



Ministry of Infrastructure and the  
Environment

# Work Programme 2015

KiM | Netherlands Institute for Transport Policy Analysis



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# 0

# About KiM and this Work Programme

## 0.1 Introduction

This is the 2015 Work Programme of the Netherlands Institute for Transport Policy Analysis (KiM).

The coalition agreement of Prime Minister Mark Rutte's second government, which took office in 2012, states that infrastructure and accessibility are vital to the Dutch economy. The government will work to improve accessibility by investing in new projects and by making better use of the existing transport infrastructure. Public transport must be reliable, accessible and efficient, and connections between different forms of public transport must be improved. The government is promoting the development of the mainports of Schiphol and Rotterdam, and opts for economic growth that avoids adverse ecological and environmental impacts. The coalition agreement proposes a clearer demarcation of tasks and responsibilities within and between the different tiers of government, arguing that effectively safeguarding public interests must be accompanied by room for reform.

In 2015, the Ministry of Infrastructure and the Environment (IenM) will devote particular attention to the program *Meer Bereiken* (Improving Accessibility), which was started in 2014. Expansion of new infrastructure goes hand in hand with intelligent alternative solutions in the area of behavioural change, influencing demand, and spatial planning. The development of new information technologies and Intelligent Transport Systems (ITS) offer new opportunities for road and public transport users, managers, carriers and the Dutch business sector, which subsequently alters the role of government. Regional institutions and the corporate sector will be much more involved in the approach to problems and challenges. The new approach in *Meer Bereiken* will be developed and applied in eight comprehensive MIRT-research studies. In 2015, work will continue on the implementation of the Long Term Rail Agenda, which will improve door-to-door accessibility, ease of travel, and travel information. With regard to climate change and the environment in 2015, priority will be given to the Climate Agenda and the Social and Economic Council of the Netherlands' Energy Agreement for Sustainable Growth.

### **Demand-driven and evidence-based**

Essential to making and implementing policies for these topics is having an up-to-date, theoretical and empirical knowledge base. In 2015 KiM will continue its efforts to make a significant contribution to compiling the required knowledge and rendering it relevant and applicable to policy and practice. KiM's Work Programme is *demand-driven*. The demand for research is not a case of one-way traffic from the policy directorates to KiM, in the sense of 'the policy asks, KiM reacts'. The articulation of research questions is based on an active dialogue in which KiM regularly alerts the policy directives to strategic developments, social trends and other issues affecting mobility that may require a policy response. In other words, KiM has an important strategic task of making the required knowledge available for the development and maintenance of policy. KiM's stated objective is therefore to strengthen and broaden the strategic knowledge base for mobility policy and thus enhance the quality of mobility policy. We strive for evidence-based policy: basing policy choices on relevant facts, sound analyses and reliable estimates of risks drawn up using nationally and internationally available knowledge.

## 0.2 Products, services and working methods

### Products and services

KiM delivers three types of products and services to strengthen and broaden the strategic knowledge base for mobility policy:

- Research projects: Exploratory studies and policy analyses based on factual information and reviews of (scientific) literature, which are then translated into a form that is applicable to policy and practice. The resulting publications are publicly available.
- Knowledge at the Table: introducing knowledge into policy processes in the following ways:
  - discussions, presentations and short reports on the available knowledge and empirical evidence;
  - answering ad hoc questions;
  - giving the Ministry of IenM access to national and international knowledge networks (what knowledge can be obtained from which sources?);
  - providing assistance to the IenM policy directorates in formulating research questions and methods for research to be contracted out to third parties;
  - participating in steering committees;
  - advising on and assisting with the planning of knowledge development programmes for research institutes outside the Ministry of IenM.
- Observational reports: reports in which KiM draws attention within the ministry to various topics in response to current policy and research developments or reports by third parties. These reports are not included in the Work Programme, although capacity is made available within KiM for this purpose. Unlike research projects and knowledge at the table, observational reports are not demand-driven.

Section 0.5 offers an indication of the capacity deployed in these three working methods.

### Contours of KiM's working methods and service delivery

The working methods and parameters within which KiM delivers its products and services have been carefully chosen.

- KiM carries out projects in close contact with the policymakers of the Ministry of IenM; the short lines of communication between the policymakers and KiM help to strengthen the knowledge base because they facilitate a better exchange of policy questions and research results.
- KiM focuses on strategic policy research: it is concerned with broad principles and knowledge relevant to the first phase of the policy cycle (agenda setting, policymaking and evaluation).
- Only KiM's research projects are published in the public domain. Publication occurs within three months of completion of the research. In some cases an exception is made, such as, for example, if the research forms an input to the development of a major policy document, in which case the relevant research reports are published simultaneously with the release of the policy document.
- The type of policy input given by KiM depends on the phase of policy development:
  - Agenda setting: KiM outlines substantive developments and identifies *leverage points for policy intervention*.
  - Policymaking: KiM provides *ex ante* assessments of the effects of *policy levers or policy instruments* proposed by the policy directorates; where necessary KiM indicates that the range of policy levers is wider than initially proposed by the policy directorates and, in consultation with policymakers, evaluates this broader range of policy levers.
  - Policy evaluation: KiM provides *ex-durante* or *ex post* assessments of the impacts of implemented *policy instruments*.

KiM's policy analyses serve as input for political and policy-related considerations.

- KiM does not undertake any fundamental research, but it may raise proposals for fundamental research for consideration.
- KiM focuses on the macro level (society as a whole) and the meso level (groups in society), but does not concern itself with insights at the level of the individual that cannot be generalised to larger groups in society.
- KiM examines issues from different angles and from several disciplines, which makes KiM's analyses more robust. Even in studies in which a certain perspective is the dominant perspective, the results are

evaluated from a range of different perspectives to increase their robustness. This is also reflected in the wide range of disciplines represented within KiM (which include economics, human geography, regional planning, sociology, psychology, traffic engineering and public administration).

- KiM does not only produce descriptive studies (which trends are apparent - the 'what' question), but also explanatory analyses (what are the underlying factors – the 'how' question).
- KiM's intention to strengthen and broaden the ministry's knowledge base relates to the full range of the ministry's policy responsibilities, including the relation between mobility and spatial development and mobility and sustainability. The needs and benefits are greatest in the most important policy fields (important in the sense of a policy's contribution to solving social problems and the degree to which an issue gives rise to public and political debate).

## 0.3 Positioning

### Differences with the policy assessment agencies

KiM is positioned within the Ministry of IenM to facilitate the uptake of KiM products and direct interaction with the policy directorates. There are clear differences between KiM and the policy assessment agencies. A key difference is that the policy assessment agencies examine issues in different policy areas (including mobility) from a certain perspective (economy, environment and behaviour), whereas KiM addresses specific issues within the field of mobility policy from various different perspectives (economy, environment and behaviour). In addition, KiM's work is almost entirely demand-led, whereas the policy assessment agencies are free to add topics to their own agendas, for which of course they keep their ear to the ground in the government departments. KiM also puts more emphasis on its knowledge at the table function.

### Cooperation with partners

However, the differences between KiM and the policy assessment agencies have not precluded them from making multiyear agreements for an effective and efficient division of tasks. Agreements have also been made for productive cooperation on topics of common interest. These include making optimal shared use of the available expertise, participating in each other's feedback groups, contributing to each other's publications, holding joint brainstorming sessions and critiquing each other's products.

KiM also works with external knowledge institutes, universities and Rijkswaterstaat Water Traffic and Environment (RWS/WVL). KiM does this mainly on the basis of knowledge developed elsewhere (in the Netherlands and abroad), which KiM then integrates and makes applicable to policy and practice. KiM sometimes subcontracts parts of research projects to private organisations (or universities) and then integrates the results into a KiM product.

### Contacts with the scientific community

KiM is associated with 10 prominent academics from the Netherlands and abroad: the KiM fellows. These fellows provide the academic backing for KiM's work. A core task of the fellows is to review project plans and draft publications. In addition, they are invited to give lectures and presentations and to take part in brainstorming sessions to give extra impetus to new research projects.

The current KiM fellows are:

Name	Discipline	University
Prof. dr. Luca Bertolini	Planning	University of Amsterdam
Prof. dr. Martin Dijst	Urban Development and Spatial Mobility	Utrecht University
Prof. dr. Jonas Eliasson	Transport Systems Analysis	KTH (Royal Institute of Technology) Stockholm
Prof. dr. Ernst ten Heuvelhof	Public Administration	TU Delft
Prof. dr. ir. Vincent Marchau	Uncertainty and Adaptivity of Societal Systems	Radboud University Nijmegen
Prof. dr. John Preston	Rail Transport; director of the Transport Research Group	University of Southampton
Prof. dr. Stef Proost	Energy Economics	Catholic University of Leuven
Dr. Tim Schwanen	Transport and Human Geography	University of Oxford
Prof. dr. Eddy Van de Voorde	Transport and Regional Economics	University of Antwerp
Prof. dr. Bert van Wee	Transport Policy	TU Delft

In the field of mobility, KiM aims to serve as a pivotal link between the Ministry of IenM and the universities. To this end KiM plays an active role in the development of research networks, such as TRAIL.

Researchers in the field of civil aviation cooperate in the Airneth international scientific network for aviation research and policy. Both Airneth and KiM aim to support aviation policy with insights from research. In view of this, in mid-2012, following periodic coordination with the ministry's Civil Aviation Department, KiM took over the management of Airneth. KiM's role in steering Airneth activities enhances their demand-driven character and thus the effectiveness of the research input to aviation policy. Airneth activities are therefore geared to providing evidence to support KiM's responses to questions coming from the policy directorates. Airneth's objectives are otherwise unchanged: to further expand, maintain and make use of the scientific network in the field of aviation. KiM commissions Airneth to organise workshops, seminars and lectures, and to prepare position papers, thus making the results of external scientific research more accessible to aviation policymakers.

### International orientation

Many research questions involve the acquisition of knowledge through international academic cooperation or have a strong international context. However, the international research community is vast and KiM's capacity is limited. Our international strategy is therefore primarily geared towards 'gathering' knowledge. To be able to 'gather' knowledge it is sometimes also necessary to 'give' knowledge, and to this end KiM has established special relationships with several relevant international research institutes. KiM staff members also participate in conferences and symposia and work to a limited extent in international projects, and KiM participates in several international forums, such as the Joint Transport Research Committee (JTRC), and in committees of the US Transportation Research Board (part of the National Research Council).

## 0.4 Core themes and relation to the Ministry's Strategic Knowledge and Innovation Agenda (SKIA)

The research projects conducted by KiM fall within several core themes. These core themes are designed in the first instance to clarify what knowledge and expertise is available within KiM and to perform an agenda-setting function for identifying the knowledge that will be needed to answer future policy questions.



Core themes:

- define the type of information and expertise KiM can be called upon to deliver;
- logically integrate the ‘individual’ studies and knowledge-at-the-table questions, which are an inevitable consequence of demand-driven research;
- communicate and reinforce the hallmarks of a typical KiM product;
- give direction to future mobility research and coherence to the focus areas of current research;
- a core theme provides a multiyear, agenda-setting framework for concrete projects;
- can discontinue over time, while new core themes can be added when required.

Core themes also provide the basis for structuring KiM’s activities, as they consist of complementary clusters of projects and other activities.

