

Pay per kilometer

Progress report

November 2001

Foreword

A system which aims to bring variation into the current fixed vehicle tax in the way of a **charge per kilometer** is part of the Dutch National Traffic and Transport Plan (NVVP Nationaal Verkeers- en Vervoersplan). In the 'MobiMiles' report, the outlines of this idea have already been presented. On the basis of this report, on 6 June 2001, the Cabinet notified the Lower House of its position on kilometer charges (Parliamentary Documents II 27 455, no. 6) and promised to send a further elaboration of that position to the Lower House, in autumn. In the report before you, we discuss in greater detail the method of introducing variation and the accompanying effects on the organisation model, the possibilities for introducing a kilometer charge system in collaboration with market parties, and the development phase. This memorandum is primarily informative in character and reflects current thinking. The choices made by the Cabinet to date are discussed individually in each chapter.

This memorandum, together with the Kilometer Charge Bill, which will be sent to the Council of State towards the end of the year, represents the elaboration of the structure for the kilometer charge system outlined in the NVVP: user pays, polluter pays and scarcity has its price.

Prior to the organisation of the project, discussions were held with administrative partners and social organisations. In the further development and implementation of a kilometer charge, the current cooperation with administrative partners and social organisations will be further extended.

Pay per kilometer

Summary

The NVVP describes how the government aims to handle the growth of mobility, and wishes to improve accessibility, quality of the living environment, and safety. In that connection, it is essential that **less** burdens are placed on **ownership** of a vehicle, whilst **more** emphasis is placed on **use and pollution**. Replacing (part of) existing vehicle tax by a kilometer charge is one instrument for achieving this goal. This method of collecting tax is **better** (improved accessibility and quality of the living environment) and **fairer** (the user pays above all when the vehicle is driven). This policy direction is also present in the countries surrounding the Netherlands, although there emphasis is on goods transport by road. The Netherlands are frontrunners in applying a charge per kilometer to private vehicles.

This memorandum **primarily** reflects **current thinking** and describes how a kilometer charge could be introduced. The actual design of the system will depend on further elaboration. The choices made by the Cabinet are discussed in individual chapters. This document will act as a guideline, for further collaboration with private, governmental organisations and interest groups.

In elaborating the kilometer charge system, there are a number of **starting points**. For example, government income will not rise (the burden on all road users together will remain unaltered) and all exemptions in the current system will in principle continue to apply. The intended system of kilometer charges makes it technically possible to differentiate the rate, according to time and location. Individual decisions will be made regarding these matters. Introduction of differentiation will take place after 2006. Separate decisions will also be taken on the further passing on of environmental costs. The kilometer charge is intended as a tax which will apply to all Dutch motor vehicles, if they are used in the Netherlands.

The taxes which will be eligible for collection subject to use are motor vehicle tax (mrb), the tax on private motor vehicles and motorcycles (bpm) and the euro vignette for heavy trucks. Duties can also be included in kilometer charges, as a result of which the solidity of the charge system will increase, and negative border effects will be reduced. According to model calculations, the optimum situation for society would be to introduce **variation on 4½ billion euro (NLG 10 billion) annually in tax income**. This will be achieved by converting the entire system of motor vehicle taxation, the euro vignette and a proportion of the duties. In addition, only one-quarter of bpm will be made variable, partly in order to avoid market disruption and to ensure that we keep control over the purchase of vehicles.

As a result of the kilometer charge, **accessibility and the quality of the living environment will improve**. Model calculations indicate that car kilometers and emissions will be reduced by approximately ten percent, and the number of hours of traffic congestion per 24 hour period will fall by one-quarter, as compared with the situation in 2020 if no kilometer charge were to be introduced. Anyone driving a private car less than approximately 18,000 kilometers per year will find themselves better off; anyone driving more will be worse off, unless they drive less (behaviour effect). Social wealth will increase considerably. A more detailed calculation of the scale of costs and income is being further investigated in an extensive social cost and benefit analysis. This analysis will include the results of the future market consultation.

Kilometer charging calls for an entirely new technical system for collecting tax. As demonstrated by the market study carried out, businesses have indicated that it is **technically possible** to equip the first vehicles with mobimeters in 2004. They also suggest that by 2006, kilometer charging and the additional services could be operational throughout the Netherlands. Every vehicle must be fitted with a device, the mobimeter, which registers the number of kilometers driven, and calculates the tax payable. Using the mobimeter, the user will then send the amount payable to the collecting organisation. In this system, privacy is guaranteed. Because every vehicle has to be equipped with a mobimeter, a growing market could be developed for additional services, ranging from the reservation of parking spaces and dynamic route planning, through to automatic breakdown assistance.

In order to facilitate introduction of kilometer charges, it is necessary **to collaborate with market parties** regarding the development of the mobimeter. For this purpose, an open standard will be developed. For the actual provision of additional services, the market parties will require a strong commitment from the government to the introduction of the kilometer charge. Additional services make it possible to co-finance the system of kilometer charging. Over the coming period, government commitment will take shape through the development of an open standard, in conjunction with private parties.

1. Introduction

Mobility is an integral part of modern society. Over the last few years, mobility has continuously increased and this situation is not due to change. Accessibility, safety and the quality of the living environment are consequently and increasingly under pressure. In the National Traffic and Transport Plan (NVVP), the new policy on traffic and transport has been established. The government wishes to absorb the growth in mobility, whilst at the same time improving accessibility, safety and the quality of the living environment. Simply building more roads is not a solution. As a consequence, in the NVVP, the choice has been made for improved use of the infrastructure, a pricing policy and expansion of the infrastructure where bottlenecks continue to exist.

The Cabinet is considering possibilities for the implementation of the traffic and transport policy by way of a pricing policy (the user pays, the polluter pays and the scarcity of the infrastructure has its price). In that process, introducing variability in (part of) the tax on the ownership of vehicles (motor vehicle tax and the tax on private motor vehicles and motorcycles (bpm) is a possible instrument. Together, taxation on the ownership of vehicles generates approximately 5.8 billion Euro (NLG 12.6 billion), thus representing a fixed component of government income.

The Dutch government is not alone in looking for new forms of pricing policy. In a number of other European countries and in the White Paper on European Transport Policy, pricing policy and the passing on of external costs are high on the agenda. On a European scale, the focus is on trucks and less on private cars. Specific plans for introducing a kilometer charge for private cars are not being considered in the countries surrounding the Netherlands. In England and Denmark, however, this possibility is being investigated and experiments are underway, on a modest scale. Variations on the kilometer charge for trucks are being introduced. This year, Switzerland introduced a charge for heavy trucks, which applies across the entire road network. Germany intends to introduce a charge per kilometer for heavy trucks on the main road network in 2003, and Austria wishes to convert its existing charge for trucks (eco points and tolls) into a kilometer charge for heavy trucks on the main road network.

Key innovations

When the kilometer charge is implemented, vehicle tax will broadly be charged on a variable basis; payment will above all be for each kilometer driven. Across the board it will not be a question of paying more, but paying differently. The amount charged will depend on vehicle weight and fuel type. Heavy use and heavy pollution will result in increased payment.

The aim is to improve accessibility and the quality of the living environment. As a consequence, vehicle use will be fairly taxed. One key precondition for kilometer charging is that road safety at least remains at its current level. The system of kilometer charges will be designed in such a way that in the future, the system of charges can be differentiated according to time and place. As a result, users will opt for travel during or outside the rush hour period. The system will make it technically possible to even pass on environmental costs.

