



Ministerie van Infrastructuur
en Waterstaat

KiM programme 2023

English version

March 2023

The Netherlands Institute for Transport Policy Analysis | KiM

Introduction

The Netherlands Institute for Transport Policy Analysis (KiM) provides knowledge inputs that aid the preparation of mobility policy at the Ministry of Infrastructure and Water Management (IenW). We carry out our own research as well as collate results from studies conducted elsewhere. We ensure that the Ministry is able to develop policy that is grounded in a strong knowledge base. We do this by analysing and explaining developments, conducting exploratory studies, drawing up potential scenarios and analysing the effects of policy instruments.

The KiM programme presents an overview of our projects for 2023. The Secretary General of the Ministry of Infrastructure and Water Management has approved the programme.

What is KiM and how does it operate? → [Section 1](#)

KiM's operations are largely demand-oriented. The programme has been created in consultation with a number of policy directorates at IenW. KiM is flexible in dealing with new inquiries and emerging problems, and modifies its prioritisation over the course of the year. Not all projects will be concluded this year.

What themes does KiM work on? → [Section 2](#)

The golden threads running through the projects collected in the KiM programme can be recognised by the ways they connect to the following nine themes.

- 1 Give direction to accessibility
- 2 Developing sustainable mobility
- 3 Urbanisation and housing
- 4 Modalities and measures
- 5 Digitalisation and innovation
- 6 Uncertain future
- 7 Considerations in times of scarcity
- 8 Data and models
- 9 Professionalising policy assessment

What projects will KiM be conducting? → [Section 3 thru 13](#)

Projects are first organised and discussed according to the IenW directorate that commissioned them (Sections 3 thru 12). Section 13 contains several of KiM's basic projects.

[Overview of projects](#)

The list of projects is sorted by theme.

Contents

Introduction 2

Contents 3

1	About The Netherlands Institute for Transport Policy Analysis (KiM) 4
1.1	Government of the Netherlands and Ministry of Infrastructure and Water Management 4
1.2	'Zipping' research and policy 5
1.3	The organisation 6
1.4	The position of KiM and safeguarding independence and standards 7
1.5	Collaborations 9
2	Themes and research lines 10
2.1	Themes in the programme 10
2.2	Research lines 12
3	Innovation and Strategy for Mobility Directorate 14
4	Sustainable Mobility Directorate 22
5	Public Transport and Railway Directorate 27
6	Roads and Traffic Safety Directorate and Directorate on Heavy Goods Vehicle Charges 33
7	Mobility and Spatial Planning Directorate and Ministry of Interior Affairs and Kingdom Relations 39
8	Directorate for Aviation 41
9	Directorate for Maritime Affairs 46
10	General Strategic Advice Directorate and Directorate for Financial and Economic Affairs 52
11	Directorate-General for the Environment and International Affairs 54
12	Directorate-General for Water and Soil 55
13	Basic projects 56
	Overview of projects by theme 58
	Publication details 65

1 About The Netherlands Institute for Transport Policy Analysis (KiM)

The Netherlands Institute for Transport Policy Analysis (KiM) provides knowledge inputs to support policymakers in the field of mobility and accessibility at the Ministry of Infrastructure and Water Management (IenW). KiM is part of that Ministry. We also make this knowledge freely available to third parties.

KiM takes a critical stance and is also a trusted colleague of policy makers. KiM conducts its own research and gathers knowledge developed elsewhere, enabling IenW to develop policy with a solid knowledge foundation. More information about KiM can be found at english.kimnet.nl.

1.1 Government of the Netherlands and Ministry of Infrastructure and Water Management

Under the Dutch constitution the Cabinet is entirely composed of government ministers. Its job is to make decisions on overall governmental policy and promote its coherence. The King and the Ministers ultimately make up the Government of the Netherlands. Ministers and state secretaries are responsible for the day-to-day business of government. Please visit the [governmental website](#) for further information on how the Dutch Cabinet operates in practice.

The government comprises a coalition between the People's Party for Freedom and Democracy (VVD), Christian Democratic Alliance (CDA), Democrats '66 (D66) and Christian Union (CU), and consists of 20 ministers and nine state secretaries. This fourth Rutte government took office on Monday 10 January 2022. The [government](#) has set its sights on the major challenges facing society. In addition to dealing with the COVID-19 pandemic, it is deeply committed to combating climate change, tackling the nitrogen pollution crisis, building affordable new housing, making major investments in security, and increasing equality of opportunity within education.

