Traffic safety: a national priority

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Opting for increased safety and a decrease in victims

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Traffic safety must become a priority for the next government. Those parties involved are calling for the following passage to be incorporated in the coalition agreement, whereby various levels of detailing are defined. Some possible passages include:

"Improving traffic safety is a national priority."

"The number of deaths and injuries must be significantly reduced, in line with the targets set for 2020, with a downward trend thereafter. The individual suffering and social costs are unacceptably high. Through cost-effective measures, hundreds of lives and billions of euros can be saved."

"This must be achieved by:

- ***Making a substantial investment in safer infrastructure and better maintenance, on the underlying road network and cycling infrastructure in particular;***
- ***The targeted utilisation of technological and legal innovations;***
- ***Evidence-based influencing of traffic behaviour (such as less distractions);***
- ***More and smarter enforcement;***
- ***More systematic knowledge about how accidents are caused;***
- ***Public – private collaboration and financing constructions."***

● Why a national priority?

Things are no longer going well in terms of traffic safety in The Netherlands. Due to the increasing number of traffic victims, The Netherlands are losing their leading international position as a safe traffic nation (from the top three down to ninth place). The facts support the degree of urgency.

● Urgency based on facts

- The number of traffic deaths is on the rise again (570 in 2013 and 2014 => 621 in 2015). That amounts to 9%;
- The number of seriously injured people continues to increase unabated (20,700 in 2014 => 21,300 in 2015);
- The targets that were set have not been met (maximum of 500 deaths, 10,600 seriously injured in 2020);
- The social cost of traffic accidents is now amounting to 14 billion euros per year;

- The number of police checks has decreased by 75%;
- Investment in improving traffic safety is solid. Calculations conducted by the CPB (The 'Duurzaam Veilig Wegverkeer' programme) and scientific calculations ('European Road Assessment Programme') points to a cost/value ratio of investments in infrastructure of 1:3. Simply reaching the objective before 2020 would save 3 billion euros in social payments;
- A total of 20% of traffic hold-ups are caused by accidents. Tackling them therefore has a positive effect on sustainability, quality of life and accessibility.

● What needs to happen?

A substantial reduction in the number of traffic victims cannot be realised by a single measure or solution. It's only when this is matched by a combination of good infrastructure, safe vehicles and (responsible) behaviour that the number of deaths and seriously injured people in traffic (plus recovery and emergency services and road workers) can be reduced in a significant manner. This also means utilising knowledge, continuing with effective approaches, and measures, and more effective traffic enforcement.

● Turn the tide right now!

In 2015, a large number of interested parties joined together to contribute towards improving traffic safety; from the idea that it should be possible to reduce the number of traffic victims in a sustained manner through a *concerted* effort, involving the government, the political arena, the scientific community, business and social organisations. We're asking the new cabinet to improve traffic safety together with us.
Step one in that regard is to designate traffic safety as a priority in the coalition agreement for the coming four years.

● Our incentive

In this document, we outline the desired effort of the new government. The parties have also provided an insight into which contributions they themselves can make in order to improve traffic safety. The total sum of this joint effort should be able to lead to less traffic victims.

We are keen to take on this challenge together with you!

From ambitions to paths of solution

In the following paragraphs, we will elaborate further on the paths of solution we are requesting in improving traffic safety. This includes the following:

I. Safe infrastructure
II. Innovative methods
III. Education and behaviour
IV. Enforcement
V. Registration, monitoring and policy.

The ambition, paths of solution, and effects to be attained are described per subject.

I. Safe infrastructure for all traffic participants

● Ambition

- Safe municipal roads; safely configured residential areas (30 km/h zones) and other roads in line with a forthcoming infrastructure assessment programme;
- Safe provincial roads in line with a forthcoming infrastructure assessment programme;
- Safe cycling infrastructure; all cycle paths in The Netherlands to at least be set up according to the prevailing guidelines;
- Safe motorways in line with a forthcoming infrastructure assessment programme;
- Bringing road infrastructure maintenance up to date.