There is social approval for the principle of variabilisation of vehicle tax, as expressed for example in the recommendation by the Socio-Economic Council (SER) in respect of the NVVP (SER, 2001). Interest groups such as the ANWB (car owners club), VNO-NCW (employers and employees organisations), MKB-Nederland (organisation for SMEs), the FNV trade union and the Stichting Natuur en Milieu (environmental conservation foundation) view the kilometer charge as a fair system, and a possible stepping stone towards a mobility market and the further charging on of external social costs. Social and administrative organisations have been consulted concerning the structure of the kilometer charge system. These consultations will be continued in the coming period.

To permit payment per kilometer, the current odometer is not sufficiently accurate, and too susceptible to tampering. With this in mind, new equipment for the vehicle will have to be developed, the so-called mobimeter a number of additional services can be linked to the Variable Road Pricing System, so that will increase, and operating costs will fall.

Additional services: the options

Because all vehicles will be equipped with a Variable Road Pricing System, besides kilometer charges, there are a number of options for offering value added services:

- Traffic and transport (particularly dynamic route planning and traffic information)
- Safety and security (in particular geared towards relocating stolen cars, automatic breakdown assistance thanks to location finding, maintenance information)
- Convenience services (parking, reservation of hotels and parking spaces, payment)
- Entertainment (satellite radio, track function, film/games on rear seat screen, with a single push of the button purchasing any piece of music on the radio)

Perspective

The kilometer charge is a step towards a mobility market, where supply is based on the demand by users, related to their willingness to pay the costs. Users in such a market are confronted with the costs of their mobility behaviour. The user is able to make a balanced decision on the purchase and type of vehicle, road use and use of alternative transport modalities. The concept of a mobility market is elaborated in the framework of the position determination in the Blankert report about the A4 transit route.

Startingpoint Kilometer Charge

The kilometer charge system must meet the following conditions:

- Social and political support is necessary. The system must be just, useful, balanced, transparent and effective. Clear and concise communication about the objectives of the kilometer charge is essential in order to maintain and expand support. This will be elaborated in consultation and collaboration with social and administrative organisations;
- The kilometer charge system must guarantee the privacy of the road user. Only those data necessary for the collection of the kilometer charge will be transmitted;
- The overall system (technology and implementation) must be reliable, fraud proof and manageable, at acceptable cost levels;
- Upon the introduction of the kilometer charge, the income to central government should not be increased, and the burdens on combined road users should therefore remain equal; the rate of the kilometer charge will be based on the rates of current vehicle tax. For heavy trucks (12 tonnes or more) this income neutrality is not automatically applicable to the government in accordance with the NVVP. In this respect, the recommendations from the Stevens Committee will be further expanded upon;
- The kilometer charge will primarily relate to a conversion of fixed vehicle taxes, the euro vignette and a proportion of duties. The kilometer charge will offer technical possibilities for differentiation according to place and time, the passing on of external costs and the prospects for further development of the mobility market. Separate decisions will have to be made regarding these matters;
- The effects of the current tax system will at least be maintained;
- The goal will be a positive contribution to road safety;
- The system to be designed must be based on open standards. Production of the mobimeter by various suppliers will stimulate market action, as well as enabling the road user to select from different types of mobimeter. The providers of additional services will also benefit from an open standard;
- The necessary technology will be developed in collaboration with the market. Market partners will be involved in the future technological and organisational development of the mobimeter.)
- Kilometer charging must support the effective and efficient management of the overall traffic infrastructure network on a permanent basis;
- Goods transport will be included in the kilometer charge system. Taxes on heavy freight transport are partially regulated according to European regulations and legislation. This imposes specific requirements on the system, relating to among others in interoperability;
- The kilometer charge system will be given a legal framework in a proposal which entirely regulates the structure of this new charge. This proposal will be sent to the Council of State towards the end of the year. At a later stage, a Bill for an implementation Act will follow, which will, among other matters, determine the final rates for the kilometer charge.

2. Design of the kilometer charge system

This chapter will describe which taxes will be made variable, and an indicative charge structure will be outlined. The Cabinet has opted to:

- convert the full motor vehicle tax and a quarter of bpm into a kilometer charge. This will be supplemented by a proportion of duties;
- replace the Euro vignette for Dutch heavy trucks with a kilometer charge.

2.1 Current vehicle tax

The current vehicle tax consists of motor vehicle tax, the tax on private motor vehicles and motorcycles (bpm), the Euro vignette and duties¹. Motor vehicle tax is a fixed tax on ownership of a vehicle, and amounts to a total of 2.9 billion (NLG 6.3 billion), of which 0.7 billion Euro (NLG 1.6 billion) consists of a provincial surcharge^{2,3}. BPM is a fixed tax on the purchase of cars with a total value of 2.9 billion (NLG 6.3 billion). The Euro vignette is a for driving on motorways for trucks of 12 tonnes and more, and generates 91 million Euro (NLG 200 million). The income from duties has a total value of 5.2 billion Euro (NLG 12 billion), and is a variable tax at present.

Not all vehicles are subject to the same vehicle taxes. Private cars and motorcycles pay all three variations of tax, whilst buses and delivery vans only pay motor vehicle tax and duties. The motor vehicle tax for delivery vans is lower than for comparable private cars. Motor vehicle tax applies to both light and heavy trucks, and in addition heavy trucks must comply with minimum rates in accordance with European Directives. Heavy trucks are also subject to the Euro vignette.

The existing vehicle taxes are subject to numerous keys (charge principles) aimed at achieving fiscal and non-fiscal objectives. There are eight key distinctions: weight, fuel type, emissions, quantity of fuel, fuel consumption, catalogue price, type of vehicle and province. In the event of conversion to a kilometer charge, as is elaborated below, six keys are considered sufficient: distances, weight, fuel type, vehicle type, emissions and province. Even further simplification could be realised in the future. In the event of differentiation between kilometer charges according to time and place, two extra keys will be introduced: time and place. Differentiation of this kind, according to time and place, will be technically feasible, but will only be introduced after 2006. A separate decision-making process will be initiated on this matter and consultation will be carried out with administrative partners and social organisations in due course.

2.2 Tax liability in relation to the kilometer charge.

The kilometer charge, just like the existing vehicle taxes. The principle behind this tax is not the registration, but the use of the vehicle. The kilometer charge will be based on all kilometers driven in the Netherlands, and will be payable for motor vehicles with a Dutch registration. Upon the introduction of the kilometer charge, the existing system (including exemptions and special provisions) will.

In the new system, the licence holder remains liable for tax. Periodically, the licence holder will be required to declare the number of kilometers driven. For this purpose licence holder must be able to accurately determine the number of kilometers driven in the Netherlands. The mobimeter (see chapter 3) will facilitate this.

¹ The amounts in this chapter are based on the year 2000.

² With changing motor vehicle taxation a decision must also be made on the part formed by provincial surcharges. Changing the provincial surcharge contributes substantially to the intended traffic effects. The provincial surcharges form the basis of the provincial tax region and make it possible that provinces make their own considerations and decide what charges will be levied on the inhabitants of that province. Basic assumption of the introduction of kilometer charge is that no change will be made to the authority of the provinces to determine and change surcharges within lawful boundaries. Changes in the amount of the surcharges a province levies will only have consequences for the drivers living in that province.

In the next period, based on these basic assumptions, necessary changes to the Provincial Law will be made in consultation with the Interprovincial Consultation (IPO) and administrations involved. IPO is momentarily contemplating the possibilities for future design of the provincial tax region. Beside the surcharges in kilometer charging other provincial taxes are also taken into account. This consideration can put the change of current surcharges into surcharges in kilometer charging in a different perspective. For the time being, the proposed kilometer charge bill assumes provincial surcharges in kilometer charging.

³ The motor vehicle taxation consists of a principal amount of the tax, provincial surcharges and a fuel surcharge for diesel and LPG.