The core themes in 2015 are as follows:

- 1. Mobility, accessibility and spatial planning.** Core theme 1 is about describing and explaining national and international developments in mobility and transport. The theme includes reviewing past developments (drawing conclusions in the light of socio-economic, spatial, demographic and technological developments and policy effects) as well as looking forward (preparation of medium- and long-term outlooks to support robust policy development), paying specific attention to the interactions with spatial development and urban planning. In addition, this theme focuses on understanding accessibility, operationalising the concept of accessibility, and developing and analysing measures for improving accessibility. Studies in this core theme encompass both passenger and freight transport, as well as transport networks, chains and hubs.
- 2. Mobility of groups.** This core theme is about the mobility of specific groups. The research aims to derive a picture of the mobility of specific groups, the autonomous and induced changes in the mobility behaviour of such groups and the underlying factors involved. Insights gained at the macro level are translated to the meso level: to groups or market segments. The underlying factors provide not only explanations, but also offer possible pointers for policy development.
- 3. Sustainable mobility, safety and transition.** This core theme is about sustainable mobility and mobility-related safety aspects. It includes the consequences for liveability and the safety of the current mobility system as well as scenarios for a more sustainable and safer mobility system in future. Much of the research effort in this core theme is devoted to the transition process: what will a sustainable and safe mobility system look like, what are the obstacles to achieving this and what points of policy leverage exist to facilitate this transition?
- 4. Models and data.** A key element in core theme 4 is stimulating the model development and data collection required for preparing mobility and transport policies. The theme also includes the development of indicators for monitoring strategic policy objectives.
- 5. Social importance, the role of government and market organisation.** This core theme aims to provide insights into the importance of mobility, transport and infrastructure in the social, spatial and economic development of the Netherlands, with an emphasis on the significance of the mainports and other transport hubs. Attention is given to the possibilities available to the government for safeguarding this vital national interest, and to exploring and analysing effective and efficient government–market relations in the various sectors (road, regional public transport, rail, inland shipping, maritime shipping, aviation). Finally, the theme examines the question of how administrative relations between the various tiers of government can be made more effective and efficient.
- 6. Policy evaluations and assessment frameworks.** Core theme 6 is concerned with evaluating the effectiveness and efficiency of policy instruments for mobility and transport. The theme covers both ex ante and ex post evaluations (including social cost–benefit analyses – SCBAs) and includes refining and broadening methodologies, with attention to the economic and administrative aspects. KiM advises the policy directorates on performing evaluations, carries out evaluations itself and can review third party evaluations.

## Management team

The KiM management team consists of George Gelauff (scientific director) and Arjen ’t Hoen (deputy director). George assumed his current position in September 2014, following the departure of Jaap de Wit.

In addition, KiM has two core theme managers: Arjen 't Hoen and Jan van der Waard. Responsibility for the core themes is divided as follows:

Core theme	Responsible MT Member
1. Mobility, accessibility and spatial planning	Jan van der Waard
2. Mobility of groups	Jan van der Waard
3. Sustainable mobility, safety and transition	Arjen 't Hoen
4. Models and data	Jan van der Waard
5. Social importance, the role of government and market organisation	Arjen 't Hoen
6. Policy evaluations and assessment frameworks	Arjen 't Hoen

### Relation to the SKIA

The ministry's Strategic Knowledge and Innovation Agenda (SKIA) sets out its strategic research questions, divided into seven topic areas. They have been included in this Work Programme insofar as they relate to KiM's research activities and the policy directorates have specifically requested KiM to investigate them. The SKIA topic areas relate to KiM's core themes as follows.

SKIA topic ...	... is addressed specifically in these KiM core themes
A - Dynamic society, governance and decentralisation	5 - Social importance, the role of government and market organisation
B - Financing, revenue models and other market approaches	5 - Social importance, the role of government and market organisation
C - Individualisation and behaviour	1 - Mobility, accessibility and spatial planning 2 - Mobility of groups
D - Area development	1 - Mobility, accessibility and spatial planning 5 - Social importance, the role of government and market organisation
E - Hubs and networks	1 - Mobility, accessibility and spatial planning 4 - Models and data 6 - Policy evaluations and assessment frameworks
F - Sustainable mobility	3 - Sustainable mobility, safety and transition
G - Closing energy, materials and water loops	-

SKIA topics E and F are most closely related to KiM's work. There is less overlap with SKIA topics A, B, C and D.

## 0.5 About the Work Programme 2015

### Preparation and flexibility

Ideas for new projects are prioritised, primarily on the basis of a critical assessment of the urgency of projects to the commissioning departments concerned, and secondarily on the match between the research questions and the pool of knowledge and expertise within KiM and the degree to which a typical KiM product (see section 0.2) can be delivered. This requires agreement with the ministerial departments at various levels. Moreover, the Work Programme is discussed with the Netherlands Environmental Assessment Agency (PBL), the Netherlands Bureau for Economic Policy Analysis (CPB) and the Netherlands Institute for Social Research (SCP). The Work Programme is formally adopted by the secretary-general of the Ministry of Infrastructure and the Environment.

The Work Programme is flexible. Interim adjustments and additions to the Work Programme, for example in response to political and social developments, may lead to amendments to topic areas, a different set of priorities, other forms of implementation and/or to the cancellation of research on certain topics.

### Defining topics in 2015

Many research projects and other activities (knowledge at the table) are conducted within the core themes. Some projects and activities focus on a specific policy area and a specific policy directorate, while others are of wider significance for the ministry's policies. The core themes described in section 0.4 give an overall structure to KiM's work. In addition, for 2015 a number of more specific and defining topic areas have been identified that give more focus to studies within and across the core themes. These topics are listed in the table below, with some projects by way of illustration.

Defining topics	Examples of projects in 2015	Page	Link to KiM core themes
1. Changing role of the bicycle in the mobility system	• Effects of paying for bicycle parking	18	1 and 2
	• Walking and cycling as part of the traffic and transport system	22	
2. Quality in the public transport chain	• Quality needs of the modern public transport passenger	16	1 and 5
	• Support knowledge questions Network Netherlands	17	
	• Indicators door-to-door accessibility public transport	34	
3. Mobility policy and the economic structure of the Netherlands	• Effects of mobility policy in regional-economic structure	33	5
	• The economic value of low-cost-carrier-operations	33	
4. Mobility systems of the future	• Innovations and modern techniques that intervene in the public transport system	18	1
	• Social effects of the automated car	18	
5. Updating mobility data	• Netherlands Mobility Panel	28	4
	• KiM's contribution to OviN Innovation Trajectory	29	
6. Knowledge and advice on SCBAs	• Supervising and giving second opinions on SCBAs for several specific projects	39	6

### Breakdown of research capacity in 2015

Knowledge at the table is an effective, efficient and valued form of knowledge delivery. In 2014, 35% to 40% of the research capacity was reserved for knowledge-at-the table projects. In 2015 this percentage shall remain approximately the same. The remaining available capacity will be devoted to research projects and observational reports.

## 0.6 Explanatory remarks on Chapters 1 to 6

Chapters 1 to 6 of this Work Programme contain descriptions of the projects and activities per core theme.

For each core theme we first describe the subject matter covered and then the various topics that form part of the core theme. For each topic we first describe the projects (research projects and knowledge at the table), including the ongoing projects from 2014 and the new projects starting in 2015. The following information is given for each project: title, project type (research or knowledge at the table), the commissioning department, project number, expected capacity requirements (large, medium, or small<sup>1</sup>), and the year quarter in which it is expected to start. This is followed by a brief description of other, small knowledge-at-the-table projects that fall within a core theme topic.

The projects listed in this Work Programme will together require full use of KIM's capacity. This means that while requests submitted after the publication of this Work Programme are welcome, they may lead, in discussion with the relevant commissioning departments, to a reordering of priorities.

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<sup>1</sup> In general, the expected capacity requirement for a small project is 0.1 FTE, for a medium project is 0.3 FTE and for a large project is 0.6 FTE. Projects that only occupy a few days are not included in this Work Programme.

# 1

# Mobility, Accessibility and Spatial Planning

## 1.1 Explanation of the core theme

The transport and traffic system is complex. Many factors determine the scale and nature of the demand for mobility of people and goods, including demographic and socio-economic trends, technological developments, computerisation, and spatial planning and urban design. Because specific factors influence the way the demand for mobility and transport are met, these factors also determine the level of accessibility associated with this mobility. For example, technological developments make new forms of transport facilities possible. Understanding the factors determining mobility and accessibility and the interactions between transport and traffic and the physical environment provides pointers to possible policy levers, and thus provides the basic knowledge required for policymaking in the field of mobility and accessibility. The rapid changes in these influential factors make it more important to closely monitor these developments and their consequences for mobility.

The core theme Mobility, Accessibility and Spatial Planning focuses on describing and explaining national and international trends in mobility and transport, and of their consequences for accessibility. This involves reviewing past social developments and implemented policy to explain trends in mobility and accessibility, as well as exploring possible (but in the final instance unknowable) developments in future. The latter can be attempted by developing environmental scenarios to support robust policy development, through the preparation of medium- and long-term outlooks, and by estimating the effects of specific policy options on accessibility.

In all these aspects KiM takes a broad approach to the concept of mobility that encompasses both passenger and freight transport (smart use of networks and smart logistics, both uni-modal and multi-modal), transport chains and hubs, and the interaction with spatial development and urban planning.

Two topics are central to this core theme:

- The internal linkages within the transport and traffic system and how the system interacts with the surrounding environment
- Accessibility and accessibility policy

The following sections show per topic which concrete activities (research projects and knowledge at the table) KiM will be undertaking in 2015 to provide answers to the research questions that have been formulated in dialogue with the policy directorates.

## 1.2 The internal linkages within the transport and traffic system and how the system interacts with the surrounding environment

The knowledge activities in this area involve describing the system in the past, present and future, and explaining actual developments in mobility and the consequences for accessibility. Besides the functioning of the transport system, the focus of these studies is on gaining insight into the relevant actual and/or expected developments in the factors influencing the transport system. Early recognition of possible developments allows policymakers to anticipate potential negative consequences and develop adaptive strategies. In this respect, there is also a relation with core themes 4 (regarding model development) and 6 (regarding policy instruments and assessment frameworks).

Projects	
<p><b>DGB Strategy Unit</b> Research project, BR1501, large, starting first quarter</p>	<p><b>Mobility Report 2015</b> The aim of the annual Mobility Report is to provide objective (background) information to policymakers, researchers, politicians and organisations active in the field of transport and traffic. The publication reviews the current state of mobility in the Netherlands. In addition to a description of the trends in mobility, the report offers explanations for the growth in passenger and freight transport. It therefore provides input to the development of policy and to the public debate about mobility in general. Any specific topics to be highlighted will be identified in consultation with the policy directorates.</p>
<p><b>DGB Civil Aviation Department</b> Knowledge at the Table, BR1502, small, starting first quarter</p>	<p><b>Long-haul-low-cost-carriers</b> Airline company business models are undergoing drastic change: an example of this is the so-called low cost hybrids. One example is Norwegian: a low-cost-carrier from Norway that set up an Irish sister company in order to fly long-haul-low-cost from London to New York JFK. Norwegian will employ Thai personnel, which has led to intense pressure from airline unions in the US. What are the opportunities for, and threats posed by, such new business models, and what are the possible consequences for the hub function of Schiphol Airport? To answer such questions, an Airneth seminar could possibly be held.</p>
<p><b>DGB Civil Aviation Department</b> Knowledge at the Table, BR1319, medium, starting second quarter</p>	<p><b>What-if-analyses network quality</b> In this Knowledge at the Table project, a (limited) number of hypothetical situations that could possibly have (severe) effects on the network quality of Schiphol are analysed in order to determine what the government's options are for acting to anticipate such developments. Links are made to the findings of previous projects aimed at exploring developments in civil aviation. An Airneth meeting could possibly provide an interpretation of part of the knowledge inventory.</p>
<p><b>DGB Roads and Traffic Safety</b> (other departments involved: DGB Strategy Unit, DGRW Spatial Development) Knowledge at the Table, BB1201, medium, ongoing</p>	<p><b>Spatial interventions of local governments and effects on mobility and accessibility</b> Car traffic can be reduced by certain spatial planning measures, such as concentrating services in central locations around existing public transport stations (the 'A locations' of earlier policy), in combination with parking restrictions. Locating major new housing developments on the edges of cities (the 'Vinex' sites), on the other hand, can lead to more traffic congestion. Conversely, building new transport infrastructure (roads and public transport) has an effect on the spatial behaviour of people and businesses. As a consequence of the 'new' mobility thus stimulated, the accessibility of some locations may be reduced and bottlenecks may be created in the transport system. KiM is preparing a report based on a literature study that will draw on past experiences and foreign examples in order to show how this interaction between spatial planning, mobility and accessibility occurs. Which principles, derived from both the spatial planning system and the transport system, have a greater or lesser beneficial influence on accessibility?</p>
<p><b>DGB Infrastructure Efficiency Programme</b> Knowledge at the Table, BR1413, small, ongoing</p>	<p><b>Knowledge input second edition of Optimising Use</b> The 'Optimising Use' (<i>Beter Benutten</i>) programme developed a working method whereby regional partners and market players must operate with an eye toward the second edition of the programme. Problem analysis plays a prominent role in this previously mentioned working method. The management of the Optimising Use programme set up an Analysis Team, wherein KiM provides specialist knowledge. KiM's expertise in problem analysis, the knowledge related to adaptive policy development, and substantive knowledge about target groups and behavioural principles, are useful for this purpose.</p>