The [Ministry of Infrastructure and Water Management](#) is committed to improving quality of life, access and mobility in a clean, safe and sustainable environment. The Ministry strives to create an efficient network of roads, railways, waterways and airways, effective water management to protect against flooding, and improved air and water quality.

Broadly speaking, the Ministry of Infrastructure and Water Management (IenW) consists of three sections: policy, implementation, and inspection. In addition, the ministry has several support agencies that help to ensure that senior-level political and civil service figures as well as employees are able to effectively perform their work.

In the policy section, four Directorates-General are tasked with developing policy in the areas of mobility, water management, aviation and maritime affairs and the environment.

- The Directorate-General for Aviation and Maritime Affairs is responsible for policy development in the fields of maritime affairs and aviation.
- The Directorate-General for the Environment and International Affairs is responsible for policy development in the fields of a clean, safe, healthy, and sustainable human environment; air quality; circular economy; sustainability;

environmental security and environmental risks. Furthermore, the Directorate-General coordinates the international component of the ministry's policy.

- The Directorate-General for Mobility is responsible for policy development in the fields of roads; road safety; public transport and railways; bicycle traffic; sustainable mobility.
- The Directorate-General for Water and Soil Affairs is responsible for policy development in the fields of water policy and flood risk management; climate adaptation; water projects in specific areas; and water and soil issues.

1.2 'Zipping' research and policy

KiM's operations are largely demand-oriented

KiM conducts research on behalf of the policy directorates of IenW. KiM enters into discussion with the various policy directorates in order to learn about their policy questions and translates these into research questions. KiM also makes efforts to confront the policy directorates with, among other things, strategic developments and social trends. We call this 'zipping' research and policy, which requires regular contact and discussions between researchers and policy departments.

KiM can also initiate its own research projects without being commissioned by a policy directorate. This happens when KiM considers a study of great importance for future policy, but the policy directorates have yet to commission such a study. However, such studies are exceptions.

Impact on policy

KiM interprets and explains developments, draws up exploratory studies and scenarios, and analyses the effects of policy instruments and the role of government. In all its work, KiM synthesises various perspectives and disciplines. This gives KiM's analyses a robust character. The robustness is also expressed in the broad number of disciplines KiM can draw on from its own organisation, including transport economics, technical management, social geography, urban planning and transport engineering.

The information, knowledge and expertise that KiM delivers serve as input for policy preparation at IenW. The kind of impact knowledge has on policy depends on the stage of the process policy is undergoing at that time. Interpretations and explanations of developments, exploratory studies and scenarios are important when setting agendas and preparing policy. The knowledge KiM delivers on the effects of policy instruments and the role of government is important for policy preparation, implementation and evaluation.

Working methods and research products

KiM supplies four different products: research projects, preliminary studies, knowledge-at-the-table and signalling services.

For *research projects*, KiM conducts its own investigations, which result in open-access publications. In such cases, KiM uses data that is already available or that has already been collected for that particular research objective.

KiM conducts *preliminary studies* when it is not yet clear whether a full study is justified. For instance, when there is a lack of clarity about the research question, or about whether and how the research question can be answered, or about whether any course of policy action would become available to IenW. This is also an option when a shorter exploration of what is already available on a topic would suffice.

Such preliminary studies can lead to publication if the results are suitable for an exploratory report in the form of a short synopsis with findings. If a follow-up study is commissioned, KiM first drafts a project plan with a more tightly focused research question as the result of the preliminary study. Follow-up studies lead to publications at a later stage. If the preliminary study indicates that the question has already been answered by someone else, has been overtaken by events or resists investigation, no publication follows.

For *knowledge-at-the-table*, KiM supplies direct information for supporting current policy processes at IenW. KiM does this through presentations, conducting discussions and supplying information for policy memoranda. Sometimes knowledge-at-the-table leads to publication of a short paper. KiM also plays a role in assuring the quality of research that has been prepared by third parties for IenW. This can vary from opening up the research network, or providing input into how the research questions and approach are formulated, to taking part in supervisory committees. Moreover, KiM also consults with policy directorates about the programming of knowledge development at institutes outside IenW.

Signalling covers getting topics related to current policy or scientific developments or reports by other parties on the agenda, both within and outside IenW. This could take the form of a short scientific paper, but also an email, telephone call, meeting or presentation. Some of the blogs written by colleagues at KiM also have a signalling function. Such activities are not included in the KiM programme. Although, there is capacity at KiM available for these things.