2.3 Conversion of fixed vehicle taxes

The Cabinet has suggested that variation should be introduced for the whole of motor vehicle tax (mrb), a quarter of bpm and, for trucks of 12 tonnes and more, the Euro vignette. This equates to a conversion of approximately 3½ billion Euro (NLG 8 billion) in annual tax income. In order to make the charge more solid, and to reduce the border effects further 0.9 billion Euro (NLG 1.9 billion) in income from duties will be converted into the kilometer charge. In total, the kilometer charge will have a budgetary scale of 4½ billion Euro (NLG 10 billion).

Converting motor vehicle tax and the Euro vignette into a kilometer tax can be realized. However, there are a number of potential problems in converting bpm into a kilometer tax. There is an evident risk of market disruption, the value of the existing fleet of cars could fall, and the government could suffer cashflow problems. In order to minimise these negative aspects a transition strategy will be implemented, in close collaboration with organisations within the sector.

The negative effects of conversion of bpm can be spread over a number of years, by introducing the conversion in stages. Finally, the kilometer tax makes it possible to convert a proportion of duties, so that the price of gasoline in the Netherlands does not exceed that of the surrounding countries.

Scale of the conversion

Introducing variation into a proportion of fixed vehicle costs will result in a reduction in mobility. Positive effects for national wealth will be a reduction in congestion, an increase in average speed, a reduction in environmental pollution and an increase in road safety.⁴ Model calculations suggest that the wealth effects will reach their optimum level upon introduction of a conversion of approximately 4½ billion Euro (NLG 10 billion).

Phasing

During the development phase, further investigations will be carried out as to whether the kilometer charge should be introduced to the full financial extent, or whether it should be introduced in stages. Such considerations as risk spreading, behavioural effects, traffic-specific effects and autonomous growth of mobility will play a role in making the choice between conversion in stages or one-off conversion.

2.4 Indicative charge structure and charge level

The charge structure and charge level will determine who pays what and how the charges affect the relationship between the various categories of vehicle and fuel types, and hence also the use and composition of the vehicle fleet. In determining the charge structure, two starting points are key. Firstly, the greening effects of the current motor vehicle tax and bpm must at least be maintained, and secondly, the charge will be determined on the basis of current government income.

A number of technical calculation exercises have been carried out on the basis of these starting points. In these exercises, for example a charge X for car Y leads to a situation in which car drivers travelling more than A kilometers are worse off, whilst car drivers travelling less than A kilometers are better off. The eventual charge structure will be calculated on the basis of a neutral conversion, in terms of policy and budget, of the current structure and charges for motor vehicle tax, bpm and duties, including the European policy in respect of the White Paper.

⁴ The traffic-specific effects above all relate to the scale of the amount to be made variable: whether motor vehicle tax or bpm were reduced by one billion, the overall traffic-specific effect is the same. On the other hand, different environmental effects can occur: lowering motor vehicle tax is favoured over lowering the bpm, because it is expected that there will be less negative vehicle fleet effects.

This paragraph presents an indicative charge structure for private cars. This gives an impression of how the existing fixed vehicle taxes per category of motor vehicle will be made variable, and the effects of this process. The eventual charge structure is partially dependent on studies still being carried out.

Private cars

For environmental reasons, a differentiation is made according to weight classes and fuel type in current motor vehicle taxation. In order to maintain the greening effects of current motor vehicle taxation, this differentiation will also be made in the kilometer charge system. Existing stimuli by which the government influences the changeover points between the use of petrol, diesel and LPG will also be taken into account. For indicative purposes, a reduction in the duty on petrol, diesel and LPG of fifteen percent has been assumed.

Three options have been considered for arriving at a charge structure. Not taken into consideration are duties

1. every petrol, diesel and LPG car will pay the same rate for each weight class or
2. every car (irrespective of fuel type) will pay the same rate for each weight class or
3. as (described in item) two, but cars running on diesel and LPG will pay a fixed amount in addition to the kilometer price.

In the first case, cars running on diesel and LPG will be charged a lower kilometer tax than cars running on petrol, because of their higher current kilometers travelled. This will have negative consequences for the environment. In the second case, a shift occurs to the disadvantage of the diesel driver. This will result in a reduction of the emission of fine dust and NO_x, but also in an increase in costs for the diesel driver. The third possibility will minimise the effects at the transition points, but does mean that an amount totalling approx. 0.4 billion Euro (NLG 1 billion) will not be made variable. The fixed amount is also equal to the current level of the fuel surcharges on diesel and LPG.

We are currently investigating how the charge structure for private cars can best be designed. The preferred option is to ensure total variabilisation, because this will prove to be beneficial in both traffic-reduction terms and in terms of the environment. The outlined indicative charges are based on the regulation method with the fixed amount.

On a structural basis, the system outlined above results in an indicative rate of 3.3 euro cent (7.2 cents) per kilometer for an average petrol-driven car (weight class 1,100 kg). The indicative rates are such that everyone who drives less than approximately 18,000 km per year in the Netherlands, will benefit.

Motorcycles, buses, delivery vans and light trucks

The kilometer tax will also apply to motorcycles, buses, delivery vans and light trucks. In terms of policy there is no reason for using a different calculation system than that for private cars. Existing differences will be maintained in the indicative calculations. Delivery vans pay (a) low motor vehicle tax and no bpm. Buses and light trucks pay only motor vehicle tax. The Cabinet can decide on policy intensification in a separate programme. In that case, the results of such a decision will be included in the eventual rates for the kilometer charge.

Heavy trucks

For heavy trucks (12 tonnes or more), the Euro vignette will be converted into a kilometer charge. The proposal is to also variabilise motor vehicle tax for heavy trucks in the Netherlands. At present, however, European legislation prescribes a minimum rate for motor vehicle tax. The Netherlands is practically already at this minimum level.

The Netherlands, in consultation with the European Committee, are investigating the options for conversion of the motor vehicle tax into a kilometer tax. The rate for heavy trucks, if only the Euro vignette were to be variabilised (and not taking into account any reduction in the diesel duty) for heavy trucks would be 2.3 to 2.8 euro cents (5.0 to 6.2 cents) depending on the Euro class, for each kilometer. This rate applies only on the main road network, for Dutch and foreign trucks. According to expectations, this will not result in a shift from the use of the main road network to the secondary road network, because the cost savings do not appear to outweigh the loss in travel time and extra fuel consumption; however, this is being further investigated.

In the long term social external costs could be the kilometer charge. To gain an insight in the level of such a rate, we have decided the findings of the Stevens working group, and the fixed and variable infrastructure costs have been calculated in the kilometer charge rates. For light trucks, the kilometer charge would then be approximately 6.4 euro cents (14 cents) per kilometer, for heavy trucks 12.7 euro cents (28 cents) per kilometer on the main road network. Such a charge would result in a considerable increase in costs for the sector.

2.5 Effects for the private car

The Cabinet has reviewed a number of variants of the kilometer charge system. This paragraph represents the effects of the variant according to which the whole of motor vehicle tax, a quarter of bpm and a proportion of duties are converted into a kilometer charge. Following the introduction, the effects will be monitored. According to the results of this monitoring, alterations may be made. Interest and governmental organisations will be involved in developing the parameters for the monitoring process.

The most important conclusion derived from traffic studies is that as a result of variabilisation, the number of vehicle kilometers in the short (2010) and the long (2020) term will fall by seven and ten percent respectively, as compared to the situation without a kilometer charge.⁵ Due to the reduction in traffic, congestion will be even further reduced: the number of lost vehicle hours per 24-hour period will fall in the short term by twenty and in the long term by twenty-five percent. Due to the autonomous growth of mobility, the number of traffic jams will be higher than in 2000. Via variabilisation alone, on a number of roads, the NVVP objectives of an average continuous travel flow speed of sixty kilometers per hour during the rush hour will not be achieved. Variabilisation will therefore lead to improved accessibility and quality of the living environment as compared with the reference situation, but not to an absolute improvement. Differentiation according to place and time will result in an absolute reduction in traffic congestion and the required traffic flow speed.