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Projects	
<p><b>DGB Public Transport and Rail</b> Knowledge at the Table, BR1403, small, ongoing</p>	<p><b>Assessment of the initial approach in Value of Time for Cycling in the Netherlands</b> Bicycles play an increasing role in multimodal travel, but to date there is no assessment framework in place for bicycle facilities. The first step towards creating such an assessment framework was the development of the 'web tool for bicycles SCBA'. Based on Swedish research, it has been decided that the initial approximation of the value of time (VoT) for a bicycle in this tool will be the average VoT for the car. The 'actual' bicycle VoT is likely to be higher than the car VoT. To obtain a good idea of the VoT for the bicycle, a limited practical study of cyclists will be conducted, from which a workable estimate can be made of the Dutch bicycle VoT, which in turn can be compared with the car VoT. This comparison will be used to decide whether or not to make a more detailed determination of the bicycle VoT. For the time being, this research into gaining insights of bicycle VoT will be affiliated with PhD research at the University of Twente.</p>
<p><b>DGB Strategy Unit</b> Other directorates involved: DGB BB, DGB OVenS and DGRW Spatial Development Research Project, BR1503, medium, starting second quarter</p>	<p><b>The role of hubs in the functioning of the traffic and transport systems of 'smart, clean cities'</b> The development of urban areas in the Netherlands is a major issue. Cities are seen as engines of the current and future economy. With this come challenges in the physical domain. The functioning of traffic and transport systems in urban areas is closely related to future spatial and mobility challenges, for example. A key focal point of the National Policy Strategy for Infrastructure and Spatial Planning (SVIR) is the role of hub development, as a strategy to improve accessibility, particularly of urban areas. The question is: how effective is the current strategy? In this project we examine the degree to which (the development of) hubs can contribute to the improvement of urban transport and traffic systems, and thus contribute to the future perspective of the 'smart, clean city'. To this end, KiM's available knowledge about the functioning of hubs is presented as an overview, and a research study will be conducted to determine whether future hub development can contribute to the improved accessibility of urban areas.</p>
<p><b>DGB Strategy Unit</b> Research Project, BR1418, large, ongoing</p>	<p><b>The Uncertainty Analysis</b> In conjunction (and agreement) with the production of new WLO scenarios, it is beneficial for policy development if research studies are conducted focusing on the mobility effects that possibly deviate from those established in these scenarios. The uncertainty study serves this purpose; this ongoing study focuses on the (long-term) future and refers to exogenous developments, or so-called environmental uncertainty, which are developments in which the Ministry of IenM has no direct influence, such as changes in activity patterns, economic development, technological developments, changes in behaviour pertaining to mobility choices, effects of foreign policies, etc. In mid-2016, the hitherto considered uncertainties will be reported on in 'The Uncertainty Survey'.</p>
<p><b>DGB Strategy Unit</b> Knowledge at the Table, OG1210, medium, ongoing</p>	<p><b>Updating long-term scenarios (WLO-2)</b> In 2013, the Netherlands Bureau for Economic Policy Analysis (CPB) and PBL Netherlands Environmental Assessment Agency completed their Horizon Scan study on Welfare, Prosperity and Quality of the Living Environment (<i>Horizonscan Welvaart en Leefomgeving</i>). Partly based on this study, both agencies began devising a new scenario study (WLO-2). According to the main points of the two foundation scenarios, CPB and PBL are working on a number of specific themes, including spatial differentiation, domestic personal mobility, aviation and freight transport and logistics. KiM is involved in guiding these studies by providing knowledge per theme in the areas of spatial development, aviation, passenger and goods transport.</p>
<p><b>DGB Strategy Unit</b> Knowledge at the Table, BR1329, small, ongoing</p>	<p><b>Meta-analysis of public transport time elasticities</b> There is no up-to-date information pertaining to the Netherlands with regard to how sensitive public transport use is to changes in journey times, and no indicators available pertaining to ease of use and comfort (known as 'convenience-indicators'). KiM is conducting a limited meta-analysis based on elasticities from national and international sources, relating these elasticities when possible to the context in which they were determined. This will generate insights into the margins of public transport time- and convenience-elasticities, and the degree to which various situational factors (time of day, type of relation, etc.) influence those margins. The outcome will be used to develop an assessment framework of the sensitivity of national and regional models.</p>
<p><b>DGMI International Affairs</b> Knowledge at the Table, OG1208, small, ongoing</p>	<p><b>Contribution to IenM Horizon 2020 team</b> Horizon 2020 is the name of the new EU framework programme. The Strategic Transport Technology Plan is the transport-related part of Horizon 2020. A portfolio team within the Ministry of Infrastructure and the Environment is working to influence the content of the part of the research programme that is relevant to the ministry. KiM is providing knowledge-at-the-table input to this portfolio team.</p>

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Projects	
<b>DGRW Areas and Projects</b> Research Project, BR1504, medium, starting second quarter	<b>Population decline and mobility revisited with a focus on North-Netherlands</b> In 2010, Kim conducted research into the impact that demographic changes have on mobility, such as public transport ( <i>Grijs op Reis</i> ). We are now nearly five years further on. The <i>Brede Doeluitkering Verkeer en Vervoer</i> (BDU) has decreased further, and despite the economic crisis, car use among the labour force in North-Netherlands has increased. The reasons for this are a concentration of services, decreasing support, and economies of scale. The 2010 research focused on the entire Netherlands, and specifically the (leading) areas of population decline. In updating the research from 2010, KiM aims to deepen the analysis, with specific attention paid to both the population declining and anticipatory regions of North-Netherlands.

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities related to this topic within the core theme. The emphasis in these activities is on answering questions pertaining to national and international trends in mobility and accessibility, and about social trends associated with mobility, as well as participating in the supervision of contract studies on behalf of the Ministry. Examples include Panteia's annual analysis of the short-term forecast of freight transport, a research and policy consultancy, and support to ongoing studies of freight corridors for the Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT), (including freight corridors).

## 1.3 Accessibility and accessibility policy

A primary objective of national transport and traffic policy is to improve accessibility, and this is the subject of this topic within the core theme. The focus is on the development and application of knowledge for operationalising the concept of accessibility. It includes further translating the concept of accessibility into viable and effective indicators for use in the policymaking process and for gaining a deeper understanding of specific aspects of accessibility, such as comfort and journey time reliability

The core theme also addresses the issue of how accessibility can be improved by adapting the transport and traffic system and various aspects of the physical structure of surrounding areas. In addition to research aimed at identifying points of leverage for new policy, this topic also looks at assessing the effects on the accessibility objectives of a broad range of policy options for the five strategies in the Accessibility Agenda (Innovate, Invest, Maintain, Inform and Design).

Projects	
<b>DGB Public Transport and Rail</b> Research project, BB1106, medium, ongoing	<b>Quality needs of the modern public transport passenger</b> Public transport policy is becoming increasingly oriented towards the needs of the passenger. But who is the modern potential public transport user? What do social trends mean in terms of potential user groups? What demands do potential user groups make and how do these translate into quality requirements, with the emphasis on various time-related elements of the public transport trip (pre- and post-transport times, trip time, transfer times)? KiM will provide an initial review based on existing knowledge. Any knowledge gaps will then be filled by carrying out further research. In the project, Quality Aspects Chain Approach, this knowledge was broadened by a greater focus on the service level (comfort, likelihood of getting a seat, possibility of working while travelling in the train, etc.).

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Projects	
<p><b>DGB Public Transport and Rail</b> Research Project, BR1505, medium, starting first quarter</p>	<p><b>Quality aspects chain approach</b> In various policy processes, there is a demand for knowledge pertaining to quality aspects, the chain approach, and consideration of public transport trips from a door-to-door perspective. The questions are concentrated around three themes:</p> <ul style="list-style-type: none"> <li>- What quality aspects are, from the traveller's perspective, of importance in the door-to-door-chain (as already partially addressed in BB1106)?</li> <li>- What quality level of provisions (comfort, probability of finding a seat, possibility to do work while travelling on the train, etc.) are important from the passenger's perspective in the door-to-door-chain, and which effects are to be expected from the perspective of trip times and public transport use?</li> <li>- How can certain quality aspects best be measured along the entire chain?</li> </ul> <p>The approach from the chain perspective, and the focus on the quality level of provisions, are extra dimensions with regard to the BB1106 project that is planned for completion in early 2015. The (preliminary) findings of this project can be used as a source of inspiration for the further detailing of knowledge questions and the project's design. The question of monitoring can be closely related to the combined project MM1407/MM1408.</p>
<p><b>DGB Public Transport and Rail</b> Research project, BR1404, medium, ongoing</p>	<p><b>Explanatory analysis of sluggish growth in rail freight transport</b> In the aftermath of the credit crisis, rail freight transport in the Netherlands has not been able to grow enough to keep pace with other transport modes and the seaports. To obtain insights into possible points of leverage for supporting policies, it will be necessary to first obtain a clear picture of the causes of this fall-off in competitiveness. An initial analysis based on cost comparisons was made by the Royal Dutch Transport Federation (KNV) in its 'rail offensive plan' (<i>Aanvalsplan Spoor</i>). Building on this, KiM will carry out a literature study of developments abroad and make an empirical analysis to assess the possible causes of the poor competitive position of rail freight.</p>
<p><b>DGB Public Transport and Rail</b> Knowledge at the Table, BR1414, medium, starting first quarter</p>	<p><b>Support in knowledge questions 'Freight Transport by Rail' work programme</b> OvenS is devising a work programme based on the theme of freight transport. Part of this programme is expected to be related to the further elaboration of freight transport questions posed in the Long-Term Rail Agenda Part II (<i>Lange Termijn Spooragenda deel II - LTSA-II</i>). A research program is currently being drafted, and although there are as of yet no knowledge questions, it is likely that specific knowledge questions will emerge as the process unfolds in 2015, and also for other knowledge lines. KiM - via knowledge at the table - can contribute to the specific question articulation process.</p>
<p><b>DGB Public Transport and Rail</b> Knowledge at the Table, BR1420, medium, ongoing</p>	<p><b>Supporting knowledge questions Network Netherlands</b> The Long Term Rail Agenda part II (LTSA-II) has formulated for IenM the aim to collaborate with ProRail and NS, to engage in close dialogue with decentralised concession providers and concessionaires (shippers), and to establish an integrated approach. This integrated approach (Network Netherlands) must lead to a concrete step-by-step plan, which must indicate what the ideal public transport product of the future looks like: Which hubs, which public transport ports, which frequencies and what degree of immediacy? And what, then, does the optimal relation to regional and city transport look like? The corresponding agenda implementation includes the following research questions:</p> <ol style="list-style-type: none"> <li>1. In what ways are the needs of the peak hour travellers in (and to/from) the key economic centres best served, if the issue is integrated public transport service?</li> <li>2. What are the most important national and international hubs in the transport network?</li> </ol> <p>In support of KiM's contributions to the previous partnership process (working groups in the framework of Railway Schedules), OVENs management has asked KiM to contribute knowledge in the form of knowledge at the table.</p>
<p><b>DGB Public Transport and Rail</b> Research project, BR1405, medium, ongoing</p>	<p><b>Estimating the effects of policy measures on public transport reliability</b> The possibilities for estimating the effects of policy measures on the reliability of travel times remain limited. In 2013 and 2014 work was done to upgrade the LMS-BT (National Model System, Reliability module) in order to deliver better information on such effects. The benefits of improved reliability for all other modalities cannot yet be quantified in the CBA. This project is a first step towards making a rough assessment of these effects. Cooperation will be sought with other organisations, including PRORAIL, CPB and TU Delft (Niels van Oort). Knowledge may also be obtained from relevant US Transportation Research Board's Strategic Highway Research Program (TRB/SHRP2) research projects. The aim is to link information to the assessment framework for optimising the rail transport system.</p>