Agreements about publication of research results

All research projects lead to open-access publications. Publication takes place within 28 days of the study's conclusion. In exceptional cases, we may have to deviate from this deadline, for example if the research forms part of preparations for a major policy paper requiring the relevant research reports be published simultaneously with the government document. Publications may take the form of a brochure, factsheet, infographic or video. We also always publish a background report with, among other things, the rationale for the research methodology. For knowledge-at-the-table, KiM may, after consulting with the relevant policy directorate, choose to publish.

KiM publications can be found at <https://english.kimnet.nl/publications>.

1.3 The organisation

Management

The Management Team at KiM is made up of the director, the deputy director and research line managers. Henk Stipdonk is the director of KiM. Arjen 't Hoen is deputy director. The roles of research line manager are filled by Pauline Wortelboer-Van Donselaar, Stefan Verduin and Arjen 't Hoen. Each is responsible for their own research line. The research line managers also function as supervisors for staff.

Research line	Research line manager
A: Mobility and accessibility	Arjen 't Hoen
B: Sustainability and regions	Stefan Verduin
C: Policy evaluations and the role of government	Pauline Wortelboer-Van Donselaar

Research lines

The research lines determine the structure of KiM's work. Research lines draw the various projects into clusters, which helps ensure coherence between the projects and consistency over the years. The first section discusses the substantive connections between the research lines.

Expertise roundtable

In addition to research lines we have an expertise roundtable. At a KiM expertise exchange, specialist knowledge is shared and policy developments are tracked. These meetings are organised on the following topics: public transport, freight transport, roads, aviation, data and modelling.

Projects

KiM works on the research lines in project teams made up of researchers. The projects have been included in this programme. Ideas for new projects are brought forward both by the policy directorates and by KiM. These new projects – along with a number of continuing projects from previous years – form the 2023 programme.

When research questions arise in the course of the year, we consult with the relevant policy directorate to see which project has priority and whether the programme has to be modified. This implies, therefore, that some of the projects included in this programme may not be carried out. There will also be projects that started in 2023 that will only be completed in the course of 2024, as occurs every year.

1.4 The position of KiM and safeguarding independence and standards

KiM is positioned within IenW because it is important that KiM's products have an effective impact on the ministry's policies. KiM takes full responsibility for the research process and its products.

KiM's position is regulated by [a protocol](#) published in the Government Gazette. The protocol safeguards KiM's function in producing and publishing independent scientific research. One of the prime objectives of the protocol is preventing confusion of the roles of politicians and policy makers, on the one hand, with the role of researchers, on the other. The protocol establishes, among other things, the following: "The Minister and his/her officials will respect the results of research produced by KiM. They will not issue any public service obligations to KiM about changing formulations, findings, research methodologies or presuppositions" ([Protocol IV, 1](#)). Furthermore, the protocol states that the contents of KiM's publications are not required to represent the standpoint of the Minister of IenW ([Protocol IV, 3](#)). The protocol further regulates the funding, research programmes and communications of KiM.

In KiM's vision, independence is a pluriform concept. Briefly summarised, KiM embodies independence in the following manner. KiM is not independent in its research programming, because KiM's operations are largely demand-driven, but independent in the way it conducts its research and communicates research results. KiM chooses its own research methodologies and publishes all the results of its research projects.

Independence is not an end in itself, but rather a means to develop the best level of knowledge possible. It is self-evident that any scientific research must be conducted without the results being guided by the opinions of interest groups, political parties

or the policy divisions of government departments. But conducting research without any form of dialogue with policy divisions could lead to results that are divorced from social developments, policy requirements or political realities. Total independence of that kind would lower the practical value of findings and prevent research results from impacting policy. KiM therefore deems an energetic dialogue between researchers and policy makers, each acting within the boundaries of his or her role, of essential importance. KiM's ultimate goal is to see the research results translated into sound policy that benefits society.

KiM's independence and the scientific values that it represents are further safeguarded by the availability of a complaint procedure. This complaint procedure ensures that any complaints about KiM's methodologies, data or analyses will be handled in a principled way. Anyone can consult the designated confidential advisor on these matters if they suspect a violation of scientific integrity. Complaints can also be submitted to this confidential advisor. In 2021, KiM joined [LOWI](#), an independent organisation that investigates the complaints of third parties about research conducted by scientific institutes.