● Effects to be attained

- A road configuration dictating 30 km/h in residential areas can realise a drop in the number of injury accidents of 25%, which amounts to a reduction of dozens of fatal accidents and a few hundred less traffic injuries per year;
- The safe configuration of 30 and 50 km/h roads together, whereby cyclists can cycle on 50 km/h roads on separate cycle paths, can save 20 to 30 deaths and 500-1000 serious traffic injuries per year by the year 2020;
- The safe configuration of 60 and 80 km/h roads can result in the saving of 20 tot 60 deaths and 200 to 500 seriously injured people per year by the year 2020;
- Less traffic hold-ups by accidents (currently, almost 20% of traffic hold-ups are caused by accidents);
- Realising a significantly less amount of injured traffic participants will be possible by improving the cycling infrastructure.

● Paths to solution

#1.1 Safely configured 30 km/h zones: traffic-safe residential areas

In the past, many 30 km/h zones were set up in a so-called 'understated' manner.
This entails that the configuration is not laid out in such a manner that the speed of 30 km/h also feels 'natural' for car drivers. There are often less or no physical or visual measures (such as sufficient speed bumps, brick pavements or a tapered road design). The result is that people drive at too great a speed. There is also little enforcement. There were at least 40 people killed in 30 km/h zones in 2015. The configuration of the 30 km/zones must therefore be reassessed. Residents must be included and can also play a role in behaviour and influencing.

#1.2 Safe and 'tolerant' 50 km/h roads

'Tolerant' infrastructure is geared towards limiting the detrimental consequences of a traffic accident as much as possible. A large number of traffic victims in 2015 occurred on municipal roads. With increasing urbanisation, a targeted approach is becoming ever more relevant in cities.
This can include the separation of unprotected and motorised traffic participants or a new configuration of traffic flows. If such infrastructural measures are not (yet) possible, then a move to adapt the speed of vehicle regulation might be considered.

#1.3 Safe and 'tolerant' 60 and 80 km/h roads

The 60 and 80 km/h roads are traditionally hazardous, and that translates into the number of victims as a result. Around 85% of all traffic deaths fall within the so-called 'underlying road network'. In 2014, the ANWB presented recommendations to make provincial roads safer, based on research with the aid of the 'Road Assessment Programme' (Euro RAP). Provincial road authorities are thereby provided with concrete handles to make their roads safer, including a 'credible' configuration of the roads and separate parallel lanes for slow traffic where needed.

#1.4 Safe and 'tolerant' cycling infrastructure

Over half of those seriously injured in traffic are cyclists, with motorised vehicles only rarely involved; there are many victims among 12-17 year-olds and the over 60s in particular, and there is an increasing traffic safety problem. In at least half the victims' cases, faults in the infrastructure were a determining factor. Many areas already have a good cycling infrastructure in place, but the aim must be to work towards a 100% 'tolerant' cycling infrastructure.

This is an infrastructure without unnecessary posts, obstacles, standout ridges, potholes and differences in the height of verges. All cycling infrastructure must therefore at least adhere to the prevailing standards (including width, lighting and demarcation) of the CROW. In addition, the starting point should remain that cyclists are separated from motorised traffic as much as possible, that means in those areas where speeds of 50 km/h or more are allowed. It is estimated that 40% of the 50km/h roads are not yet segregated.

#1.5 Safe and 'tolerant' motorways

Since 2015, the number of traffic victims on motorways has been increasing again, in contrast with previous years. These are traditionally the safest roads in our country due to their layout. Traffic hold-ups increase when there is an accident or breakdown, and accidents account for over a quarter of all traffic hold-ups. Our proposal is to urgently complete the investigation into the causes and provide an insight into those areas where there are opportunities to make motorways safer, for instance with the aid of EuroRAP or PROMEV.