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Projects	
<p><b>DGB Public Transport and Rail</b> Research project, BR1506, medium, starting third quarter</p>	<p><b>Innovations and modern techniques that intervene in the public transport system</b> A great deal of attention has recently been devoted to the development of the driverless car as the ultimate innovation in the car system. A part of the related technology can also be applied directly to the public transport system, and thus ensure a system leap. DGB asked for potential KiM developments in the traffic and transport system to be comprehensively mapped and, where possible, translated as potential consequences for the public transport system.</p>
<p><b>DGB Public Transport and Rail</b> Research project, BR1507, small, starting second quarter 2015</p>	<p><b>Effects of paying for bicycle parking</b> In the framework of the 'Approach to Bicycle Parking' project, DGB requires insights into the possible effects of paying for bicycle parking within the chain displacement. Based on existing insights and the eventual <i>stated-preference</i>-research, initial insights can be gained into the effects of paid bicycle parking provisions at train station locations.</p>
<p><b>DGB Roads and Traffic Safety</b> Knowledge at the Table, BB1112, small, ongoing</p>	<p><b>Review of evaluation method for the Traffic Management Trial Amsterdam</b> The goal of the Traffic Management Trial Amsterdam (<i>Praktijkproef Amsterdam</i>, PPA) is to investigate the degree to which network-wide coordinated traffic management measures can improve the utilisation of the road network in the Amsterdam region. This is a joint project between central government and the regional and local authorities. The trial will run for about three years. KiM's role is to review the ex ante and ex post evaluations of this trial for DGB Roads and Traffic Safety. Each review contains an independent scientific judgment on the evaluation methods to be used and on the results of the evaluations.</p>
<p><b>DGB Roads and Traffic Safety</b> Research project, BR1406, small, ongoing</p>	<p><b>Societal effects of the automated car</b> Driverless cars, in various stages of development toward full automation, are a hot topic today. The Netherlands wants to be a testing ground for the development of such systems, and on various fronts (DAVI, the Dutch Automated Vehicle Initiative and Connect Mobility) has committed to making automated driving feasible and widely implemented. With great attention devoted to the technology, legal aspects, etc., knowledge development has sharply focused on the implementation process for the coming years, whereby the long-term perspective of full automation, and, in particular, the social implications thereof, still receives little attention. At the request of DGB (including via support groups), KiM contributes knowledge to various ongoing projects pertaining to the automated airplane. In addition, KiM also examines the social implications of various scenarios of full automation, with the aim being to structurally map for lenM the possible consequences of the various transition paths to full automation.</p>
<p><b>DGB Roads and Traffic Safety</b> Research project, BR1508, medium, starting first quarter</p>	<p><b>Urban distribution</b> Urban distribution causes congestion and negatively impacts CO<sub>2</sub> emissions and the residential environment in the city. This has long been problematic, and many solutions have been studied and tried, yet they often appear to be difficult to implement, including owing to lack of cooperation and initiative by the many actors often involved. Due to technological innovation, urban stocks are developing rapidly, partly owing to the strong growth of internet shopping and the associated home delivery services. Three knowledge questions are to be identified:</p> <ol style="list-style-type: none"> <li>1) Provide insights into problems and effects of specific solutions. KiM can closely analyse the challenges (environmental disturbance, the relatively high transport costs and increasing client demands), and also create an inventory of short- and long-term effects and assess them based on their effectiveness.</li> <li>2) Coordination and stimulation. KiM can study what role lenM can play and what the possible policy options are. For lenM, urban stocks are a local issue. The regions and various sectors primarily envision lenM playing a coordinating and stimulating role, because, for both the challenges and solutions, coordination issues are involved that seemingly cannot be solved on a regional level. This poses an interesting governance question, which overlaps with urban accessibility yet is also very specific in terms of the sector's role in the organisation of this transport.</li> <li>3) Behavioural change. Various factors prevent the parties involved from reaching solutions. Behavioural factors, such as trust, competition, habits and the like also play roles in this. Insights into the ways in which these factors are of influence can offer starting points for solutions. It is precisely the behavioural factors that are of importance here. This aspect will be further elaborated with the involvement of the BIT-core team</li> </ol>

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Projects	
<b>DGB Infrastructure Efficiency Programme</b> Research project, BR1328, medium, ongoing	<b>Effects of flexible working on congestion – 2<sup>nd</sup> phase</b> As yet, little is understood about how widespread flexible working is in the Netherlands and its effects on mobility and congestion. In 2013 KiM was able to make an initial analysis based on the available data for one aspect of flexible working: the degree of ‘teleworking’. The goal of this project is to expand this analysis, through specific data collection, so that it will be possible to determine what the effects of all aspects of flexible working will be on mobility and congestion in future. This will enable the effects of flexible working, as one of the relevant factors influencing the development of congestion, to be described and quantified with greater accuracy.
<b>DGMI International Affairs</b> Knowledge at the Table, BB1204, small, ongoing	<b>Contribution to IenM TEN-T policy team</b> KiM is contributing to the ministry-wide TEN-T policy team with knowledge at the table on infrastructure planning, transport development and appraisal methods. KiM may be asked to assist with assessing new applications for TEN-T subsidies.

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities for this topic within the core theme. The emphasis in these activities is on answering questions on the accessibility effects of policy interventions and supervising external research projects on the effects of policy options. Examples include annually preparing a trend prognosis for NSL and SWUNG, making an active contribution to the knowledge group, *Meer Bereiken* (Improving Accessibility), providing knowledge in the setting up of the *Omgevingsvisie* (Environmental View), and participating in the advisory board group (design) evaluation SVIR.

## 1.4 Project overview table

Department	Title	Number	Project Type	Start	Size
DGB Strategy Unit	Mobility Report 2015	BR1501	Research Project	1 <sup>st</sup> quarter.	Large
DGB Civil Aviation	Long-haul-low-cost-carriers	BR1502	Knowledge at the Table	1 <sup>st</sup> quarter.	Small
DGB Civil Aviation	What-if-analyses network quality	BR1319	Knowledge at the Table	2 <sup>nd</sup> quarter.	Medium
DGB Roads and Traffic Safety	Spatial interventions of local governments and effects on mobility and accessibility	BB1201	Knowledge at the Table	Ongoing	Medium
DGB Infrastructure Efficiency Programme	Knowledge input second edition of Optimising Use	BR1413	Knowledge at the Table	Ongoing	Small
DGB Infrastructure Efficiency Programme	Assessment of the initial approach in Value of Time for Cycling in the Netherlands	BR1403	Knowledge at the Table	Ongoing	Small
DGB Strategy Unit	The role of hubs in the functioning of the traffic and transport systems of ‘smart, clean cities’	BR1503	Research Project	2 <sup>nd</sup> quarter.	Medium
DGB Strategy Unit	The Uncertainty Analysis	BR1418	Research Project	Ongoing	Large
DGB Strategy Unit	Updating long-term scenarios (WLO-2)	OG1210	Knowledge at the Table	Ongoing	Medium
DGB Strategy Unit	Meta-analysis of public transport time elasticities	BR1329	Knowledge at the Table	Ongoing	Small
DGMI International Affairs	Contribution to IenM Horizon 2020 team	OG1208	Knowledge at the Table	Ongoing	Small

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Department	Title	Number	Project Type	Start	Size
DGRW Areas and Projects	Population decline and mobility revisited with a focus on North-Netherlands	BR1504	Research Project	2 <sup>nd</sup> quarter.	Medium
DGB Public Transport and Rail	Quality needs of the modern public transport passenger	BB1106	Research Project	Ongoing	Medium
DGB Public Transport and Rail	Quality aspects chain approach	BR1505	Research Project	1 <sup>st</sup> quarter.	Medium
DGB Public Transport and Rail	Explanatory analysis of sluggish growth in rail freight transport	BR1404	Research Project	Ongoing	Medium
DGB Public Transport and Rail	Support in knowledge questions 'Freight Transport by Rail' work programme	BR1414	Knowledge at the Table	1 <sup>st</sup> quarter.	Medium
DGB Public Transport and Rail	Supporting knowledge questions Network Netherlands	BR1420	Knowledge at the Table	1 <sup>st</sup> quarter.	Medium
DGB Public Transport and Rail	Estimating the effects of policy measures on public transport reliability	BR1405	Research Project	Ongoing	Medium
DGB Public Transport and Rail	Innovations and modern techniques that intervene in the public transport system	BR1506	Research Project	3 <sup>rd</sup> quarter.	Medium
DGB Public Transport and Rail	Effects of paying for bicycle parking	BR1507	Research Project	2 <sup>nd</sup> quarter.	Small
DGB Roads and Traffic Safety	Review of evaluation method for the Traffic Management Trial Amsterdam	BB1112	Knowledge at the Table	Ongoing	Small
DGB Roads and Traffic Safety	Societal effects of the automated car	BR1406	Research Project	Ongoing	Medium
DGB Roads and Traffic Safety	Urban distribution	BR1508	Research Project	1 <sup>st</sup> quarter.	Medium
DGB Infrastructure Efficiency Programme	Effects of flexible working on congestion – 2 <sup>nd</sup> phase	BR1328	Research Project	Ongoing	Medium
DGMI International Affairs	Contribution to IenM TEN-T policy team	BB1204	Knowledge at the Table	Ongoing	Small

# 2

## Mobility of Groups

### 2.1 Explanation of the core theme

People travel because they have to or because they want to do different things in different places; goods are transported so that they can be used elsewhere. Personal mobility behaviour, goods transport and the choices behind travel behaviour differ between groups in society. Describing and explaining these differences in mobility behaviour reveals important insights for making policy, which must increasingly differentiate between different groups in society in order to be effective.

The core theme Mobility of Groups is about the mobility of specific groups, the autonomous and induced trends in mobility behaviour of these groups and the underlying factors that explain these trends. The underlying factors provide not only explanations, but also offer possible pointers for policy development.

Projects	
<b>DGB Roads and Traffic Safety</b> (other department involved: DGB Infrastructure Efficiency Programme) Research project, MG1401, medium, ongoing	<b>The use of 'new' one-person vehicles</b> In mobility outlooks, such as the Mobility Report, mobility is usually divided up into the 'big' transport modes 'car', 'train', 'bus, 'tram and metro', 'moped/bicycle' and 'walking', and a catch-all category of 'other transport modes'. The question is whether these often one-person vehicles, such as (electric) scooters, micro-cars and the e-bike, no longer require a specific (policy) response. KiM will carry out a foresight study, which will also consider information on developments abroad.
<b>DGB Roads and Traffic Safety</b> Research project, MG1302, medium, ongoing	<b>Role of travel information in road traffic</b> Developments in ICT mean that there is now a large amount of travel information available to car drivers, and the range and type of information will probably increase further in future. Providing information has been identified as one of the five potential policy options. But what role does travel information play for the various groups of road users? And how well are these road users served by the current supply of channels offering traffic and travel information? In this project KiM intends to collate existing insights pertaining to the role of information in road traffic and obtain further insights, including by means of collecting extra data from the Netherlands Mobility Panel. This project will also provide a hypothesis document that includes an overview of the open questions pertaining to this subject.
<b>DGB Roads and Traffic Safety</b> Research project, MG1406, medium, ongoing	<b>Patterns and variations in social-recreational mobility</b> In terms of mobility behaviour, social-recreational traffic is a highly heterogeneous group. Using analyses of the travel behaviour of sub-segments within this travel motive, we are searching for sub-segments in which possible starting points exist for policy focusing on more sustainable travel behaviour.
<b>DGB Strategy Unit</b> (other department involved: DGB Roads and Traffic Safety) Research project, MG1402, medium, ongoing	<b>Shift from car ownership to car use: trends and effects on mobility and sustainability</b> The sharing or rental economy is still in its infancy, but it is growing fast. Shared car use is increasingly common, as those who want to drive a car need not necessarily also own a car. The greater issue is the availability of a car. Not much is known about the effects of this trend from car ownership to car availability/car use. This development could have potentially substantial effects on the mobility of Dutch people and hence also on the traffic and transport system in the Netherlands, in terms of accessibility and sustainability. This research examines the extent of the development of various types of shared car use, the factors that impact this development, the opportunities and obstacles that play roles, and the possible effects of this development on car ownership rates, mobility, accessibility, sustainably and prosperity. The research is jointly conducted with the PBL.