KiM fellows

In the context of quality assurance, KiM has appointed ten scientists from different disciplines, both national and international, as KiM fellows. An important task of these fellows is to comment on project plans and draft publications. The fellows are also invited to give lectures and presentations, and to participate in brainstorming sessions for current or new projects, in order to give them additional scientific cachet.

KiM fellow	Field	University
Professor Luca Bertolini	Urban Planning	University of Amsterdam
Professor Heleen de Coninck	Innovation and Sustainability Studies	Eindhoven University of Technology/Radboud University Nijmegen
Professor Dick Ettema	Urban Accessibility and Social Inclusion	Utrecht University
Professor Serge Hoogendoorn	Operations and Management of Transport Systems	Delft University of Technology
Professor Vincent Marchau	Uncertainty and Adaptivity of Social Systems	Radboud University Nijmegen
Professor Tim Schwanen	Transport and Social Geography	University of Oxford
Professor Ann Verhetsel	Interaction Geography, Spatial Planning and Economics	University of Antwerp
Professor Thierry Vanellander	Research Group Transport and Spatial Economics	University of Antwerp
Professor Erik Verhoef	Regional, Urban and Environmental Economics	VU Amsterdam
Professor Bert van Wee	Transport Policy	Delft University of Technology
Professor Oded Cats	Transport and Planning; Smart Public Transport Lab	Delft University of Technology

Review

KiM thinks it is important to reflect on its performance. For that reason, KiM conducted a self-evaluation in 2022. At the beginning of 2023, a review took place by an independent committee consisting of representatives drawn from policy and scientific fields. The findings of this review will be used by KiM to further improve the effectiveness and quality of the institute.

1.5 Collaborations

International orientation

Many research questions demand knowledge of international developments or have a predominantly international context. KiM is a member of the Transport Research Committee (TRC) of the International Transport Forum (ITF), which is affiliated with the Organisation for Economic Co-operation and Development (OECD). The ITF's TRC brings together research institutes from dozens of countries for the purpose of initiating joint research projects and exchanging expertise. KiM is very active within the TRC, with a view to stimulating joint international approaches to problems and solutions in the area of mobility. KiM is also active on various committees of the American Transportation Research Board (TRB) and the Association for European Transport (AET). In addition, KiM maintains direct contacts with researchers all over the world. KiM staff also attend conferences and symposia – both national and international – and present their own research findings.

Collaborations with knowledge institutes, government planning agencies, universities and Rijkswaterstaat (Public Works and Water Management)

KiM works closely with other Dutch knowledge institutes, universities and the Water, Traffic and Environment division (WVL) of Rijkswaterstaat (RWS). KiM makes expertise that has been developed elsewhere (in the Netherlands or abroad) accessible for practical policy use. Sometimes KiM commissions private parties or universities to conduct parts of its research, after which the results are synthesised into a KiM product. KiM performs a vital linking role between IenW and the universities in the area of mobility.

In addition, KiM coordinates its research programmes with the Netherlands Environmental Assessment Agency (PBL) and Netherlands Board for Economic Policy Analysis (CPB) in order to divide tasks in an effective and efficient manner, and to work together on topics of overlapping interest. Collaboration enables, among other things, optimal use of both parties' expertise through joint brainstorming sessions, mutually acting as an advisory board and providing critical feedback on each other's products. KiM also coordinates regularly with RWS and Statistics Netherlands (CBS) in order to link up current and future activities, where possible. This programme was also discussed with the PBL, CPB, SWOV, CBS and RWS.

The oval table

KiM investigates whether structured consultations between policy makers, scientists, industrial interests and users can help address major social themes for which the Ministry IenW bears a certain responsibility. This notion has been successfully applied within the Amsterdam region under the name "oval table".

The approach envisioned by KiM involves formulating a strategic policy question and then inviting users and relevant academic or industrial partners to offer their perspectives on the issue. The goal is to answer the question and, where possible, develop a plan of action that has broad support.

KiM conducted a pilot in 2021 and 2022 in order to acquire experience with this instrument. The topic for this pilot was energy supply for the Dutch railways: how can energy supply for the Dutch railways be guaranteed such that accessibility, security and sustainability goals (for both passenger and freight transport) for the period 2020 through 2050 can be realised? This process is not yet at an end. In 2023, KiM will conduct a straightforward evaluation using among other things an inventory of the experience of participants.