1.6 Maintenance

Safe roads demand proper maintenance. Maintenance budgets have been adjusted downward during the years of recession, while the infrastructure will actually be more intensively utilised due to the recovery of the economy.
The National Government has also lowered its norm for road maintenance within the Municipal Fund.
The quality of the current infrastructure is under an increasing degree of pressure in this manner. In addition, councils in particular anticipate that they will have to cut back (even more) on roads. Replacement, renovation and (temporary) maintenance is essential.

#1.7 Safe supply routes

Cities have typical supply routes which exceed the average utilisation by freight traffic for supplying large-scale businesses and retail companies. Identifying these supply routes and configuring them accordingly are key areas of focus for traffic safety. The priority in that sense is the separation of vulnerable groups of road users and freight traffic.

#1.8 Innovative infrastructure

Also, innovations within the GWW (civil engineering) sector and the use of new materials can assist in making the infrastructure more traffic-friendly and safer. This could mean reflecting elements or other paving, the implementation of LED lighting in new materials and other technological innovations. In those cases of (scientifically) proven effects on traffic safety, the idea is to stimulate the use of such materials via a specially set up fund or subsidy ruling. This will of course stimulate production and the innovation of materials that can contribute towards better traffic safety.

The realisation of (renewed) infrastructure will preferably have to take place in conjunction with road authority, designers, users and the civil engineering sector.

In addition, the implementation of innovative methods for identifying and improving the safety of cycling infrastructure (think in this instance about CycleRAP, bike route planners) will assist in making the right investments.
This method is currently being tested in a number of urban regions and counties (also see Chapter: V).

II. Implementing innovative means (technology)

● Ambition

- A clear and collectively supported vision for implementing modern technology that will contribute towards lowering unsafe traffic situations.
- The government will take the initiative in this regard and will actively engage the partners.

● Effects to be attained

- The prevention of dozens of deaths and a few hundred serious traffic injuries per year, through the utilisation of modern technologies.

● Paths to solution

#2.1 Utilising new systems in an optimum manner

Innovative technologies can provide an important contribution to improving traffic safety. ADAS systems such as ESC (stability control) and ABS (anti-lock braking systems) have proven their added value in the past. Systems that are (possibly) going to be rolled out now and in the future, such as lane departure warning and prevention, automatic emergency braking, motorway self-drive options, navigation systems, radar systems, emergency braking systems (AEB) and V2X connected vehicles can assist the traffic participant in executing their driving task.

In order to optimise the positive effects, the following is needed:

- The system to be standardised and made uniform;
- To ensure that objective, evidence-based clarity is available regarding the actual contribution of driver-support systems to traffic safety;
- For the consumer to be better informed about the added value of these systems. At present, consumers are not particularly knowledgeable in this respect, which is why they are less inclined to invest in it.
  The government can make a contribution towards better a better supply of information for road users;
- Fiscal stimulation is being looked into (exemption from vehicle purchase tax, no additional tax) that can assist in implementing the instruments and purchase of safe cars: entailing cars that are shown to contribute towards preventing (the impact of) accidents;
- Looking into how we can entice drivers when selecting a car, and how to significantly reduce the transition period, until such times that the autonomous car will appear on the road. This can also be accompanied by (fiscal) incentives for employers and leasing companies to incorporate safety accessories such as Blind Spot, Autonomous Breaking System, Adaptive Cruise Control, Lane Keep Assist into a Safety Business Lease Edition for both business and private lease drivers;
- Enticing employers to refer to the vehicle mobility linked to the highest security system, namely 5-star EuroNCAP in their mobility policy;

- Organisations with an exemplary role - such as driving school owners – will be stimulated to invest in these 5-star cars when purchasing new vehicles.

#2.2 Examples as inspiration

There are also opportunities for the so-called 'intelligent speed assistant' (ISA): an advisory information source, which displays the applicable speed limit, in all places and at all times, in a non-distracting manner, as well as warning when this is exceeded. Research has revealed that this measure is effective for counteracting the unintentional exceeding of the speed limit; after all, by no means all speed limit violations are committed on purpose. During this term of government, an investigation will be initiated to assess whether there is support to introduce a more binding style of ISA, and if so, in which form and where this would take shape. In addition, there are also opportunities for driver assistance systems such as an emergency braking system, blind spot assistant, lane assistance and fatigue detection. Empiric figures relating to earlier innovations (such as the implementation of ESP) point towards a significant potential with regard to the effect on less traffic accidents.