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Projects	
<p><b>DGB Strategy Unit</b> Research project, MG1403, medium, ongoing</p>	<p><b>Walking and cycling as part of the transport and traffic system</b> What role do walking and cycling (also known as ‘active modes’) play in the total mobility system and how can changes in this role make an active contribution to achieving national policy objectives? The aim of the project is to draw up a knowledge overview of the role of active modes, as based on our own data analysis and recent research findings. The emphasis moreover is on mapping the role of active modes in urban areas.</p>
<p><b>DGB Strategy Unit</b> Research project, MG1501, medium, starting second quarter</p>	<p><b>Life stages, living conditions and lifestyles</b> In the past, KiM has on several occasions emphasised the effects that social-demographic and social-cultural changes have on mobility, including in a study about the aging population, as well as in studies focusing on population decline, immigrants and (recently) young people. Yet there are many questions that still must be addressed, such as the implication that double aging has for mobility and the question of the extent to which children today are less mobile than in the past. Based on data derived from the Netherlands Mobility Panel (MPN), it is possible to not only provide insights into the shifts in the size and composition of cohorts (life stages) but also to analyse the effects of changes in living conditions (activity patterns) and lifestyles (preferences and norms and values). Based on this data, KiM can compile multiple thematic reports in which the various social-demographic and social-cultural aspects can be reviewed.</p>
<p><b>DGB Strategy Unit</b> Research project, MG1502, medium, starting second quarter</p>	<p><b>Who is riding along? The view of the car passenger</b> As the growth of car mobility stagnates, the decrease in car use as a passenger is making a major contribution. But who in fact is the typical car passenger? Based on available data from the ‘Research of Trips Undertaken in the Netherlands (<i>Onderzoek Verplaatsingen in Nederland - OViN</i>)’, and KiM’s own Netherlands Mobility Panel, it is possible in the first instance to gain a clearer overall picture of car passengers. In terms of policy, there is a strong relation with carpooling. The government has promoted carpooling, but without much success. Recently, new, more advanced types of carpooling have emerged, such as, for example, BlaBlaCar. Partially based on analysis of the current car passenger, we can determine if these recent new types of carpooling are in fact different and/or better meet the users’ needs, and we can examine the various ways that the government can, if desired, support and/or promote such systems.</p>
<p><b>DGB Strategy Unit</b> Research Project, MG1503, medium, starting third quarter</p>	<p><b>Senior citizens and mobility</b> Senior citizens have increasing possibilities (physical, social, financial &amp; technological) to continue participating in the transport system to older ages. They remain healthy longer and there are a range of affordable aides that allow them to move independently through public spaces. How do these developments apply to mobility? Is it socially responsible to facilitate this new senior citizen mobility with government funding? It is therefore not only the demographic cohort effect that is the main issue in <i>Grijs op Reis</i> (Grey Travelling), but also the combination of environment and spatial developments.</p>

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities related to this core theme. In these activities the emphasis is often on identifying and describing developments in the mobility behaviour of specific groups in relation to the characteristics of these groups, an example of which is the WVL-project ‘Driving under the Influence’.

## 2.2 Project overview table

Department	Title	Number	Project Type	Start	Size
DGB Roads and Traffic Safety & DGB Infrastructure Efficiency Programme	The use of 'new' one-person vehicles	MG1401	Research Project	Ongoing	Medium
DGB Roads and Traffic Safety	Role of travel information in road traffic	MG1302	Research Project	Ongoing	Medium
DGB Roads and Traffic Safety	Patterns and variations in social-recreative mobility	MG1406	Research Project	Ongoing	Medium
DGB Strategy Unit & DGB Roads and Traffic Safety	Shift from car ownership to car use: trends and effects on mobility and sustainability	MG1402	Research Project	Ongoing	Medium
DGB Strategy Unit	Walking and cycling as part of the transport and traffic system	MG1403	Research Project	Ongoing	Medium
DGB Strategy Unit	Life stages, living conditions and lifestyles	MG1501	Research Project	2 <sup>nd</sup> quarter.	Medium
DGB Strategy Unit	Who is riding along? The view of the car passenger	MG1502	Research Project	2 <sup>nd</sup> quarter.	Medium
DGB Strategy Unit	Senior citizens and mobility	MG1503	Research Project	3 <sup>rd</sup> quarter.	Medium

# 3

## Sustainable Mobility, Safety and Transition

### 3.1 Explanation of the core theme

This core theme is about sustainable mobility and mobility-related safety aspects. It includes the consequences for the liveability and safety of the current mobility system (and the leverage points for policy intervention) as well as the development of a more sustainable and safer mobility system in future. The core theme contributes to important, mobility-related themes, such as reducing dependence on oil, the introduction and use of sustainable fuels, reducing greenhouse gas and other polluting emissions, and traffic safety. These issues are the subject of intense policymaking activity in both the EU and the Netherlands, such as the SER Energy Agreement of 2013. The research effort in this core theme will be devoted to the transition process: what will a sustainable and safe mobility system look like, what are the problems and obstacles in the transition process, what is the role of government and where can points of policy leverage be found to facilitate this transition?

In this core theme the concept of 'sustainability' is interpreted in a broad sense, relating to all aspects of the environment, living environment and climate.

In fact, safety also falls under the broad approach to sustainability mentioned above. This is explicitly mentioned in the title of the core theme - perhaps unnecessarily - because the term sustainability is often associated only with environmental issues.

Projects in this core theme are grouped under the following topics:

- Consequences for the liveability and safety of the current mobility system;
- Transition to a more sustainable and safer mobility system

The recent dialogue with the policy directorates has led to the formulation of a number of research questions on these two topic areas. The following sections show per topic which concrete projects (research projects and knowledge at the table) KiM will be undertaking in 2015 to provide answers to these research questions.



## 3.2 Consequences for the liveability and safety of the mobility system

This topic revolves around the consequences for the liveability and safety of the current mobility system, as well as explaining the relevant trends and points of policy leverage for influencing these effects.

Projects	
<b>DGMI Climate, Air and Noise</b> Research Project, DT1501, start second quarter, medium	<b>Global trends pertaining to oil</b> In this project, KiM examines the global trend in oil and the refining of oil into diesel and petrol. KiM maps the consequences this will have for the transport sector, both from the perspective of the Netherlands and Europe.

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities for this topic area within the core theme. Examples include: contributing to the development of the temporary assessment framework for external security of railway yards, and knowledge infusion in the field of car taxation.

## 3.3 Transition to a more sustainable and safer mobility system

This topic within the core theme is about the features of a sustainable and safe mobility system, the obstacles to achieving this, and what the government can do to remove such obstacles. In 2015 a series of projects exploring the contours of a sustainable mobility system in 2050 for each of the various sectors will be completed.

Projects	
<b>DGB Public Transport and Rail</b> Research project, DT1403, medium, starting fourth quarter	<b>Exploratory study for a sustainable public transport system 2050</b> What are the possibilities for creating a sustainable mobility system for the public transport and rail sectors, what are the obstacles and what policy instruments could be used to remove these obstacles? This study will build on the experiences and knowledge gained by KiM in similar studies on road transport, air transport and the maritime sector. At the same time, a broader exploratory study will be carried out to include alternative systems (such as combinations of personal and collective transport).
<b>DGMI Climate, Air and Noise</b> Research project, DT1405, medium, ongoing	<b>Air quality policy options</b> The current policy on the effects of the mobility system on air quality consists of EU standards (EU regulations on emissions from new vehicles) and limit values (daily and annual limit values for the concentrations of various substances). In this project KiM will investigate which policy options for the future will be effective and efficient, taking into account the relative contribution transport makes to the emission of air-polluting particles and the technological possibilities for reducing transport-related emissions.
<b>DGMI Climate, Air and Noise</b> Knowledge at the Table, DT1306, small, ongoing	<b>Fuel mix strategy</b> In 2014, a strategy was developed for the future fuel mix, as a result of the SER-Energy Agreement. As a follow up to this, work is being done on an action plan with concrete actions for the various parties. KiM provides knowledge for the purpose of setting up and executing this action plan.

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities related to this topic within the core theme. An example is contributing ideas on how accessibility, sustainability and safety considerations can be put on a more equal footing when preparing the Multi-Year Plan for Infrastructure, Spatial Planning and Transport.

### 3.4 Project overview table

Department	Title	Number	Project Type	Start	Size
DGMI Climate, Air and Noise	Global trends pertaining to oil	DT1501	Research Project	2 <sup>nd</sup> quarter.	Medium
DGB Public Transport and Rail	Exploratory study for a sustainable public transport system 2050	DT1403	Research Project	4 <sup>th</sup> quarter.	Medium
DGMI Climate, Air and Noise	Air quality policy options	DT1405	Research Project	Ongoing	Medium
DGMI Climate, Air and Noise	Fuel mix strategy	DT1306	Knowledge at the Table	Ongoing	Small

# 4

## Models and Data

### 4.1 Explanation of the core theme

The quality of answers to just about every research question in the field of transport and traffic depends on the quality of the underlying data. The quality of data on historical and current trends in transport and traffic depends on standard data collection procedures, and the quality of data relating to future developments depends on the models used to generate those data

KiM has extensive knowledge of the available pools of data, data collection methods and transport and traffic models, and can use this knowledge to support policymaking by articulating the need for models and data collection relevant to mobility and transport policy. At the same time, KiM is able to assist the policy process, and on occasions the Human Environment and Transport Inspectorate (ILT), with the development and use of policy indicators for monitoring strategic policy objectives.

KiM only occasionally compiles data on mobility and accessibility itself (except for specific projects) and does not develop or manage transport and traffic models. To provide the policy directorates with new information and insights, KiM therefore relies on standard data collection and model development and management by other organisations, such as Statistics Netherlands (CBS) (mobility and freight transport), Rijkswaterstaat Water, Traffic and Environment (RWS-WVL) (traffic data, models), the National Data Warehouse for Traffic Information (NDW) (traffic data), TNO (models), universities (ad hoc data collection and models) and private organisations (ad hoc data collection and models). Making such data available for processing and analysis is a key activity within the core theme.

Two topics are central to this core theme:

- Basic information about mobility and accessibility
- Transport and traffic models

The following sections show per topic which concrete activities KiM will be undertaking in 2015 to provide answers to the research questions identified by the policy directorates.

## 4.2 Basic information about mobility and accessibility

This topic within the core theme concerns standard data collection in the field of mobility and accessibility, with the sharpest possible focus on information needed for the monitoring and evaluation of mobility and transport policy. The information requirements for policymaking (and therefore for KiM) are determined directly by existing and potential indicators for monitoring strategic policy objectives. Interaction is clearly an issue here, because information demands are often limited by the availability of suitable data and the possibilities for and constraints on data collection. KiM's knowledge and expertise on data collection and modelling methods is used to translate policy information needs into the continuous and improved collection and processing of data. These data are not collected by KiM itself, but by organisations such as Statistics Netherlands (CBS) and Rijkswaterstaat (RWS CIV and RWS WV). Conversely, KiM can play a role in 'translating' the available data into policy-relevant information.

