident detection may be taken over in the long term by direct communication between vehicles and the infrastructure.
- The emergence of cooperative systems will make roadside systems for the traditional functions simpler, more maintenance-friendly and less expensive.

### 3 From local/regional to national coverage by road traffic/travel information and traffic management

- The road user travels from door to door and in doing so experiences the road network as one cohesive whole. He/she will not notice that different road operators are responsible for different parts of the road network.
- Even more so than now, therefore, traffic management will be configured/designed regionally and, where necessary, nationally. Different road operators will jointly implement network-wide regulation strategies.
- Given this development, it is important to explore the consequences, opportunities and possibilities that the enhanced collaboration of road operators and private parties offer for the use and organisation of traffic control centres, for example.

4 From business to government (B2G) to business to consumer (B2C) and business to business (B2B)

- Public authorities are aiming for more cost-effective traffic management.
- Due to the changing perspective for private earning models for road traffic/travel information services, there will be less need for these services to be structurally funded by public authorities.
- This change requires an understanding of how market parties can create balanced earning models and the requisite pre-conditions. It will also require market parties to focus their services (for example, parking navigation in the cities) particularly on (road) users (consumers) and the business sector (business).
- This also requires a trustworthy long-term perspective on which the parties concerned can base their own investment strategies.

5 From ownership of data to maximum openness and availability of data

- Openness and availability of data is an important enabler for innovations in road traffic/travel information and traffic management.
- On a European level, open data is now mandatory for public authorities and, in principle, Dutch public authorities must make all of their data about road traffic/travel information and traffic management *openly* available.
- This change requires all the parties involved in road traffic/travel information and traffic management to have access to as much data as possible and requires all *owners* to make as much of *their* data as possible available to others, preferably openly but if necessary under certain conditions and on payment of a fee.

6 From government supervision to public-private collaboration and alliances

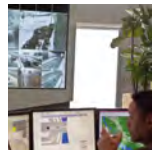
- The interaction between public authorities (provincial governments, municipalities and Rijkswaterstaat) and private service providers (navigation companies, the automotive industry, geobusiness, the transport industry, and the developers of services and applications) and the end users is changing, as are the underlying earning models.
- Mutual dependency means that no single party can dominate and exercise overall control. Structural consultation platforms are necessary in which agreements can be made, for example, about standardisation and data availability and quality.

## Cohesion in trials and experiments

In order to take the step towards the large-scale implementation of successful mobility solutions, it is crucial that tests and trials are performed for those solutions. The integral management of such trials and experiments increases efficiency and learning capacity and reduces competition between regions. Project objectives will have to be linked to national policy objectives. With this in mind, the *5 November Group* has designated 4+1 themes that provide a strategic framework for a cohesive approach to trials and experiments. These themes focus on and are central to the *Implementation Agenda*. They indicate how State resources should be deployed.

It was decided to adopt a 4+1 approach, where the 4 substantive themes are geared to specific regional mobility specifications, while the '1' is intended to serve those themes. Standardisation and the technical perspective transcend the 4 substantive specifications. The DITCM collaborative relationship can be used for the technology and standardisation theme.

See the main document (available on [www.connekt.nl](http://www.connekt.nl)) for a detailed description of the themes.



Theme  
Network-wide traffic management



Theme  
Logistically and  
internationally oriented



Theme  
Multimodal urban accessibility



Theme  
Automotive and in-car

Theme  
Technology  
and standardisation

# And now it is time to get going

## The challenge

A joint public-private *Implementation Agenda*, as well as the professionals that will work on it, will make the *Roadmap* route operational.

The agenda includes three major challenges:

- 1 *Embedding the structural shifts* in the distribution of roles between public authorities and market parties;
- 2 *Strengthening the collaborative relationship* between the market, knowledge institutes and public authorities. It is now essential to take the step from an informal procedure (*the 5 November Group*) to a formal procedure with a mandate and responsibilities. However, it is important to continue utilising the informal network, the trust and the knowledge that were built up. That is necessary for the creation and successful realisation of the *Implementation Agenda*;
- 3 *Stay on course*: there is no exact point on the horizon that we can work towards step by step; it is a collaborative relationship in which results will be achieved in phases. The *Roadmap* is a compass that can be used to make adjustments in the years to come, where necessary.