As a result of the (relative) reduction in the number of vehicle kilometers, there is also a positive effect on safety and the quality of the living environment. The risk of accidents will fall by approximately ten percent⁶ and the emissions of CO₂, NO_x and fine dust will fall by approximately ten percent. Noise nuisance will be reduced by 0.5 dB(A) per 24-hour period. In this connection it is assumed that the size of the vehicle fleet will not be fundamentally altered as a result of variabilisation. At present, this question is being investigated. Results will be available by the end of the year.

The socio-economic effects have also been charted out; who will (stand to) gain and who will be financially worse off as a result of variabilisation. Everyone who drives in a private car in the Netherlands (at) less than 18,000 km per year will stand to gain as a result. This covers more than half of all car owners. The remaining car owners will find themselves at a disadvantage, unless they drive less. Over the coming period, these effects and the resulting effects for business and industry will be further investigated.

As a result of variabilisation/variation, low-income households will, on average, stand to gain financially. Heavy road users will find themselves at a disadvantage. This category includes business and professional drivers. Generally speaking, these are also the higher income classes.

Costs and benefits

For (reasons of) social acceptance, it is essential that the benefits of the kilometer charge balance the investments and operating costs. This applies to both individual car drivers and society as a whole. A rough cost-benefit analysis has indicated that social wealth will increase, through the introduction of the kilometer tax. In the event of differentiation of the rates according to place and time, this rise will be considerably higher.

At present a rough indication of the development costs of the mobimeter suggests an amount of between 100 and 150 Euro (excluding installation costs and VAT) per unit. The actual costs will depend on market developments and the results of the tendering process.

An extensive social cost-benefit analysis is soon to commence on the basis of which a better estimate can be made of the costs and benefits resulting from the introduction of a kilometer tax. The results of the market consultation will be taken into account in this analysis, which could have a major influence on costs. Based on the cost-benefit analysis, a contribution will be made to the preparations and decision making, about a new incentive.

⁵ On the basis of autonomous growth, mobility in 2010 will be twenty percent higher than in 2000, and in 2020 will have increased to forty percent.

⁶ Calculations indicate that no shift will occur from the main road network to the less safe secondary road network: time gains counterbalance the shorter route.

3. Technology: the outlines

A reliable and fraud-proof kilometer charge taxation system will necessitate a new technical system for registering the number of kilometers driven. As indicated in the Mobimiles report the various technological components necessary for kilometer charges taxation are in principle already available. However, the necessary combination of technologies will have to be developed. The Cabinet wishes to leave the development of a combination of these technologies to the market. With this in mind, a functional programme of requirements has been, on the basis of which the market itself is able to put forward solutions. This means that at present, no binding statements can be made about the technical specifications of the system. It is possible that private parties will develop alternative systems, on the basis of the functional programme of requirements. This chapter presents the outlines of the system, and indicates also how the system could operate.

The Cabinet has decided:

- to further develop the system for kilometer charges taxation based on the functional programme in consultation with parties;
- information which relates to the amount payable and the total number of kilometers driven per charge class;
- that submitting the declaration is the responsibility of the registration holder;
- to equip every Dutch vehicle with a mobimeter.

3.1 The total system

For the sound implementation of the kilometer charge system, the following will be necessary:

- Policy development: determining rates and specifications for the required equipment;
- Declaration: measuring the number of kilometers driven, calculating the amount payable, and transmission to the service provider;
- Charging and collection: receiving the declaration, determining the amount payable, sending the bill, collecting the amount payable and customer service;
- Enforcement and supervision;
- Additional services: equipment and software for the kilometer charge system should make it possible to offer additional services;
- Supervision of market action, privacy and implementation.

Implementation of this system will call for agreements, processes and procedures and sometimes new technology. The core of the system is the mobimeter which on the one hand will register the number of kilometers driven in various charge classes and issue a declaration of those kilometers, and on the other hand offer additional services. The declaration will be transmitted electronically to a so-called 'service provider': the manager of data traffic with the mobimeter, who directly sends the information about the kilometer charge to the Tax Office. Depending on the result of the tendering process, the service providers will be private parties or the Tax Office (see chapter 5). The service provider will offer additional services to the user, and will receive information about the kilometer charge payable, and the use of the additional services. This implementing body will as it were send two bills to the user: a bill (from the Tax Office) containing the kilometer charge payable and a bill for the use of the additional services. The amount of the kilometer charge will be paid directly by the user to the Tax Office. The user will communicate directly with the Tax Office about the tax declaration.

3.2 The mobimeter

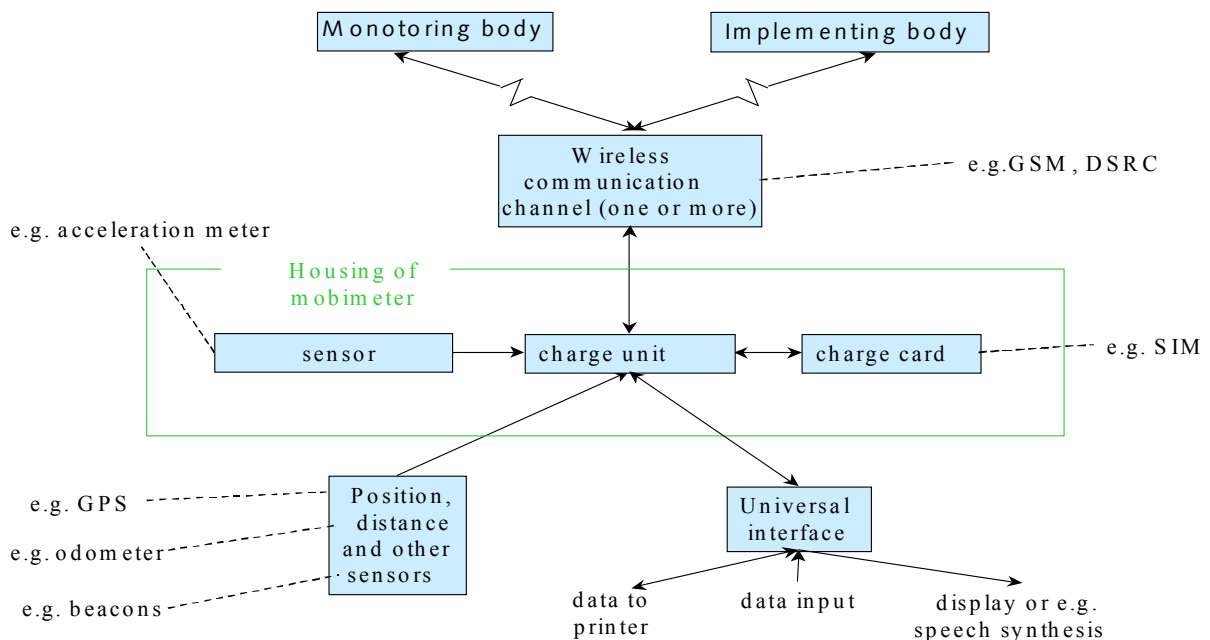
A new 'smart' kilometer counter will have to be developed. Existing odometers do not reflect the number of kilometers driven accurately enough, and are relatively unreliable. The existing system also fails to take the prospect of a mobility market into account. Based on the market orientation carried out and the 'Mobimiles' report, it appears that if this new device were to be fitted with a location finding system, there is a realistic possibility that additional services could be made available.⁷ Such a move also makes it possible to differentiate the rate according to place and time, and thus brings the prospect of the mobility market further within our reach.