A combination of systems and data is also feasible. For instance, the radar and video sensors realised for an emergency braking system, also form the basis for other driver assistance systems, such as the use of sign recognition with speed limits alongside the road to project onto the dashboard of the car and inform the driver in this manner whenever they are driving too fast.

III. Education and influencing of traffic behaviour

Ambition

- For road users to behave safely in traffic to the extent that they will not form a risk either for themselves or others.
- For road users not to permit themselves to be distracted while driving.

Effects to be attained

- Reduction with regard to accidents through undesirable behaviour;
- Reduction with regard to the number of accidents as the result of distractiions during driving;
- More clarity on the use of smartphones in traffic;
- Less traffic deaths and injuries.

Paths to solutions

#3.1 Behaviour and empowerment

There is no such thing as safe traffic without safe behaviour. For this purpose, the infrastructure should be up to date (chapter I.) and legislation and

enforcement should be in place (chapter IV). But this also concerns exemplary behaviour by parents/educators and targeted traffic education for all ages.

Behavioural campaigns can assist in that regard, provided they are incorporated properly within the overall framework. That requires attention regarding *empowerment* and *encouragement*: successfully enabling civilians and encouraging them to render their own active contribution towards traffic safety.

#3.2 Distraction and influencing

The main risk factors for undesirable behaviour are repeat offenders (road hogs), drinking while driving, distractions, excessive speed, and driving through red lights. Estimates reveal that an excess of alcohol and driving too fast causes 20% and 30% of all accidents respectively. Over the last few years, we've seen the emergence of a new problem in the shape of 'distraction' in traffic, for instance in the use of mobile phones whilst driving; this is a significant and growing problem. New 'naturalistic driving' research from the US (whereby researchers, and black boxes can see exactly what transpired in a vehicle in the last crucial seconds before an accident with the aid of cameras) shows that the majority of the drivers (over 60%) were distracted immediately prior to the accident. Mobile phones play a key role in that regard: the risk of handling a telephone was 3.6 times the normal risk, and even 9.9 times for reading and writing. Mobile data use is doubling every year, and the use of mobile phones is continuing to grow. During this government term, those means that are effective when combating this problem must be looked into.

One motto could be that drivers do not allow themselves to be distracted by communication equipment, but do permit themselves to be supported when driving in a responsible manner.

A clear, practically workable and enforceable norm is necessary: behind the wheel, only traffic-related and question-generated (non-intrusive) hands-free operation is permitted, and then only when the traffic situation allows it and the device is not distracting.

#3.3 Combining behaviour, technology and legislation

A targeted and combined implementation of legislation, awareness campaigns and technological means of support ('drive mode') is essential, as is credible enforcement (view chapter IV). The option to have a standard read-out of the telephones and trip logs of drivers in the event of serious accidents is being explored, whereby – in addition to legal aspects – the manner in which safe driving behaviour can be stimulated is the central focus.

#3.4 Deployment of multiple target groups

Campaigns and education need to be directed at all relevant target groups and all road users. Individual responsibility, such as the visibility of vulnerable road users in traffic (in dark and/or bad weather) forms a part of that. Developments must be monitored in order to be able to gain an insight into the effects. If possible, targeted campaigns should be considered for separate road user groups.

New target groups can also be involved, such as employers who can refer to traffic safety in their employment conditions in terms of mobility, or take an active role in that regard.

IV. Additional and more effective enforcement

Ambition

- The deployment of traffic enforcement will once again become a priority within politics and will be brought back 'on track';
- Traffic enforcement will be allocated the manpower and (innovative) means necessary for a realistic and effective opportunity for monitoring.