2 Themes and research lines

2.1 Themes in the programme

To make the golden threads running through this collection of projects more visible, KiM differentiates nine themes. Every project can be sorted under one of these themes. These themes reflect the topics that KiM is working on in 2023. The overarching themes cover multiple modalities. All the projects have been listed by theme in 0.

1 Give direction to accessibility

Mobility is not an end in itself; it is rather a means to enable accessibility. This concept has recently taken a more central place in IenW policy, which in turn raises new policy and research questions. What is the value of accessibility, in contrast, for example, to other objectives, such as safety and sustainability? Is it possible to formulate specific objectives or minimum levels of accessibility – for the entire country or for certain regions or groups? And how can accessibility be expressed, quantified and measured? How are the effects of accessibility policy distributed, and are they fair and equitable? These are the central questions governing this theme.

2 Developing sustainable mobility

Climate mitigation, climate adaptation and traffic safety are important demands for the future. Climate mitigation presents us with the major challenge of reducing CO₂ emissions by 55% in 2030 compared to 1990 levels. We also have to make our infrastructure able to withstand extreme weather conditions. KiM conducts studies and generates knowledge for tackling the climate challenges facing mobility. Our work focuses on the main energy, spatial, capacity and cost aspects of carbon-neutral energy chains – from power sources to vehicle power trains. Under this theme, KiM is conducting research into the problem of how the transition to sustainable mobility can be accelerated for maritime navigation. We are also guiding research that IenW has commissioned from third parties, such as studies on the availability of energy carriers for different modalities.

Moreover, in terms of traffic safety, the ambitious target of zero traffic fatalities has been set for 2050. KiM is working with the Dutch National Scientific Institute for Road Safety Research (SWOV) to find answers to research questions in this area.

3 Urbanisation and housing

The Netherlands is facing a huge housing challenge, requiring up to almost a million more houses in 10 years. The densification of cities is increasing, but the flipside of urbanisation is also visible, namely that rural areas are becoming less populated. Both these developments have an influence on mobility. In the year ahead, the tightening of the National Environmental Vision (NOVI) will get underway, which also includes a research and innovation programme. KiM is providing knowledge about trends and drivers that are central to the relationship between mobility, accessibility and spatial planning.

4 Individual modalities and measures

The ministerial (IenW) mobility policy is a unified policy, whereby the policy is integrated into each modality. This is reflected in, among other things, the creation of the Mobility Fund and drafting of the new, integrated mobility vision. Nonetheless,

the different modalities also have their own specific facets, along with modality-specific questions about the envisaged policy instruments.

These might be something like the cost and lifespan of a bicycle, the prioritisations of the railways, or the future of inland shipping. Other projects deal with car accessibility and ownership structures, and the potential added value of air freight.

Almost a third of KiM's projects can be sorted into this theme. All these projects focus on a specific modality, perceived obstacles or measures targeting these modalities. KiM also supplies information on the effectiveness and efficiency of policy measures for individual modalities.

5 Digitalisation and innovation

The theme of digitalisation is gaining importance within the mobility system. To what extent are alternatives available for traditional instruments? Projects for the current year on this theme deal mainly with applications of smart technologies in vehicles and infrastructure. KiM functions as an advisory board for the smart mobility department on this issue. In addition, the Directorate for Aviation is drafting an innovation strategy which may give rise to research questions.

6 Uncertain future

The future is uncertain. To address this uncertainty, KiM estimates future mobility growth, based on developments in the past and present. But there are always things that buck the trend, like COVID-19, the current war in Europe or high energy prices. Transport planning also follows its own course of development. We are largely replacing 'first forecast and then implement a policy' with 'first set targets and then develop transitional paths towards those targets' (known as 'decide and provide'). KiM applies these insights to IenW problems and working methods, while dealing with follow-up questions. Such problems mainly pertain to forecasting and consideration of different measures. KiM provides insight into mobility trends, as well as into other social developments that could potentially influence mobility. Policy can influence how the effects of incidents like the COVID-19 pandemic will be felt. KiM collaborates with policy makers designing the Mobility Vision, and is contributing to drafting new scenarios on Welfare, Prosperity and Quality of the Living Environment for the Netherlands Environmental Assessment Agency (PBL).