⁷ The telecom market is already developing a range of services for mobile telephony, and the automotive industry is developing vehicle-related technology.

The mobimeter will have to collect data relevant to the kilometer charge; the number of kilometers driven and the location of use. Subsequently, the kilometer charge to be paid must be calculated. This demands that the mobimeter is aware of the rates for the location where the kilometers have been driven. It must be possible to store and transmit this data in a tamper-proof manner. How private parties will fulfil these requirements will be determined during the elaboration over the coming.

Possible solutions include location-finding using road side beacons, but this would seem to involve costly provisions. Other options are based on the Global Positioning System (GPS). Once the position of the vehicle is known, using a digital road map in the mobimeter, the road section can be identified. The mobimeter then identifies the charge class. In the event of differentiation according to place, it is possible to set a specific rate for each road section, but for reasons of simplification, it would be necessary to limit the number of rates. For privacy protection, data about place and time from the vehicle will not be made available to anyone other than the registration holder him or herself. For additional services, the car driver can decide whether or not personal information should be made available on an individual basis.

Figure 3.1 Sketch showing operation of the mobimeter



All this information can be combined in the charge unit in the mobimeter into a payable amount. This amount will be stored in the mobimeter. To prevent fraud and tampering, it is important that once stored, this data cannot be changed by the user. Once a month or, if later, after 1,000 km driven, the registration holder will automatically submit a declaration to the service provider. Naturally, this declaration is accompanied by the vehicle identification.

Finally, the mobimeter must be capable of transmitting wireless information about to the inspection, if so requested. The user must be able to check what information has been stored, and to request detailed journey information for personal use.

Calculating the charge information inside the vehicle offers the advantage that the privacy of the registration holder is guaranteed. The information about where someone has driven and when remains within the vehicle. Only the amount payable and the total number of kilometers driven per charge class are transmitted. Location finding is carried out inside the vehicle. Vehicle tracing by use of the kilometer charge system will not be possible.

The tamper-proof registration of data and identification can be combined in a charge card. This charge card, which is comparable to the SIM card in a mobile telephone, is linked to the vehicle registration and subsequently installed in the mobimeter. The charge card will be constructed in such a way that information once recorded can no longer be altered or deleted. This will prevent fraud. In order to further prevent fraud, it will not be possible to drive without this being registered by the mobimeter. The mobimeter must also be built in such a way that efforts to tamper with the system are registered and/or visible. These features represent major stumbling blocks to fraud and tampering.

In order to promote both privacy and resistance to tampering, it is important that the mobimeter communicates only through secure protocols. It is also important that this communication is only possible with authorised parties outside the vehicle.

3.3 The system from the driver's perspective

The driver will hardly be aware of the measurements and calculations carried out by the system, but is able to see at a glance the costs of the journey. When the system is introduced, the owner will have to equip the vehicle with a mobimeter. In the long term, it is expected that new vehicles will be fitted with a mobimeter as a standard.

During every journey, the driver must check whether the mobimeter is functioning correctly. If this is not the case, the situation must be reported to the service provider, and the mobimeter must be repaired as quickly as possible. The compulsory tax declaration will call for no additional actions; the tax declaration is automatically periodically transmitted by the mobimeter. The registration holder will also periodically receive an overview of the kilometer charge payable, and the number of kilometers driven. A detailed journey overview can only be produced by the driver him or herself. This information is contained within the mobimeter, but is not available to the service provider. The detailed information can serve as a basis for an appeal against an incorrect tax amount, for example in the event of theft.

3.4 The option of offering additional services

The mobimeter will make it possible to offer additional services to the driver. In technical terms, it will be possible to connect peripheral equipment such as displays, data input systems and speech recognition to the mobimeter. The architecture provides for the possibility of loading additional software, necessary for these additional services. This provision will be implemented in such a way that implementation of the kilometer charge is not compromised.

For the protection of privacy, it will not be possible to load software into the vehicle device unless the user of that device gives the relevant explicit permission. The user can decide whether or not to divulge personal details, in order to facilitate particular additional services (for example information about the location is necessary for route navigation).

The kilometer charge system will also make it possible to improve road safety. For example the issuing of timely warnings in the event of fog or slippery road conditions, or an imminent approach of a traffic jam. Whether and how road safety can be improved is still being investigated. The government will assess the additional services offered for road safety. Consultation on this matter will be carried out in collaboration with the road safety organisation, 3VO.

4. Organising implementation of the kilometer charge

For the smooth operation of the overall system of kilometer charging (see chapter 3), it is essential that a clear indication be given of which party is responsible for what, and who will implement which tasks. This chapter describes the organisation in the operation phase. It should be emphasised here that we are dealing only with the system of kilometer charging. Chapter 5 describes the additional services which will have to be provided by private parties. The Cabinet has decided that:

- the kilometer charge is a form of taxation: final responsibility for this tax will lie with the Minister of Finance;
- the kilometer charge will be a traffic-related instrument, the final responsibility for which will lie with the Minister of Transport, Public Works and Water Management;
- Taking into account the framework of recommendations derived from the Cabinet response to the report 'Guaranteeing public interests'⁸, the implementation of the system of kilometer charging will be for the most part the responsibility of the market parties.

Three clusters of tasks can be identified:

1. Government tasks: tasks which belong in the public domain;
2. Tasks to be subcontracted: tasks requiring facilities which are not available within government, which are beyond the core tasks of government, or which as a result of specialisation and economies of scale can more efficiently be implemented by market parties;
3. Private tasks: These tasks can be implemented by and for the account and risk of the market, and are only subject to public responsibility in the form of supervision, for example in respect of safety.

4.1 Government tasks: the public domain

The kilometer charge is part of the mobility policy as expressed in the NVVP. The yield from vehicle tax is an important source of income for central government. The kilometer charge, as is the case with existing vehicle taxes, will be a charge accruing to the government purse, which is subject to ministerial responsibility. By introducing variation in vehicle tax, the character of the tax will not change. The collection of tax is the responsibility of the Minister of Finance. In the development and implementation phase of the kilometer charge system, there will be a joint responsibility for the Minister of Finance and the Minister of Transport, Public Works and Water Management. Because, in addition to generating general resources traffic effects are to be achieved, the determination of rates and charge structures will be a matter for both Ministers.

The government is responsible for supervising market action, privacy and the performance of private service providers. Naturally, government is also responsible for legal enforcement. This is an integral component of the entire kilometer charge process. Legal enforcement covers the entire process from start to finish, whereby a balance could be established between effective preventive measures, such as physical protection of the mobimeter, and effective monitoring efforts. This balance will play a key role in the further development of the functional programme of requirements.

A number of mechanisms have been provided for detecting fraud. For example, administrative checks are carried out by the service provider (for example by checking that everyone submits a declaration), and the mobimeter is checked and calibrated in an annual inspection. Checks will also be carried out using measuring equipment by the roadside at fixed and mobile measurement points. For example, the installation of two hundred measurement points along heavily used roads means that users of these roads can be checked once every three days. By a focused approach on specific groups and specific locations, an acceptable level of checks will be achieved.

⁸ In accordance with the Cabinet reaction to the report 'Ensuring public interests' by the Scientific Council on Government Policy (Parliamentary Document TK 2000-2001, 27 771, number 1).

In determining the required control capacity, penalty charge in the event of fraud plays a key role. After all, the higher the penalty, the greater the threat, the less the temptation to commit fraud, and hence the smaller the need for control activities. This is supported by constructing the mobimeter in such a way that deviations can not easily take place and must almost always be the consequence of an action by the user. These matters will be further elaborated during the development phase.