Effects to be attained

- A considerable increase in the possibility for control through automated enforcement, and restoring the level of the arrests will result in an important change in the behaviour of road users;
- For 2020, the effect of the intensification and innovation (especially progressive fines) is collectively estimated to be between 70 to 90 less incidents of deaths, and approximately 1060 to 1260 less seriously injured through traffic (Upshift to increased traffic safety).

Paths to solutions

#4.1 Renewing the key position of enforcement

The aim of traffic enforcement is for road users to behave in a safe manner, in accordance with the intentions of the traffic laws and regulations. Aside from speed – it's about driving whilst under the influence of alcohol and drugs, red light negation, distraction and repeat offenders, thereby making traffic enforcement an indispensible part of traffic safety policy. Traffic enforcement is not a national priority however at present. The number of stop checks by police – such as alcohol checks – have declined significantly in recent years. Although there was an increase initially in 2016, it is still only 25% of what it was in 2007 (from 1.46 million to 0.36 million arrests per year). The enforcement deployment should therefore at least get back on level terms, and be allocated more priority in order to increase deployment considerably.

#4.2 Shaping enforcement within the current possibilities

By deploying sufficient people, means, and innovative techniques, the options for monitoring and thereby the perceived probability of 'being caught' can be enhanced.
The efficacy can be enhanced by:

- A combination of a personal approach, progressive sanction systems, and risk-driven enforcement with the aid of automated methods (cameras and maximum deployment of speed check controls).

The connection between councils, the Police and OM (Prosecutor's Office) should be reinforced in order for the required measures to increase traffic safety to be able to coordinated in an improved manner. This way, an integral consideration of the 3 E's can be carried out as effectively as possible. It should be investigated and assessed whether the current traffic fine issuing system is still sufficiently effective in combating traffic violations. Research is currently being conducted into the current traffic fine issuing system; the results of which are expected to be made known in 2017;

- Talking with local councils in both urban and rural areas regarding the prioritisation, allocation of duties and capacity with regard to enforcement, including the compensation needed to attain it. Capacity issues make it difficult to take action in the event of 'disturbance acts' and general conformity.
  The weaker traffic participants make up the group that runs the largest risk because of this;
- Attaching a great deal of importance to increasing the pressure of enforcement.
  The Police Force has made a start in this regard. An initiative has been developed by the Public Prosecutor's Office, in order to look into how to carry this impulse forward, in conjunction with the key enforcement partners and to realise concrete proposals and possible enforcement. Part of this initiative is a reconnaissance effort on the part of police, governance and road authorities for enhancing the role and powers of each. It is the ambition of the Public Prosecutor's Office and the Police Force to reinforce the objective and subjective enforcement pressure at a local level. The starting point is that the police is and will remain responsible for traffic enforcement. As a supplementary measure, Dutch local councils are prepared to deploy their enforcement capacity (such as BOA's - special investigating officers - for instance) in order to assist in enlarging the capacity for traffic enforcement.

In anticipation of the results, politicians must at any rate allocate more priority to the availability of (traffic) enforcement capacity, the development and acquisition of new innovative technological means of enforcement, and relevant legislation in order to be able to enforce in an effective manner.

V. Better accident registration, monitoring & pro-active policy

Ambition

- Accident registration with regard to traffic deaths is 100% complete;
- Registration of those seriously injured has improved, thanks to additional data sources;
- The road authority and other parties can invest in an effective traffic safety policy in a targeted manner on the basis of risk factors.

Anticipated effects

- Better registration, including an insight into causes;
- A great deal more clever combinations from and within data sources;
- Increasing insight into risk factors;
- Gradual development towards a more pro-active approach and development of targeted measures to promote traffic safety at a national, regional and local level;
- Better prioritisation with regard to the chosen approach.