Projects	
<b>DGB Strategy Unit</b> Research project, DM1102, large, ongoing	<b>Netherlands Mobility Panel</b> Increasing attention is being devoted in transport and traffic policies to the behaviour of specific target groups in society. Accordingly, there is a growing demand for insights into the trends in the mobility of specific target groups over time and into the effects on mobility behaviour of changing circumstances among individuals and groups (changes in family composition, moving house, etc.). In 2012 KiM started a longitudinal mobility study, which will last at least four years, in order to obtain this type of information and understanding. The project will be implemented in cooperation with Goudappel Coffeng and the University of Twente, and with the involvement of Rijkswaterstaat Water Traffic and Environment (RWS/WVL) and PBL. The second wave of survey data was collected in the autumn of 2014. A report on this will be produced early in 2015. The third wave survey will be conducted in the autumn of 2015.
<b>DGB Civil Aviation Department</b> Research project, E928, small, ongoing	<b>Factsheet aviation data</b> The aviation data factsheet provides an annual overview of trends in traffic at Amsterdam Airport Schiphol and other (competing) airports. The airports covered are the Dutch regional airports, the major North-West European hubs and a number of Belgian and German airports that serve part of the Dutch market. The trends in global aviation are also presented for reference purposes. The factsheet is purely informative.
<b>DGB Public Transport and Rail</b> Knowledge at the Table, DM1404, small, ongoing	<b>Considering the data needs for national government management concessions</b> Elaborating on previous activities pertaining to the availability of public transport data, KiM provides input in working group sessions, organised by CROW-KpVV on behalf of NOV. KiM considers the data needs for managing the national government's concessions, but particularly considers this from the point of view of the availability of data for strategic policy research.
<b>DGB Strategy Unit</b> Knowledge at the Table, DM1302, small, ongoing	<b>Information about international travel behaviour of Dutch nationals and the travel behaviour of foreigners in the Netherlands</b> From previous analyses of international travel behaviour carried out by KiM it has become apparent that existing data collections provide only limited possibilities for compiling an integrated picture of international mobility, including both the mobility of foreign nationals making use of the Dutch transport infrastructure and the mobility of Dutch nationals abroad. The aim of this project is to obtain an initial insight into the size of the above-mentioned market segments and to identify and define what may be relevant to know for the various policy processes. Those aspects which prove to be highly relevant will then be investigated to determine how these specific data needs can be met in future.
<b>DGB Strategy Unit</b> Knowledge at the Table, DM1113, medium, ongoing	<b>Contribution to the Infrastructure and Spatial Planning Monitor</b> In 2012 PBL Netherlands Environmental Assessment Agency started monitoring spatial planning and mobility policy, in cooperation with KiM. This Infrastructure and Spatial Planning Monitor (MIR) covers the 13 national interests set out in the National Policy Strategy for Infrastructure and Spatial Planning (SVIR). The information is used to report to the House of Representatives once or twice a year on progress made with the policy. For DGB, KiM supplies knowledge-at-the-table information on mobility and accessibility to PBL for use in the MIR and ensures the information it contains is aligned with and complements the Mobility Report (see Mobility Report 2014; BR1401). The core element of KiM's contribution in 2015 is the further development of the accessibility indicator. In the most recent MIR (2014), this indicator is proposed only for car transport. The next MIR in 2016 should also include sharp insights into accessibility developments in public transport and for bicycles. Further development of this indicator will begin in mid-2015.

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Projects	
<p><b>DGB Strategy Unit</b> Research report / Knowledge at the Table, DM1401, large, ongoing</p>	<p><b>KiM's contribution to OViN Innovation trajectory</b> For the period 2015-2017, IenM and the CBS have agreements in place for continuing the mobility research project, 'Research of Trips Undertaken in the Netherlands' (<i>Onderzoek Verplaatsingen in Nederland</i>). Moreover, the relevant parties have agreed that, during the same time period, innovative possibilities will be studied as a means of providing a more efficient method of providing the information requirements covered by the OviN. In this study, distinctions will be made between the possibilities offered by big data (public transport chip cards, telephone and data traffic from smartphones, data from navigation systems) and new collection methods (automatic tracing of people via smartphones or gps loggers, surveys conducted via internet and apps, etcetera). KiM makes an active contribution to this innovative trajectory.</p>
<p><b>DGB Strategy Unit</b> Other department also interested: DGB Roads and Traffic Safety. Research Project, DM1501, medium, start first quarter</p>	<p><b>Validation of various congestion indexes</b> The media routinely publishes lists about how congestion and accessibility are developing in various major cities - the most well-known of these being the INRIX National Traffic Scorecard Annual Report and the TomTom Traffic Index. In order to make possible comparisons with the Dutch government figures pertaining to traffic congestion levels and travel time loss, as compiled by RWS, VID, ANWB and TNO, it is necessary to fully understand how these other indexes are devised. In addition, studies will be conducted about the suitability of relevant data sources for traffic analyses.</p>

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities related to the content and nature of existing statistical databases and data collections. Examples are participating in the supervision of monitoring projects contracted out by the ministry, focusing on gaining an overview of freight flows on the Benelux level, and exchanging knowledge with the ILT's Analysis department.

## 4.3 Transport and traffic models

Transport and traffic models play an important role in the development of policy. In ex ante evaluations of policy measures the policy effects of interest are almost always revealed by using models. These models are continually being adjusted in the light of new information, understanding and technical advances. Over the past few decades this innovation process has been driven largely by two, partly conflicting, objectives: on the one hand, the need for comprehensive information that meets the needs of current policy questions, and on the other hand the scientific desire to describe the world as accurately as possible.

Over the past decade these developments have led to problems with using models in the policy process because the information supplied is, in a certain sense, too complex. This has increased the chances of mistakes occurring, and thus adds to the vulnerability of the policymaking process, thus demanding a high degree of quality control. In previous research, KiM has concluded that if the models are to remain workable in future, they will have to be improved and subjected to better quality assurance procedures, and the outcomes will have to be presented more effectively. The challenge for the future is to find better ways of interpreting model outcomes in the policy process. This challenge has been met in the IenM project Integration and governance models, which KiM participates in. KiM does not intend to develop and manage models itself (except for simple models to be used in the production of the Mobility Report and the Medium Term Outlooks (MLTs)). However, KiM does have extensive knowledge of the available models and modelling techniques as well as knowledge of the policy process, and can use this knowledge to stimulate the development of models and data collection relevant to mobility and transport policy. At the same time, KiM can assist the policymaking process by translating specific information needs (both substantive and process-related) into model development criteria.

Projects	
<p><b>DGB Strategy Unit</b> Knowledge at the Table, DM1106, medium, ongoing</p>	<p><b>Support for the Integration and Governance Models project</b> Partly based on recommendations from the KiM project, <i>Rekenen met Beleid</i> (Accounting with Policy), conducted in 2010, the IenM 'Integration and governance models' work to improve the steering of mobility and accessibility model development. The main focus is on structuring the relevant information needs for various policy processes, the modelling tools needed to do this, and the development of improved governance processes for developing and using these instruments. The core activities are the Improvement Programme models that are conducted under the direction of RWS, and of which KiM's Uncertainty Principle is a part. KiM contributes to the project's steering and preparatory group and provides knowledge contributions to various projects within the Improvement Programme.</p>
<p><b>DGB Strategy Unit</b> Knowledge at the Table, DM1107, large, ongoing</p>	<p><b>Model development in the medium term (MLT-model)</b> For past years, for the Mobility Report and Mobility Overview, the Medium Term Model (MLT model) was used to make forecasts of road traffic and congestion on the trunk road network for a period of up to five years. The aim of this project is to update the available forecasting methods - also referred to as the MLT model - and render them suitable for further detailing. From 2012 to 2014, the road traffic model was regularly updated, and the relation between mobility and congestion improved. In 2014, a MLT was also developed for aviation. For 2015, the road transport model is to be extended to regional provisions. Moreover, we will also look into possibilities for improving the available freight transport forecasting models.</p>
<p><b>DGB Strategy Unit</b> Research Project, DM1502, large, starting third quarter</p>	<p><b>Price elasticities freight transport</b> It has been repeatedly found that, for passenger transport, there exists reasonable insights into the sensitivity for costs and price changes (costs and/or price elasticities), but for freight transport this is much less the case. A few years ago, existing insights were compiled by PBL (Geilenkirchen et al., 2010), but without the recent new findings. A need for clear insights arise as expected when the Netherlands must determine whether it will continue with the Euro vignette or, as is the case for most other neighbouring countries, implement a kilometre pricing charge on freight transport. Based on a literature study, the first step is to determine if any new facts have been published in recent years. The expectation is that this would only be the case to a limited extent. An empirical analysis will then be conducted along two paths: a so-called revealed-preferences-analysis (RP-analysis) would be conducted based on available aggregate data; and price sensitivity would be analysed based on available databases, including information about individual choice behaviour in freight transport, such as research into the value of travel time loss and reliability (AVV, 2004 and KiM, 2013).</p>

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities related to this topic. The emphasis in these activities is on answering questions about the content and nature of existing national and international models, and participating in steering groups on model development and application projects within the Ministry of IenM (including Aeolus).

## 4.4 Project overview table

Department	Title	Number	Project type	Start	Size
DGB Strategy Unit	Netherlands Mobilty Panel	DM1102	Research Project	Ongoing	Large
DGB Civil Aviation	Factsheet aviation data	E928	Research Project	Ongoing	Small
DGB Public Transport and Rail	Considering the data needs for national government management concessions	DM1404	Knowledge at the Table	Ongoing	Small
DGB Strategy Unit	Information about international travel behaviour of Dutch nationals and the travel behaviour of foreigners in the Netherlands	DM1302	Knowledge at the Table	Ongoing	Small
DGB Strategy Unit	Contribution to the Infrastructure and Spatial Planning Monitor	DM1113	Knowledge at the Table	Ongoing	Medium
DGB Strategy Unit	KiM's contribution to OViN Innovation trajectory	DM1401	Research Project / Knowledge at the Table	Ongoing	Medium
DGB Strategy Unit	Validation of various congestion indexes	DM1501	Research Project	1 <sup>st</sup> quarter.	Medium
DGB Strategy Unit	Support for the Integration and Governance Models project	DM1106	Knowledge at the Table	Ongoing	Medium
DGB Strategy Unit	Model development in the medium term (MLT-model)	DM1107	Knowledge at the Table	Ongoing	Large
DGB Strategy Unit	Price elasticities freight transport	DM1502	Research Project	3 <sup>rd</sup> quarter.	Large

# 5

## Social Importance, the Role of Government and Market Organisation

### 5.1 Explanation of the core theme

The coalition agreement of Prime Minister Mark Rutte's second government attached great importance to the competitive strength of the Netherlands and how this is impacted by accessibility. With this as a starting point, much policy attention is devoted to the development of the mainports of Schiphol and Rotterdam, but also more broadly to other urban areas in the country. Moreover, the coalition agreement also emphasises a compact, strong and service-oriented government, which requires a clear demarcation of tasks and responsibilities.

These themes from the coalition agreement have increasingly come under the spotlight in recent years, which has led to an increase in the number of research questions to KiM in this area. How important are mobility and transport? Are they only important for the economy, or is there also a social and cultural component? What is the function of the major transport hubs, such as the mainports? To what extent should government facilitate their functioning, and what can better be left to market players? What instruments does government have at its disposal? How can the government bring about an effective and efficient market organisation? And how can public roles and tasks be allocated astutely across the various tiers of government?

This core theme addresses this broad range of questions. This core theme is broken down into the following topics:

- The social importance of mobility and transport, and especially of the mainports;
- The role of government and market organisation;
- Relations between the tiers of government.

The recent dialogue with the policy directorates has led to the formulation of a number of research questions on these three topic areas. The following sections show per topic which concrete projects (research projects and knowledge at the table) KiM will be undertaking in 2015 to provide answers to these research questions.



## 5.2 The social importance of mobility and transport, and especially of the mainports

The key question in this topic is how we can provide reliable quantitative evidence of the importance of mobility, transport and infrastructure to the social and economic development of the Netherlands. The approach we take adheres as far as possible to the broad concept of welfare that is widely used in the field of welfare economics. Subtopics are the relation between accessibility and economic growth, the importance of mobility as distinguished by motive (travel to work, business, social/recreational) and the functioning of mainports, brainports and greenports.

Projects	
<b>DGB Civil Aviation Department</b> Knowledge at the Table, MM1401, small, ongoing	<b>Economic contribution Schiphol</b> In order to satisfactorily support the policy for the mainport Schiphol, it is important that IenM has access to the actual insights into the economic contribution of the airport and of the network of connections that are available there. In order to have the most complete and current insights into the relevant economic contributions that are attributed to Schiphol airport, the research results are updated. The research is contracted out to an external party. KiM is responsible for part of the project oversight.
<b>DGB Civil Aviation Department</b> Research project, MM1501, medium, start second quarter	<b>Impact of airports on value of homes</b> In this project the primary subject is how the presence of an airport impacts the value of homes. This impact can be positive (accessibility) and negative (noise disturbance). The project will initially consist of an analysis of available literature on this subject.
<b>DGB Civil Aviation Department</b> Research project, MM1402, small, starting first quarter	<b>The economic value of low-cost carrier operations</b> Low-cost carrier operations make up about 25% of all intra-European operations. They have improved the accessibility of many smaller and also some larger airports in Europe by adding more destinations, lowering prices and raising flight frequencies. This project will analyse the economic value of these low-cost carrier connections for certain airports, regions and the Netherlands as a whole. An important part of the approach to this study will be enlisting the aid of the Airneth network.
<b>DGB Maritime Affairs</b> Research project, MM1403, medium, starting first quarter	<b>Effects of the North Pole route on the strategic position of seaports and shipping</b> The 'North Pole route' between Asia and Europe may have an influence on intercontinental cargo flows and thus on the strategic position of (Dutch) seaports and on shipping. This study will examine the potential importance of this route. Environmental and safety aspects will be included in the study if they have not already been investigated by the International Maritime Organization. It builds on the analyses conducted by the CPB in this area.
<b>DGB Public Transport and Rail</b> Knowledge at the Table, MM1502, medium, starting first quarter	<b>Effects of innovations in the taxi market</b> KiM contributes to the brainstorming sessions and subsequent research projects focusing on innovations in the taxi market, such as Uber.
<b>DGB Strategy Unit</b> Research Project, MM1404, medium, ongoing	<b>Effects mobility policy in regional-economic structure</b> Improvements in accessibility can contribute to the competitiveness of a region or county, which is one of the objectives of the SVIR. In this project, a decision tree and checklist are developed in order to be able to indicate the competitiveness in the selection stage of assignments for a region. The decision tree and checklist are tested in three case studies in Amsterdam.