4.2 Tasks to be subcontracted

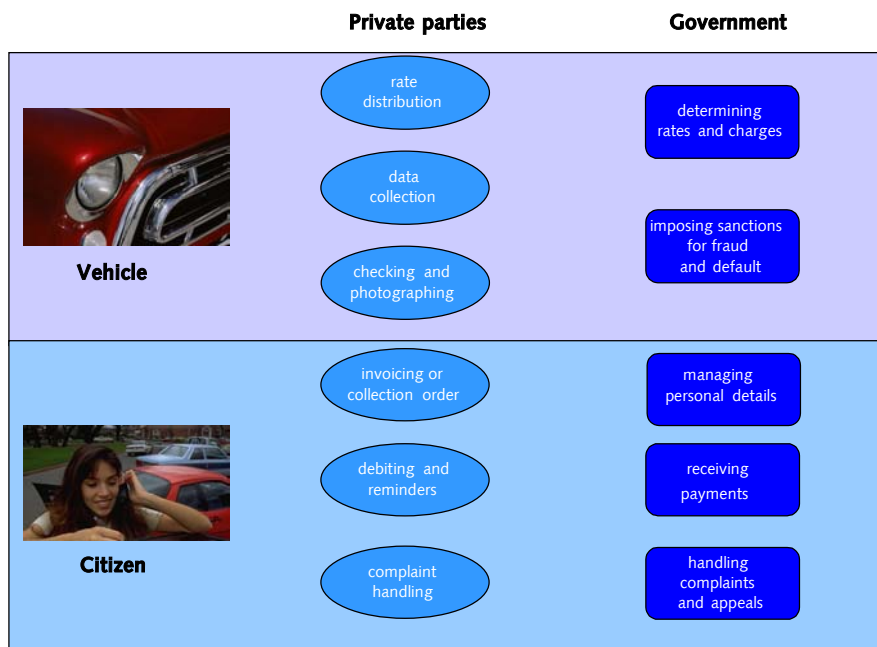
A proportion of the tasks in the kilometer charge process (see 3.1) are suitable for subcontracting. On behalf of the government, market parties may well be capable of processing the declarations, sending out bills, and carrying out the frontline settlement of customer reactions. These tasks can be carried out efficiently by government, because the Tax Office already carries out these tasks on a large scale for other forms of central government tax. The desirability of also developing other additional services alongside the kilometer charge could be a reason for subcontracting these tasks. The market orientation (see appendix) suggests that the combination of kilometer charging tasks and additional services could result in synergy and an attractive business opportunity. Chapter 5 outlines the possible role of the service providers. It is also possible that this role will be fulfilled by a public-private partnership, for example the ‘trusted third party’ (ttp) mentioned in ‘Mobimiles’.

An essential element in ensuring that the mobimeter is reliable in relation to the accuracy of the charge calculation is certification. Certification offers a guarantee of the correct functioning of the mobimeter. The intention is that the mobimeters supplied by the manufacturers may only be sold once they have been certified. Consideration is also being given to limiting the installation of mobimeters to certified bodies.

4.3 Private implementation

The production of the mobimeter is a matter for the market. The same also applies for further development, production, distribution and installation of certified mobimeters. The development and provision of additional services also comes under the private domain. The additional services are an important by-product of the kilometer charge, with a view to reducing the costs of the mobimeter, operation of the system and social acceptance.

Figure 1.1 Overview of tasks and possible implementation by private parties and government⁹



⁹ Whether the tasks allocated to private parties will also actually be implemented by these parties depends in part on the market consultation. It is also possible that these tasks will be carried out by government.

5. Development phase (2002-2004)

In the development stage, the technology necessary for the kilometer charge will have to be developed, additional services will have to be established and a clear indication will have to be given as to which organisation will fulfil the role of service provider. The government will direct the process, but a substantial contribution from the market is intended. Experience with major projects has shown that this approach results in greater speed on the one hand and manageable costs on the other. The Cabinet has chosen:

- to develop, validate and demonstrate an open standard for the kilometer charge;
- to start a tendering procedure for service providers, on the basis of a programme of requirements;
- to stimulate the development of vehicle-related additional services.

This chapter describes the current state of thinking. These ideas may be adapted during the development phase.

5.1 Mobimeter

During the development phase, the mobimeter must be developed, tested, mass produced, distributed and installed. This means that a development process for the mobimeter will have to be initiated as soon as possible. This process will involve designing an open standard for the kilometer charge, production of the first mobimeters and certification.

1. The open standard for kilometer charges (development time approximately 8 months)

Before the development of mobimeters can commence, the functional programme of requirements will have to be further elaborated and tested. A determination will have to be made as to how the communication between the various (such as measurement, calculation, fraud identification) will be realised, so that society can be sure that the mobimeter will carry out the charge calculation correctly. The Cabinet suggests that this should be achieved within an open standard. After all, such a standard is not subject to intellectual property rights, and no single party can claim exclusive rights. As a result, it will be possible for several companies to start producing mobimeters. The open standard is therefore also the best guarantee for ensuring the introduction of additional services and future expansion of the mobimeter with additional functions. The open standard is also relevant in respect of the possible internationalisation of the kilometer charge system. All interested parties will be given an opportunity to submit their input. With this in mind, contacts will be established with the automotive industry and developments in service provision. Cooperative work is already being carried out on systems for offering mobility services on an international scale. An open standard is not static, and may change over time.

The Open standard: an example

The best-known examples of an open standard are the Internet and the Global Standard for Mobile Telephony (GSM). Anyone is able to request and further develop the technical architecture. This is the best guarantee for broad-based industrial involvement, at low costs. An open standard could develop into an international standard. GSM, for example, is based in (northern) Europe, but has now become the worldwide standard used for mobile telephony. Because the Netherlands is the frontrunner in Europe when it comes to payment for the use of private cars, there is a possibility of introducing the standard.

Once developed, the standard will have to be validated and demonstrated. Technical feasibility of the basic functions of the mobimeter and a number of critical functions (such as fraud prevention, privacy, accuracy/reliability, charge update, enforcement concept) will have to be established.