Paths to solutions

The registration of traffic accidents leaves a lot to be desired. Of those 21,000 people who were seriously injured in traffic in particular, we are insufficiently aware what the cause and circumstances of the accidents they were involved in has been. We do not know for instance how many cyclists have been seriously injured in traffic, the location where this took place (which road type, type of bicycle facilities, junction or road section) and whether another party/participant was involved. We are also missing essential information with regard to the number of traffic deaths. It is even the case that it is not always guaranteed that systematic analysis will take place of what has occurred, which factors have played a role with regard to infrastructure, vehicles/or behaviour, and which safety lessons are to be taken from that - even in the event of very serious accidents. Summing up therefore, it is important to gain better insight into both the cause/circumstance of accidents (via accident registration and monitoring) as well as ways of preventing accidents (via pro-active and risk-driven traffic safety policy).

#5.1 Better and more detailed registration, systematic factor analysis in the event of serious accidents

Proper accident registration forms the basis for effective traffic safety policy, and must therefore be brought back to the level of the period prior to 2010 as quickly as possible. In concrete terms, this means an improvement in the number of registered accidents and accuracy during registration. In addition, looking into whether it is possible/desirable to systematically register key risk factors, such as the use of alcohol, distraction (mobile phone use), the speed driven by those involved and the characteristics of the driver (previous violations, date driving license was issued).
In the event of very serious accidents, there will be an analysis in a systematic manner of what exactly has gone wrong, and which factors have played a role in terms of infrastructure, vehicles/or behaviour.

#5.2 Making data accessible and utilising data through Public Private Cooperation

Fortunately, there have been valuable public-private initiatives that have been started in recent years to improve registration (think of the 'STAR' initiative). The government should take the lead however with regard to making all relevant data needed to find out the cause of accidents (such as hospital data, trauma care, details from research institutes etc.) available.

This also requires increased interdepartmental collaboration in order to identify and make accessible the necessary data sources. In addition, hospitals must start to contribute towards improving accident registration, as they have a considerable amount of valuable information available with regard to traffic accidents.

Vehicle data itself must also be utilised. From next year for instance, the lawfully obligatory e-call, which will come into force as of next year, will contribute towards an improved picture of accident locations. The government is being called upon to look into obtaining this data, with or without prior permission from the driver. In addition, the government is being called to conduct research into the Event Data Recorder (EDR). The EDR registers a number of essential data regarding the behaviour of the driver and the vehicle, such as its speed. Insight into this data prior to an accident can help to map out the cause of an accident in a better manner. Insurers and other relevant acting parties with regard to accidents should be able to have access to this data, after they have been read out by an independent authority. Car manufacturers should only be able to communicate about any data from the vehicle after the authorities have analysed the data and granted permission for communication.

Making data sources accessible may also have additional benefits.
The smart utilisation of data can assist in the mapping out of risk areas, and thereby play a role in accident prevention. The Municipality of The Hague for instance uses the Nationaal Wegenbestand (National Road Network), links it to its own traffic (loop) data and basic registration and can view any possible risks that may occur on a map. For instance by analysing where schools are, the speed limit in that area, and the volume of passing traffic. It pays to look into which of this data is nationally available, and can be linked in a clever manner, so that it can also be applied to other areas.

#5.3 Pro-active, risk-driven and integral traffic safety policy

This is being worked towards using systems with quantifiable risk indicators that establish causal relationships between accidents and risk factors such as characteristics of the road (also view chapter I), speed, alcohol and distraction. This is necessary in order to arrive at a more risk-driven (linking accident registration with pro-active risk mapping) and integral (emphasis on the entire traffic flow instead of taking on bottlenecks within the respective road networks) government policy.
If governments pay attention to traffic safety policy in a more systematic manner, it will enable an improved consideration where the deployment of means is concerned.

By prioritising on the basis of risks, road authorities can be enabled to actually improve traffic safety in stages.
A relationship can also be realised with other policy-related areas, such as healthcare.

Appendix:
All those involved are contributing

● Cooperation between all those involved is essential

Where better traffic safety (and therefore less traffic victims) is concerned, there are many interested parties. In this appendix, we have provided an insight into which contribution can be made by businesses, social organisations and the scientific sector. In addition, an effort is needed on the part of the government and the political arena.

NB: For practical reasons, the translation was omitted from this appendix.