### Global description of other small knowledge-at-the-table activities

KiM also regularly carries out small knowledge-at-the-table activities in this topic area. In 2015 this will include participating in the development of a knowledge agenda for the national maritime strategy.

## 5.3 The role of government and market organisation

This topic is about effective and efficient relations between government and the market. How can public interests be safeguarded and what will the effects be of a shift towards more market liberalisation or, alternatively, to more government intervention? How can government make transport markets work better? How can the government steer semi-public and private organisations in such a way that they contribute to meeting government objectives? Apart from the fundamental tasks of government (such as defining ownership rights), the issue here is the degree to which government can operate as implementer, facilitator and regulator. This topic also includes examination of forms of public-private partnerships and financing mechanisms.

Projects	
<b>DGB Civil Aviation Department</b> Knowledge at the Table, MM1503, medium, starting second quarter	<b>Possibilities for selectivity policy Schiphol</b> In this project, KiM maps what possibilities exist for shaping the selectivity policy at Schiphol. Which instruments exist and what are the advantages and disadvantages of these instrument? An example of a possible instrument is the pricing and trading of slots.
<b>DGB Public Transport and Rail</b> Research project, MO1201, medium, starting third quarter	<b>Increasing market responsiveness of public transport</b> Central government may be able to make public transport more responsive to the needs of the customer by removing constraints and barriers and by taking measures to facilitate a more market-oriented approach. What measures will have the greatest effect in this transition from a supply-led to a demand-led system? What are the main obstacles that have to be removed in densely populated areas, especially in the transport and real estate markets? What opportunities are there in sparsely populated areas to integrate public transport with contract transport? This project will start after completion of the project 'Quality needs of the modern public transport passenger' (BB1106).
<b>DGB Public Transport and Rail</b> Research project, MM1407/MM1408, medium, ongoing	<b>Indicators door-to-door-accessibility public transport</b> There is a need, from two perspectives, for indicators of door-to-door-accessibility via public transport. The first, from the perspective of the national government's system responsibility, is to adequately follow the development of the quality of door-to-door-accessibility. The second perspective - as part of an effective concession agreement - is the need to encourage transport firms to focus on improving the quality of door-to-door accessibility with public transport, and to clearly show what their contributions to this development are. In this project, the possible indicators for monitoring door-to-door-accessibility are described, criteria are established for evaluating the applicability of these indicators, and this evaluation is conducted.
<b>DGB Roads and Traffic Safety</b> Research project, MM1409, medium, starting first quarter	<b>Real costs and benefits of PPP in infrastructure projects</b> Little is known ex post of the costs and benefits of public-private partnerships (PPP) in infrastructure projects. It is assumed that private sector involvement gives better value for money (e.g. the 'design, build, finance and maintain', or DBFM, contract model), but is this really so? This project will use case studies to gain a clear understanding of the actual added value achieved (in terms of costs and benefits).
<b>DGB Roads and Traffic Safety</b> Knowledge at the Table, MM1411, medium, starting first quarter	<b>Social priorities for replacement and renovation projects</b> It is expected that in the near future a large number of engineering structures in the nation's transport infrastructure will need to be replaced. Unfortunately, the available budget is insufficient to meet these requirements in full. Rijkswaterstaat is currently taking a structured welfare economics approach to this issue for hydraulic engineering structures (VONK replacement project) and flood protection (RINK risk inventory project). Such an approach has not yet been prepared for road infrastructure. KiM will prepare a memorandum in order to prioritise the starting points based on social costs and benefits. In addition, KiM will provide knowledge at the table on an ad hoc basis to help with prioritising the replacement requirements of the Directorate-General for Mobility and Transport (DGB).

### Global description of other small knowledge-at-the-table activities

Within this theme KiM supplies knowledge at the table on various subjects, an example of which being knowledge at the table during the design of transport and management concessions in the public transport sector.

## 5.4 Relations between the tiers of government

This topic is about how the division of responsibilities and cooperation between the various tiers of government can be designed to be as effective and efficient as possible. Important lessons can be learned from other countries and from other sectors. The topic covers the relations within the Netherlands, as well as the relationship between European and national policies.

### Projects

There are currently no projects within this subject area.

Global description of other small knowledge-at-the-table activities

Currently there are no small knowledge-at-the-table activities planned for this topic.

## 5.5 Project overview table

Department	Title	Number	Project type	Start	Size
DGB Civil Aviation	Economic contribution Schiphol	MM1401	Knowledge at the Table	Ongoing	Small
DGB Civil Aviation	Impact of airports on value of homes	MM1501	Research Project	2 <sup>nd</sup> quarter.	Medium
DGB Civil Aviation	The economic value of low-cost carrier operations	MM1402	Research Project	1 <sup>st</sup> quarter.	Small
DGB Maritime Affairs	Effects of the North Pole route on the strategic position of seaports and shipping	MM1403	Research Project	1 <sup>st</sup> quarter.	Medium
DGB Public Transport and Rail	Effects of innovations in the taxi market	MM1502	Knowledge at the Table	1 <sup>st</sup> quarter.	Medium
DGB Unit Strategy	Effects mobility policy in regional-economic structure	MM1404	Research Project	Ongoing	Medium
DGB Civil Aviation	Possibilities for selectivity policy Schiphol	MM1503	Knowledge at the Table	2 <sup>nd</sup> quarter.	Medium
DGB Public Transport and Rail	Increasing market responsiveness of public transport	MO1201	Research Project	3 <sup>rd</sup> quarter.	Medium
DGB Public Transport and Rail	Indicators door-to-door-accessibility public transport	MM1407/ MM1408	Research Project	Ongoing	Medium
DGB Roads and Traffic Safety	Real costs and benefits of PPP in infrastructure	MM1409	Research Project	1 <sup>st</sup> quarter.	Medium
DGB Roads and Traffic Safety	Social priorities for replacement and renovation projects	MM1411	Knowledge at the Table	1 <sup>st</sup> quarter.	Medium

# 6

## Policy Evaluations and Assessment Frameworks

### 6.1 Explanation of the core theme

This core theme focuses on ex ante and ex post evaluations of infrastructure and mobility policy and the assessment frameworks required for these evaluations. What are the most effective and efficient policy options for solving problems and exploiting opportunities? Identifying effective and efficient policy options has been part of KiM's core business since its establishment. In the current climate of budget cuts, arguments for proceeding with infrastructure projects and deploying policy instruments are subject to more critical scrutiny, emphasising the need for transparent assessment frameworks that give extra weight to efficiency and effectiveness.

Social cost-benefit analysis (SCBA) is an important assessment method in the field of infrastructure and spatial planning. However, SCBA is itself under scrutiny because sometimes too much emphasis is placed on the final balance of costs and benefits and because of questions about the extent to which an SCBA can answer questions or achieve specific policy objectives. These issues require extra attention within this core theme.

Three topics are central to this core theme:

- Developing and broadening methodology
- Improving the uptake of insights from assessment frameworks
- Implementing and reviewing evaluations

The recent dialogue with the policy directorates has led to the formulation of a number of research questions in these three topic areas. The following sections show per topic which concrete projects (research projects and knowledge at the table) KiM will be undertaking in 2015 to provide answers to these research questions.

## 6.2 Developing and broadening ex ante evaluation methodology

KiM's methodological development work is primarily concerned with the questions surrounding cost-benefit analysis. Despite the fact that the SCBA methodology for infrastructure impact assessment has been used for more than 10 years, various aspects are still new developmental points. These relate to broadening the applicability of the instrument (for example to area-based projects and for management and maintenance decisions) and to accommodating the latest insights into the types of effects generated by mobility projects (for example, reliability benefits). Besides methodological development, we aim to devote more attention to examining the position of SCBA within the full range of policy analysis methods.

Projects	
<b>DGB Roads and Traffic Safety</b> Knowledge at the Table, EA1501, medium, ongoing	<b>Updating valuation ratios SCBA</b> The overview of valuation ratios for use in SCBAs must be updated. This overview is retained by the Support Centre for Economic Evaluation within RWS WVL. KiM provides a still to be determined contribution to this update.
<b>DGB Strategy Unit</b> Research project, EA1402, medium, starting second quarter	<b>Identifying and dealing with uncertainties in SCBAs</b> An SCBA involves a number of steps (such as describing the baseline alternative and project alternatives, determining the effects, monetisation of effects). Each step involves some degree of uncertainty, such as possible uncertainties in the values of time used. In this project KiM will analyse these uncertainties to identify the steps in which they are most prevalent and thus where the need to reduce uncertainties is most urgent in order to generate reliable SCBA outcomes in future. The project will not only cover SCBAs of infrastructure projects, but also SCBAs of other types of measures in the field of mobility.
<b>DGRW Regional and Project Development</b> (other department involved: DGB Strategy Unit) Knowledge at the Table, EA1401, medium, ongoing	<b>Development of adaptive policy</b> In 2013 KiM described how adaptive policy can be applied in the regional agendas. KiM will deliver knowledge at the table to support the use of adaptive policy in the implementation of the Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT). An important topic is the relation with the new approach to accessibility.
<b>DGRW Regional and Project Development</b> Knowledge at the Table, EA1502, small, ongoing	<b>Evaluation assessment frameworks</b> On behalf of DGRW, an external party compiled an overview of all assessment frameworks that are used within the IenM. The conclusion of this scan is that many assessment frameworks are too sectorial and/or comprehensive to be used effectively. Moreover, it is often the case that information is requested which at that stage of the process is not yet available. KiM will contribute toward the follow up project.
<b>Finance, Management and Control</b> (other directorates involved: DGB, DGRW, DGMI, RWS) Knowledge at the Table, EA1102, small, ongoing	<b>Various project-transcending questions on SCBA methodology</b> When social cost-benefit analyses (SCBA) are conducted, questions arise that are not limited to one particular project and for which an appropriate and consistent solution must be found, in consultation with relevant parties such as the Netherlands Bureau for Economic Policy Analysis (CPB), PBL Environmental Assessment Agency and Rijkswaterstaat Water, Traffic and Environment (RWS/WVL). Work on this project in 2015 may cover topics such as the size of the social discount rate and the risk increment of irreversible effects.
<b>Finance, Management and Control</b> Knowledge at the Table, EA1321, small, starting second quarter	<b>SCBA of an entire project or of national government funding</b> It is customary for the SCBA to examine the effects of the entire project, and therefore also all the costs included in a project. The more involvement there is of private parties and other government institutions, the more the question arises of whether the national government must assess the project as a whole in terms of social costs and benefits, or rather conduct a social-cost benefit analysis of its own share in the project. This issue also arises in the co-financing of projects by the European Union.
<b>Finance, Management and Control</b> Research Project, EA1503, small, starting third quarter	<b>Scope and procedures for second opinions</b> Second opinions on SCBA often differ in term of scope and procedures. Do you also offer alternatives to a second opinion? Do you conduct recalculations? Or do you only indicate which aspects are correct and which are incorrect? A guideline can clarify the role and position of second opinions. KiM, and other relevant parties, will devise a guideline for this situation.

### Global description of other small knowledge-at-the-table activities

Various small knowledge-at-the-table activities are planned for this topic, including, for example, the providing of ad hoc contributions to the development of assessment frameworks.