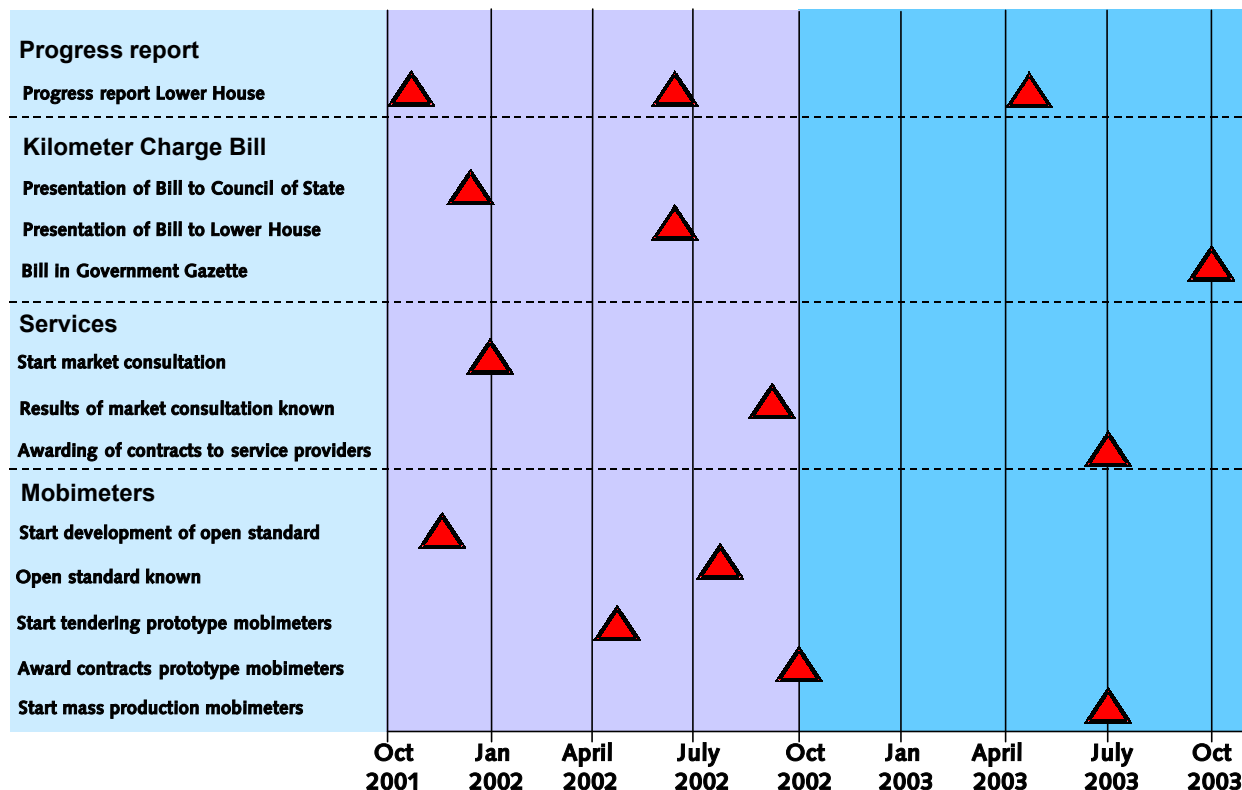
2. Design, production and delivery of the first mobimeters (development time approx. 12 months)

On the basis of the open standard, manufacturers can start producing the first mobimeters. During the development of an open standard, (the necessity for the government to issue an order for the development, construction and production of a mobimeter to a number of manufacturers will be investigated. On the one hand such a tendering process could be necessary to ensure a timely initiation of the commercial production process, whilst on the other hand, the industry itself will also have to be willing to invest in development and production (to ensure follow-up orders). Once the mobimeters are mass produced, a lower marginal cost price will emerge. When the first mobimeters are ready (for use in the summer of 2003), extensive tests will be held, e.g. in the Randstad conurbation.

3. Certification

During the development phase, the certification requirements will have to be further elaborated on the basis of the open standard and the functional programme of requirements, in order to guarantee that every service provider is mobimeter, and that every company is able to start producing mobimeters. Certification of the organisation (administrative), processes and software will also be necessary, in order to ensure the establishment of a system.

Figure 1.2 Time scale for decision making, services procedure and mobimeter procedure



5.2 Service providers

The service providers could start implementing the following activities:

- receiving, re-transmitting and administrative processing of user declarations;
- distribution of charges to mobimeters;
- distribution of mobimeters to customers;
- operational (application) management for mobimeters (technical integrity);
- offering additional services;¹⁰
- (frontline) customer support.

The service provider will bear responsibility for the development and marketing of additional services. The service provider will be accountable for the development of these commercial services, and this will be at their own risk.

The service providers will bear no responsibility for the actual collection (this will be the responsibility of the Tax Office) but they will be responsible for reliable and safe communication with the mobimeter. Through a secure communication channel, new applications, for example applications for differentiation or additional services, can be added to the mobimeter. The service provider is authorised to add such additional services. Through this approach, the integrity of the mobimeter will be technically and organisationally guaranteed.

¹⁰ Every citizen will at all times be able to opt solely for the 'basic package': only kilometer charge. Every service provider must offer this basic package.

The role of the service providers in the distribution of mobimeters can be expressed in a number of ways. Analogously with the market for mobile telephony, road users themselves could purchase a mobimeter. It is also possible for the service provider to offer mobimeters in combination with additional services. In that case, the service provider may have to bear (a proportion of) the purchase costs for the mobimeters.

In order to gain insight into the market possibilities, government will be starting a market consultation programme. An indication will first be generated of precisely what the government is looking for: a programme of requirements will be drawn up. Subsequently, the market parties will be requested to 'submit an offer'. Important in this process is the amount the providers will charge for providing and settling the charge per kilometer. During the first few years, the amount the government will have to pay for this service is probably higher than the current costs accrued by the Tax Office for the collection of fixed vehicle taxes. The service providers will be asked to indicate the degree to which this amount will be likely to fall. The outcome should be that the government bears the same or maybe even lower costs, in the event of subcontracting. The major advantage to this approach is that additional services will have a better chance of succeeding.

The end of 2002 is an important milestone. At that point, it will be clear whether the offers from the market are sufficient in terms of short-term costs to the government and the options for additional services. It is expected that the role of service provider will be attractive to a large number of (new) market parties as well as the government. If the contribution, involvement or cost prospect from the market prove disappointing, it is possible to opt for a model according to which the government will fulfil the role of service provider. In the opinion of the market parties, the likelihood that additional services will then be introduced is not considerable. If the offer from the market parties is of a sufficient quality, a start can be made on establishing contracts. The preference is for a number of different service providers. Each citizen will then be free to choose which service provider he or she wishes to use. In terms of the additional services, there will be real competition for clients, and in order to guarantee that in 2006 every road user will be able to become a customer of any service provider they choose, the service providers will be obliged to offer the service; in other words, they are not allowed to refuse any clients. The contract must also ensure sufficient capacity. This is possible by including a minimum market share to which the provider wishes to commit in the contract.

5.3 Additional services

Additional services are an important element in the positioning and development of the kilometer charge. The services will increase the user value for the driver. As a result of the mobimeter, the cost of driving will be more equally distributed the user pays and more comfortable (additional services). For the government, the additional services are important because of the cost-reducing factor on the operation of the kilometer charge system. Naturally, the additional services must not be at the expense of road safety, or tax collection via the mobimeter.

The market investigation has demonstrated that market parties do see opportunities for additional services, but only on condition that the government encourages the development of those services (see appendix). The Cabinet therefore feels it is necessary to encourage the development of vehicle-related additional services by accelerating market development, where initiatives have already been taken or are proposed. This will for example be achieved by developing a platform of open standards, in cooperation with private parties. Whether additional stimuli will have to be provided is currently being investigated.

5.4 Costs in 2002

In the year 2002, the project organisation will have developed an open standard. In the same year, the first phase of the tender process for the service providers will begin. There will be extensive communication about the design of the kilometer charge system. The total costs (excluding the staffing hours of the Ministries of Finance and Transport, Public Works and Water Management) will be approximately 20 million Euro (NLG 45 million).¹¹ These total costs will be covered in the budget of the Ministry of Transport, Public Works and Water Management.

¹¹ On the basis of technical marketing considerations, this amount has not been broken down.

Additional services: the options

At present, more and more additional services are being made available via mobile telephone. According to expectations, this development will continue in the future. Using the mobimeter, location finding will also be possible in the future. For vehicle-related additional services, a link to the mobimeter is an obvious option.

Traffic and transport services

This is the largest category of additional services. These services do not so much offer factual information (there are this many kilometers of traffic jams) but above all suggest solutions. A very accurate prediction of journey time and the processing of current information about the situation on the road will be the ingredients. The result is a personal, up-to-date and affordable travel recommendation for the fastest route from a to b. This service will cover the entire road network. The solution on offer may be in the manner of navigation, up-to-date traffic information about the journey to be undertaken, integration of journey recommendations from the various modalities, or a combination of car/train. Thanks to the introduction of kilometer charges, such services will be within reach for every traveller. An additional advantage will be better distribution across and better use of the entire infrastructure, and the additional possibilities for traffic management. The result could be a further decrease in congestion levels.