7 Considerations in times of scarcity

Increasingly, scarcity is having an influence on mobility policy. Scarcity covers a wide range of problems: the limitations of budgets or nitrogen emission allowances, fuel shortages due to high energy prices and the war in Ukraine, lack of qualified personnel or capacity in inland and maritime navigation. What is the IenW's scope for action in any particular case, and how should decisions be made? How should we prioritise limited financial resources within a directorate or programme, or fairly and consistently across the different parts of the organisation? And what effective measures are there for achieving targets if budgets, energy, nitrogen emission allowances or personnel remain subject to shortages?

8 Data and models

In its projects, KiM uses data and models generated by others, such as Statistics Netherlands (CBS) and Rijkswaterstaat. KiM has input into the way data is collected and models are developed by these organisations. However, if KiM believes that a certain data set or model would be useful which has not been tackled by the other organisations and therefore is not available, KiM takes the initiative to develop this.

One example of this is KiM's Netherlands Mobility Panel, a longitudinal panel research tool which KiM has been using since 2012 to collect data on mobility behaviour of a large fixed group of Dutch people and households over the years. Since the COVID-19 crisis, we also have been pushing for publication of the very latest statistics, to obtain proper insight into how mobility sectors are affected by times of crisis as quickly as possible.

9 Professionalising policy assessment

This year, once again, KiM is playing an active role in quality assurance reviews of external studies, based on our expertise in such things as evaluating mobility measures. The focus is on questions such as, what does a good social cost-benefit analysis (SCBA) require? Have questions about the efficiency, legitimacy and effectiveness of policy been properly answered in the external investigation? In addition, we ensure that index numbers (for valuation) are accurate: a big sample for determining travel time and reliability valuations will, after being delayed by the pandemic, be ready for publication in 2023. We also deploy our technical research experience as a contribution to taking responsibility for and learning about policy by means of evaluations. We see a trend in the greater need for monitoring developments (and a desire for more orientation towards clear goals for monitoring). We also see a broadening of subjects that policy considers relevant for monitoring, e.g. social justice and broad-based economic prosperity.

2.2 Research lines

Research lines form the basis for structuring and managing KiM's work. Research lines draw the various projects into clusters, which helps ensure coherence between the projects and consistency over the years. The themes that have been differentiated for the current year (see previous section) cut across the research lines to form cross-links. The projects are sorted according to research line in **Fout! Verwijzingsbron niet gevonden..** Further detail on the content of the three research lines is given below.

Research line A: Mobility and accessibility

The research line Mobility and accessibility is dedicated to understanding how the mobility system operates. KiM analyses the interaction of modalities, while making use of trends and innovations. Collecting data and developing models for these topics also fall under this research line. KiM looks at the past to find explanations for trends in mobility and accessibility using social developments and implemented government policy measures. KiM also looks to the future by drafting projections for the medium term, and by forecasting the effects of specific policy options on mobility and accessibility. The notion of accessibility is given special consideration by KiM: what is understood by this term? and how can we measure accessibility?

KiM also investigates the mobility of specific groups. Mobility behaviour varies between different groups in society. One example is the difference between old people and young people. Such research supplies important information for policy development because it helps clarify whether policy instruments will be effective for certain groups.

Research line B: Sustainability and regions

This research line is dedicated to sustainability and regions. Sustainability is an issue facing the entire country and every sector of the economy; thus it also earns a place in the mobility domain. While focusing on mobility, KiM approaches this theme in relation to the impacts of climate change and the effects of emissions on human

health. This research line might include investigating transitional pathways or people's behaviours and selection processes. Sustainability is already a facet of many studies, but in some studies it becomes the central focus. When that is the case, the study falls under this research line.

The Netherlands is facing a huge new housing challenge of 900,000 units to be built before 2030. These housing units must be easily accessible. The challenge is to ensure that the whole mobility system does not become gridlocked. The government has earmarked € 7.5 billion to support accessibility of new homes and the surrounding areas. But € 7.5 billion is not sufficient. We also have to roll out a mobility transition that gives more prominence to proximity to amenities and workplaces, with more sustainable transport choices. KiM supports such policies with expertise in this area.

Research line C: Policy evaluations and the role of government

For this research line, KiM analyses the effectiveness and efficiency of policy measures for all modalities – for both the transport of both passengers and freight. Questions about the role of government (legitimacy) also come within the scope of this research line.