## 6.3 Improving the uptake of insights from assessment frameworks

At least as important as developing new knowledge is ensuring that the insights already obtained by the research community are actually taken up by the ministry's policy officers. KiM plays a pivotal role in making knowledge about SCBAs and other assessment frameworks ready for use and aspires to continue in this role in future. This includes explaining in understandable terms how SCBA works, as well as presenting and communicating the results of SCBAs of specific projects and programmes.

Concrete projects	
<b>Finance, Management and Control</b> (other directorates involved: DGB, DGRW, DGMI) Knowledge at the Table, E712, small, ongoing	<b>New SCBA guidance</b> KiM is providing an input to sector-specific handbooks on the use of the new national guidance on SCBA.
<b>Finance, Management and Control</b> (other directorates involved: DGB, DGRW, DGMI) Knowledge at the Table, E712, small, ongoing	<b>Communication on SCBA</b> KiM is making information on SCBA available for presentations and reports and also contributes to conferences and courses in this area.
<b>Finance, Management and Control</b> (other directorates involved: DGB, DGRW, DGMI) Knowledge at the Table, E712, small, ongoing	<b>Secretariat of the inter-departmental SCBA core team</b> KiM runs the secretariat of the inter-departmental SCBA core team.

### Global description of other small knowledge-at-the-table activities

Within this topic, small knowledge-at-the-table activities often consist of contributions to projects by other knowledge institutes and the policy assessment agencies.

## 6.4 Implementing and reviewing evaluations

As well as conducting ex ante evaluations of concrete policy instruments, KiM gives second opinions on SCBAs, takes part in overseeing the production of SCBAs, and advises the policy directorates on the implementation of SCBAs and the role of SCBA in the decision-making process

KiM also carries out ex post evaluations. Ex post evaluation of infrastructure projects and policies can have important advantages. Learning from the past can improve the quality of future ex ante evaluations, and therefore the quality of decision making. Moreover, ex post studies and meta-evaluations can provide information of wider significance by revealing which policies have been successful and under what circumstances, and which policies have not. Within this topic area, KiM provides second opinions on policy screenings included in the central government budget and conducted by third parties.

Projects	
<b>DGB Maritime Affairs</b> Knowledge at the Table, EA1504 small, starting first quarter	<b>Measuring effectiveness of National Maritime strategy</b> For the new National Maritime strategy, the question is how to measure the effectiveness of the proposed policy. Because the maritime strategy also included interdepartmental subjects such as shipbuilding, and marine and maritime education, for the IenM the indicators derived from the Maritime Monitor will no longer suffice. Moreover, the aim is to place the effects of the Dutch policy alongside developments abroad. KiM will draft a report about the possible ways of measuring appropriate indicators and help devise new ideas further future developments.
<b>DGB Strategy Unit</b> (other directorate involved: DGB Public Transport and Rail) Knowledge at the Table, EA1505, small, starting first quarter	<b>Quick scan existing knowledge effects of price incentives</b> KiM will create an inventory of recent knowledge pertaining to various types of price incentives.
<b>DGMI Safety and Risks</b> Knowledge at the Table, EA1317, small, ongoing	<b>A considered approach to safety</b> KiM will provide a knowledge-at-the-table contribution to the next stage of the IenM-wide process: A considered approach to safety. A part of this will involve mapping the ways in which safety issues and aspects are appraised within the Ministry.
<b>Finance, Management and Control</b> (other directorates involved: DGB Roads and Traffic Safety, DGB Public Transport and Rail, DGB Civil Aviation Department, DGB Maritime Affairs) Knowledge at the Table, EA1403, medium, starting at various times	<b>Supervising and giving second opinions on SCBAs of several defining projects</b> (as far as currently envisioned): <ul style="list-style-type: none"> <li>- Second opinion on the SCBA Calandbrug</li> <li>- Second opinion on the SCBA A58</li> <li>- SCBA Rotterdam The Hague Airport</li> <li>- Supervision SCBA 3000V</li> <li>- Regional projects in framework of LTSA-2</li> </ul>
<b>Finance, Management and Control</b> (other directorates involved: DGB Roads and Traffic Safety, DGB Public Transport and Rail, DGB Civil Aviation Department, DGB Maritime Affairs) Knowledge at the Table, EA1405, medium, starting at various times	<b>Guiding and testing policy reviews</b> (as far as currently envisioned): <ul style="list-style-type: none"> <li>- Social safety</li> <li>- National Cooperative Aviation Programme (NSL)</li> </ul>

### Global description of other small knowledge-at-the-table activities

KiM regularly carries out small knowledge-at-the-table activities for this topic area. KiM for example participates in the process of further developing the set of key figures and indicators for the 'responsible budgeting' system.

## 6.5 Project overview table

Department	Title	Number	Project type	Start	Size
DGB Roads and Traffic Safety	Updating valuation ratios SCBA	EA1501	Knowledge at the Table	Ongoing	Medium
DGB Strategy Unit	Identifying and dealing with uncertainties in SCBAs	EA1402	Research Project	2 <sup>nd</sup> quarter.	Medium
DGRW Regional and Project Development	Development of adaptive policy	EA1401	Knowledge at the Table	Ongoing	Medium
DGRW Regional and Project Development	Evaluation assessment frameworks	EA1502	Knowledge at the Table	Ongoing	Small
FMC	Various project-transcending questions on SCBA methodology	EA1102	Knowledge at the Table	Ongoing	Small
FMC	SCBA of an entire project or of national government funding	EA1321	Knowledge at the Table	2 <sup>nd</sup> quarter.	Small
FMC	Scope and procedures for second opinions	EA1503	Research Project	3 <sup>rd</sup> quarter.	Small
FMC	New SCBA guidance	E712	Knowledge at the Table	Ongoing	Small
FMC	Communication on SCBA	E712	Knowledge at the Table	Ongoing	Small
FMC	Secretariat of the inter-departmental SCBA core team	E712	Knowledge at the Table	Ongoing	Small
DGB Maritime Affairs	Measuring effectiveness of National Maritime strategy	EA1504	Knowledge at the Table	1 <sup>st</sup> quarter.	Small
DGB Strategy Unit & DGB WV	Quick scan existing knowledge effects of price incentives	EA1505	Knowledge at the Table	1 <sup>st</sup> quarter.	Small
DGMI Safety and Risks	A considered approach to safety	EA1317	Knowledge at the Table	Ongoing	Small
FMC & DGB WV, DGB OVenS, DGB Civil Aviation, DGB Maritime Affairs	Supervising and giving second opinions on SCBAs of several defining projects	EA1403	Knowledge at the Table	Various	Medium
FMC & DGB WV, DGB OVenS, DGB Civil Aviation, DGB Maritime Affairs	Guiding and testing policy reviews	EA1405	Knowledge at the Table	Various	Medium



# List of abbreviations

AVV	Traffic and Transport Advisory Service ( <i>Adviesdienst Verkeer en Vervoer</i> )	DGRW GenP	DGRW Directorate for Regional and Project Development ( <i>Directie Gebieden en Projecten</i> )
BIT	Behavioural Insight Team	DGRW RO	DGRW Directorate for Spatial Development ( <i>Directie Ruimtelijke Ordening</i> )
CBA	Cost-Benefit Analysis	FMC	Finance, Management and Control ( <i>Financiën, Management en Control</i> )
CBS	Statistics Netherlands ( <i>Centraal Bureau voor de Statistiek</i> )	IenM	Ministry of Infrastructure and the Environment ( <i>Ministerie van Infrastructuur en Milieu</i> )
CPB	Netherlands Bureau for Economic Policy Analysis ( <i>Centraal Planbureau</i> )	ILT	Environment and Transport Inspectorate ( <i>Inspectie Leefomgeving en Transport</i> )
DBFM	Design, build, finance and maintain	JTRC	Joint Transport Research Committee
DBR	Sustainable Accessibility in the Randstad ( <i>Duurzame Bereikbaarheid van de Randstad</i> ) (NWO research programme)	KaT	Knowledge at the Table
DGB	Directorate-General for Mobility and Transport ( <i>Directoraat-Generaal Bereikbaarheid</i> )	KiM	Netherlands Institute for Transport Policy Analysis ( <i>Kennisinstituut voor Mobiliteitsbeleid</i> )
DGB BB	DGB Infrastructure Efficiency Programme ( <i>Programmadirectie Beter Benutten</i> )	KNV	Royal Dutch Transport Federation ( <i>Koninklijk Nederlands Vervoer</i> )
DGB LVT	DGB Civil Aviation Department ( <i>Directie Luchtvaart</i> )	LMS	National Model System ( <i>Landelijk Model Systeem</i> )
DGB MZ	DGB Directorate for Maritime Affairs ( <i>Directie Maritieme Zaken</i> )	MIR	Infrastructure and Spatial Planning Monitor ( <i>Monitor Infrastructuur en Ruimte</i> )
DGB OVenS	DGB Directorate for Public Transport and Rail ( <i>Directie Openbaar Vervoer en Spoor</i> )	MIRT	Multi-Year programme for Infrastructure, Spatial Planning and Transport ( <i>Meerjarenprogramma Infrastructuur, Ruimte en Transport</i> )
DGB Strat	DGB Strategy Unit ( <i>Unit Strategie</i> )	MLT	Middle-Long Term
DGB WV	DGB Directorate for Roads and Traffic Safety ( <i>Directie Wegen en Verkeersveiligheid</i> )	MON	Mobility Research Panel ( <i>Mobilitetsonderzoek Nederland</i> )
DGMI	Directorate-General for the Environment and International Affairs ( <i>Directoraat-Generaal Milieu en Internationaal</i> )	MPN	Netherlands Mobility Panel ( <i>Mobiliteitspanel Nederland</i> )
DGMI Int.	DGMI Directorate for International Affairs ( <i>Directie Internationaal</i> )	NOVB	National Public Transport Consultancy ( <i>Nationaal Openbaar Vervoerberaad</i> )
DGMI KLG	DGMI Directorate for Climate, Air and Noise ( <i>Directie Klimaat, Lucht en Geluid</i> )	NS	Netherlands Railway ( <i>Nederlandse Spoorwegen</i> )
DGMI VenR	DGMI Directorate for Safety and Risks ( <i>Directie Veiligheid en Risico's</i> )	NSL	National Air Quality Cooperation Programme ( <i>Nationaal Samenwerkingsprogramma Luchtkwaliteit</i> )
DGRW	Directorate-General for Spatial Development and Water Affairs ( <i>Directoraat-Generaal Ruimte en Water</i> )	OEI	OEI method for infrastructure impact assessment ( <i>Overzicht Effecten Infrastructuur</i> )
		ov	Public transport ( <i>Openbaar vervoer</i> )

OVIN	Research of Trips Undertaken in the Netherlands ( <i>Onderzoek Verplaatsingen in Nederland</i> )	SKIA	Strategic Knowledge and Innovation Agenda ( <i>Strategische Kennis- en Innovatieagenda</i> )
PBL	Netherlands Environmental Assessment Agency ( <i>Planbureau voor de Leefomgeving</i> )	SVIR	National Policy Strategy for Infrastructure and Spatial Planning ( <i>Structuurvisie Infrastructuur en Ruimte</i> )
PPS	Public-Private Partnership ( <i>Publiek-private samenwerking</i> )	SWUNG	Collaboration on Implementation of New Noise Disturbance Policy ( <i>Samen Werken aan de Uitvoering van Nieuw Geluidsbeleid</i> )
RO	Spatial Planning ( <i>Ruimtelijke Ordening</i> )	TRB	Transportation Research Board
RWS CIV	Rijkswaterstaat Central Information Service ( <i>Rijkswaterstaat Centrale Informatievoorziening</i> )	TEN-T	Trans-European Transport Network
RWS/WVL	Rijkswaterstaat Water, Traffic and Environment ( <i>Rijkswaterstaat Water, Verkeer en Leefomgeving</i> )	VerDuS	Connecting Sustainable Cities (NWO research programme)
SCBA	Social Cost-Benefit Analysis	WLO	Welfare, Prosperity and Quality of Living Environment ( <i>Welvaart en Leefomgeving</i> )
SCP	Netherlands Institute for Social Research ( <i>Sociaal en Cultureel Planbureau</i> )		

## Colophon

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