## The practical situation

We are now starting to make the *Roadmap* operational. A limited set of *roadmap projects* is putting everything into focus and is making it possible to control the complex *Implementation Agenda*. In 2014, we will start visibly working on this. The investment strategy to be developed is the link between the transition routes described in the *Roadmap* and the activities of the *Implementation Agenda*. After all, every transition implies the dismantlement of the current constellation (services, technology, organisation and finances) and the step-by-step introduction of a new constellation.

The investment strategy provides estimates of the budgets and the necessary changes as well as when which decision moments are expected or necessary.



## For each other, with each other

The *Roadmap* articulates the combined expectations and goals not just of the Ministry of Infrastructure and Environment but also the market parties, knowledge institutes and other public authorities/road operators. As a dual project, the *Roadmap* and the *Implementation Agenda* will result in the concrete realisation of the *Better informed on the road* Action Programme. The structural involvement of all parties is a key factor for success. After all, investing together increases the quality of the services and the efficiency of projects. And it brings the modernisation of the road traffic/travel information services and traffic management ever closer.

The *Roadmap* is worked out in more detail in the main document *Better informed on the road*, which is digitally available on the Connekt website ([www.connekt.nl](http://www.connekt.nl)).



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LOGISTICS

# Objectives

The route to be taken by the *Roadmap* is presented on this page and the following pages in an *infographic*, which clearly displays the relationship between the objectives, transition routes and building blocks.



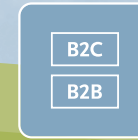
# Transition routes

From Roadmap to Implementation Agenda - Focus on six transition routes

Objectives



END 2023



From collective influence to a smart mix of collective and individual services

The changing role of roadside systems

From local/ regional to national coverage road traffic/ travel information and traffic management

From business to government to business to consumer and business to business

From ownership of data to maximum openness and availability of data

From government supervision to public-private collaboration and alliances



START 2013



# Building blocks



Working towards  
realisation with six  
building blocks

Creating conditions  
and pre-conditions

Stimulating market  
development

Facilitating road users  
in a better way

Target-oriented testing  
*from trial to application*

Modernising traffic management

Monitoring to check whether  
the realisation is on course?



# Expression of support

The Action Programme is supported by a broader group of market parties and social organisations. The following organisations have expressed their support for the initiative and their desire to be involved in the realisation process:

ANWB	<i>Guido van Woerkom</i>	Innovactory	<i>Lucien Groenhuijzen</i>
ARCADIS The Nederlands BV	<i>Gert Kroon</i>	KpVV	<i>Wim van Tilburg</i>
Be-Mobile NV	<i>Jan Cools</i>	MAPtm	<i>Wim Broeders</i>
BOVAG	<i>Koos Burgman</i>	NXP	<i>Maurice Geraets</i>
Bussmo	<i>Lucas Osterholt</i>	Organizational Coaching	<i>Rien van der Knaap</i>
Cachelot	<i>Paul Potters</i>	Qolor	<i>Axel Zandbergen</i>
Capgemini	<i>Herbert Celen</i>	Stichting Sims*	<i>Leo Bingen</i>
CGI	<i>Sake Algra</i>	Trinité Automation	<i>Frank Ottenhof</i>
DITCM	<i>Joëlle van den Broek</i>	TU Eindhoven	<i>Ben Rutten</i>
Goudappel	<i>Jos van Kleef</i>	Van Brienens	<i>Nicole Maas</i>
HR Group	<i>Jacques Goddijn</i>	Vialis	<i>Rudi Lagerweij</i>
IBM	<i>Eric-Mark Huitema</i>		

*\*initiative of BOVAG &  
RAI Vereniging*

Various public authorities have been informed by the relevant bodies about the goals and the course to be taken by the Action Programme. In official circles, the programme is being received and supported in a positive way. In the time to come, the challenge is to use the *Implementation Agenda* to outline the

course of action in terms of measures and financial consequences. The various public authorities (particularly the provincial governments, municipalities and metropolitan regions) will be actively involved in this.

# Connekt

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For more information, go to [www.connekt.nl](http://www.connekt.nl)