Safety and security services

Another important category relates to such items as safety and breakdown assistance. Services of this kind will warn travellers of local weather conditions such as fog, snow and road works. In the event of a breakdown, all necessary details can be automatically passed on to the emergency services not only the location of the vehicle but also technical and personal details. Another possibility is that in the event of theft, the vehicle automatically passes on its position. This is already the case in Italy, and insurance companies are now offering a discount on their policies. Insurance companies can also base their charges on the actual number of kilometers driven. Lease and transport companies can better match their fleet maintenance to demand and to the technical condition of the vehicle. This is because the car itself can regularly contact the administrative system of the dealer or garage, and automatically announce when maintenance is required.

Entertainment and communication

After residence, the car is the second highest expense item for the average family. As is the case at home, a great deal of 'spare time' is spent in the car. However, activities in the car must not avert the attention of the driver speech (communication) and sound (music) offer numerous possibilities in this case. Listening to and dictating e-mail messages whilst driving could be an attractive service for many business users. Little is known at present about the effect of linking such items as instant messaging and SMS to the current location of the vehicle, but it is certain that such a link will have an impact. Services according to which people can enter the names of friends and family, and then being able to determine where they are and whether they are nearby, will certainly emerge. In addition, integrating the car radio/CD player with the device for kilometer charging will undoubtedly lead to request radio, a huge increase in the number of channels, and will put an end to the constant shuffling of CDs. Such items as a request button on the radio 'I want to hear this song more often' could be introduced.

Convenience services

These could include the reservation of and paying for parking spaces. Coins and cards could be replaced by simply pressing the 'park' button. Because the precise position of the car is known, the applicable parking charge can be easily determined. The total of all parking costs accrued can then be charged on a monthly basis. This in turn could result in the establishment of a whole range of additional services on the basis of the parking product, for example reservation of parking spaces.

Another example of this type of service is automatic kilometer administration for business drivers. It is easy to indicate whether a journey is for business or private, alongside the purpose of the journey. Finally, a kind of yellow pages service could be attractive to every traveller. This service could provide an answer to such questions as: what is the cheapest petrol station within a 20 km radius, where is the closest pizza restaurant, cash point or garage? These services could in turn be combined with the above mentioned navigation(-al) services.

6. Implementation phase (2004-2006)

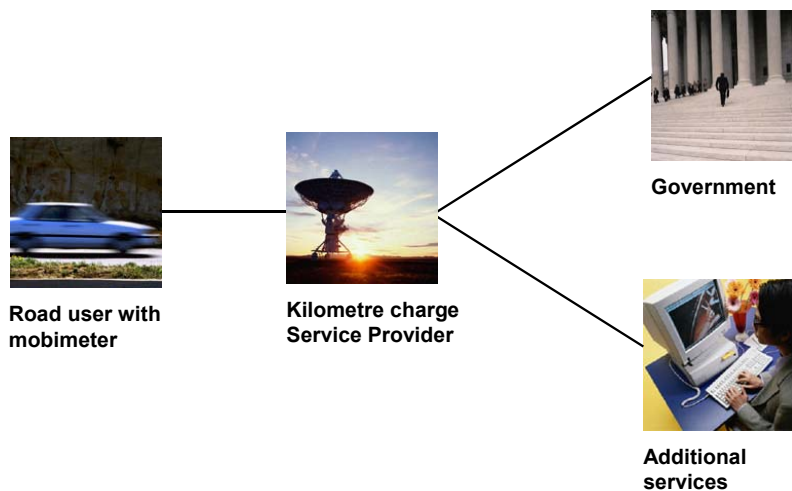
During the implementation phase, the introduction of the kilometer charge will call for testing of optimal coherence and coverage of the technical functions of the mobimeter as well as the entire organisation of the variable road pricing system. Prior to the introduction of the kilometer charge, the Cabinet intends to organise a number of try-outs. The precise nature of these try-outs will be determined during the development phase, in cooperation with market parties, governmental organisations and interest groups. For the time being, try-outs with the mobimeter are being considered so that all the processes and procedures necessary for system operation can be run and tested. The results of these try-outs may lead to minor adjustments to the functional programme of requirements and the production process, and will determine the manner of actual implementation. Another option being considered is a full rehearsal with for example 100,000 volunteers, with a view to settling in the organisation, and testing the procedural aspects (e.g. installation companies, helpdesk, customer services and the enforcement system).

Roll-out and implementation

The implementation strategy will be elaborated in collaboration and cooperation with the social (in particular sector) organisations. The general public will bear the responsibility for the actual installation of the mobimeter into their vehicles.

From 2004 onwards, the system of kilometer charges will be introduced step by step. For example, the mobimeters will be built into the vehicles, and from 2004 onwards, car drivers who decide to make the changeover can already access any additional services on offer. In 2006, full introduction of the kilometer charge could be possible throughout the Netherlands.

After 2006, expansion of the kilometer charge will be possible. The options include differentiation according to place and time, the charging on of external costs any newly developed additional services.



Appendix: The Results of market orientation

Prior to the preparation of the Mobimiles report, discussions were held with a number of parties about the practicality, feasibility and desirability of a kilometer charge system with additional services. The conclusion was that the kilometer charge is possible in the short term, and that market parties see evident opportunities for offering additional services. To facilitate the choices to be made in the field of market approach and organisation form, as announced in the Cabinet position paper, a more detailed and specific market orientation was conducted. An additional advantage of a market orientation is that the market parties can be offered direct information on the kilometer charge system. The feasibility, risks, willingness to participate and conditions of participation were investigated amongst thirty potential suppliers of one or more components of the kilometer charge system. These companies were also asked whether they see options for additional services.

The market orientation demonstrated a positive response from the private parties concerning the feasibility of a kilometer charge system and additional services, as well as the positioning of the kilometer charge as a shared activity between government, business and industry and social and administrative organisations. The private parties suggested that the system architecture is technically feasible, whereby the (cost of the) basic model of the mobimeter will be approximately 100 to 150 Euro per unit excluding installation and VAT. The private parties pointed out the need for social acceptance of the kilometer charge, but at the same time suggested that the provision of a package of additional services could be a positive factor in establishing such support. The private parties also pointed to the possible involvement of a trusted third party.

Concerning the establishment of additional services, those companies approached showed a positive response. The majority of market parties expressed the view that the development of car-related mobile information services could become a lucrative commercial activity. However, before the companies are willing to invest in the development of these services, they are looking for a strong commitment on the part of the government to indeed implement the kilometer charge system and the development of the mobimeter. The market is clear on its own position. The market parties are in favour of a joint development of the mobimeter by private parties and central government. The companies are not willing to bear the development risk alone, because they want true commitment from the government about the introduction of the charge system. The market will then carry out production. Finally, the market orientation indicated that communication with the mobimeter about the kilometer charge payable and the services to be offered can best be operated via private parties; the so-called service providers. Additional services will then be more likely to be introduced, and the total system can be made more cost-effective to the government.

The market parties drew the following conclusions:

- The kilometer charge is part of a range of vehicle-related services, which will be offered to the road user through the mobimeter. Additional services are possible and, for reasons of social acceptance, desirable;
- A private service provider increases the likelihood of additional services, and can lower the costs for government;
- Multiple service providers are favoured over the use of a single provider, because competition will be enabled for the provision of additional services. After all, no competition is possible between the providers in respect of the general population in relation to the kilometer charge;
- Considering planning, government commitment and the required interoperability of the mobimeters, the tendering process will have to be broken down into a separate tendering procedure for the development of the mobimeter, and tendering for the service providers;
- Additional services will have to be encouraged by government: market parties will offer additional services, but their development will have to be stimulated.