KiM supplies policy directorates with analyses on policy approaches and results of evaluations, or conducts such evaluations itself. KiM also reviews evaluations compiled by other parties. A key element in this regard is widening and broadening the methodologies for social cost-benefit analyses. While doing so, we take a close look at the coherence between the constituents that are of social importance: the contribution to the economic development of the Netherlands, but also the external costs of mobility, such as damage to climate. In addition, KiM develops policy indicators which operationalise the concept of broad-based economic prosperity. IenW can monitor its policy targets and the degree to which these are achieved by means of such indicators.

3 Innovation and Strategy for Mobility Directorate

Theme	Project	Number	Track	Type
Give direction to accessibility	Potential accessibility objectives	MB2215	A	Research project
Give direction to accessibility	Further development and distributional aspects of the accessibility indicator	MB2302	A	Knowledge-at-the-table
Give direction to accessibility	The value of accessibility	ER2203	C	Research project
Give direction to accessibility	Knowledge agenda on mobility poverty and study of accessibility poverty	MB2107	A	Knowledge-at-the-table and research project
Give direction to accessibility	Quantifying accessibility poverty	MB2303	A	Preliminary study
Give direction to accessibility	Affordability of mobility and effect of mobility on purchasing power	MB2304	A	Preliminary study
Urbanisation and housing	Knowledge inputs for NOVI monitor	MB2221	A	Knowledge-at-the-table
Modalities and measures	Mobility Report 2023	MB2301	A	Research project
Modalities and measures	Update on commercial cost figures for transport of freight	ER2115	C	Research project
Modalities and measures	Impact studies of pay according to car use	ER2301	C	Knowledge-at-the-table
Digitalisation and innovation	Exploration of innovative but still immature technologies as potential contributors to carbon-neutral and energy-neutral mobility	DG2301	B	Preliminary study
Uncertain future	Similarities and differences in mobility between the generations	MG1910	A	Research project
Uncertain future	Mobility Vision	MB2220	A	Knowledge-at-the-table
Uncertain future	Integrated Mobility Analysis 2025	MB2322	A	Knowledge-at-the-table
Uncertain future	Paradigm shift in transport planning: monitoring transitions	ER2204	C	Knowledge-at-the-table
Considerations in times of scarcity	Consequences of scarcity for mobility	ER2205	C	Research project
Considerations in times of scarcity	Funding issues	ER2302	C	Knowledge-at-the-table
Data and models	IenW integration and governance models trajectory	DM1106	A	Knowledge-at-the-table
Data and models	Knowledge inputs for Statistics Netherlands mobility study ODIN	DM1719	A	Knowledge-at-the-table
Professionalising policy assessment	Major study of the value of travel time and reliability	EA1903	C	Research project
Professionalising policy assessment	Re-evaluating (price) elasticities	ER2208	C	Research project

Professionalising policy assessment	Broad-based economic prosperity and mobility follow-up	ER2201	C	Knowledge-at-the-table
Professionalising policy assessment	Assessment method of mobility funding	ER2303	C	Knowledge-at-the-table

Give direction to accessibility

Potential accessibility objectives (MB2215)

In the Integrated Mobility Analysis (IMA), IenW has outlined the forecast accessibility developments for the decades ahead. In the IMA accessibility is defined as the number of destinations (e.g. workplaces or amenities) that can be accessed from a specific location within a certain travel time. Accessibility is thus determined by how many destinations are available, the spatial proximity of these destinations and the ease with which travellers can reach these destinations. This approach to accessibility has been gaining a more important place within policy, alongside the more traditional approach where the central focus is on loss of travel time on the motorways, for example, or the reliability of public transport.

Indicators have been devised for the new approach, but as yet no objectives. In this project, KiM investigates what specific objectives are needed for accessibility, potentially differentiated for different population groups and different types of workplaces and amenities. KiM is also investigating how freight transport can be given a place in this approach to accessibility. The concept of a "15-minute city" is one of the possible options.

Research line A, research project

Further development and distributional aspects of the accessibility indicator (MB2302)

Rijkswaterstaat has further developed the accessibility indicator as applied by the IMA (see MB2215 above). TNO is analysing the distributional aspects of this indicator. KiM is participating in supervising these projects.

Research line A, knowledge-at-the-table

The value of accessibility (ER2203)

Traditionally, the social significance of mobility is presented in the Mobility Report. However, the edition for 2021 is missing an estimate for social significance, due to the unprecedented influence of the COVID-19 pandemic. The method also has several well-known limitations, such as the use of marginal travel time valuations and only being able to calculate a minimum threshold for social significance. For this project, KiM is exploring the possibility of updating or improving the method, or even devising a whole new approach where the value of *accessibility* is given a central place instead of *mobility*. The focus would then potentially shift from travel time and travel time gains to valuation of what can be accessed through mobility.

Research line C, research project

Knowledge agenda on mobility poverty and study of accessibility poverty (MB2107)

Mobility poverty (or accessibility poverty) occurs if people are prevented from participating in society *as a consequence of* limited mobility options. That someone has a relatively low-level of mobility does not necessarily mean that he or she is involuntarily restricted in the possibilities of participating in the employment process

or social activities, but it could indicate this. The causes of accessibility poverty – and therefore also the solutions – can also be sought outside the mobility system, for example in a different geographical distribution of amenities. Using knowledge-at-the-table, KiM provides insight into this theme.

Further, around the beginning of 2023, KiM will complete a research project in which it mapped out the mechanisms driving accessibility poverty (causes and consequences) using literature reviews and interviews.

Research line A, knowledge-at-the-table and research project
Also involved: Public Transport and Railway Directorate

Quantifying accessibility poverty (MB2303)

The research project to be completed around the beginning of 2023 into the mechanisms driving accessibility poverty (MB2107 above) is of a qualitative nature. In order to guide policy that affects accessibility poverty successfully, IenW requested a quantification of the scope of this problem. This would calculate such things as what proportion of certain vulnerable groups are experiencing accessibility poverty. It is not yet clear whether these segments can be quantified. In 2023 KiM will be conducting a preliminary study on the topic.

Research line A, preliminary study
Also involved: Public Transport and Railway Directorate

Affordability of mobility and effect of mobility on purchasing power (MB2304)

Since the purchasing power of large groups in Dutch society has come under pressure, the affordability of mobility has become an increasingly important theme in society and government policy. But what is affordability? How do you analyse affordability? And what are the possibilities IenW has for influencing affordability? KiM is conducting a preliminary study into this issue based on making a distinction between the micro-economic level (the affordability for individual citizens and households) and the macro-economic level (the affordability for society as a whole). This preliminary study is closely related to the previously mentioned studies of mobility and accessibility poverty. If the preliminary study demonstrates that a specific definition and measurable indicator of affordability is possible that can make an essential contribution to the notion of accessibility poverty, while also offering IenW direct leverage strategies, a research project will follow.

Research line A, preliminary study

Urbanisation and housing

Knowledge inputs for NOVI monitor (MB2221)

The Environmental Assessment Agency (PBL) issues the monitor NOVI (National Regional Vision) biannually, which contains the state of affairs for each of the 21 national interests represented in NOVI. The first monitor, published in 2020, was a baseline measurement; in 2022 the second monitor was issued. The next monitor will follow in 2024. KiM is supplying knowledge inputs about mobility-related indicators for the NOVI monitor.

Research line A, knowledge-at-the-table

Individual modalities and measures

Mobility Report 2023 (MB2301)

In the Mobility Report 2023, KiM presents the up-to-date data on developments regarding mobility up to now, plus forecasts for the medium term (through 2028). The Mobility Report differentiates between modalities for passenger and freight transport, while also discussing the effects of mobility on accessibility, living environment, climate and security. Explanations of these developments also form part of the Mobility Report. KiM publishes a Mobility Report once every two years. In interim years, a synoptic version appears, the Core Figures.

Research line A, research project

Also involved: Roads and Road Safety Directorate, Public Transport and Railway Directorate, Sustainable Mobility Directorate, Mobility and Regions Directorate, Directorate for Aviation, Directorate for Maritime Affairs

Update on commercial cost figures for freight transport (ER2115)

In 2020, we supplied an overview of commercial cost figures for freight transport. At present, the data is being updated for the baseline year 2021. This involves figuring out whether a further breakdown of cost components (or the underlying price indexes) is possible. The cost figures can be used for answering more detailed policy questions and in Social Cost-Benefit Analyses (SCBAs).

Research line C, research project

Also involved: Roads and Road Safety Directorate, Public Transport and Railway Directorate, Directorate for Aviation, Directorate for Maritime Affairs

Impact studies of pay according to car use (ER2301)

In the first six months of 2023, in follow-up to another KiM study providing an overview of the impacts of pay-per-use, research studies will be conducted into the impacts of pay according to car use on traffic, security and sustainability. IenW has commissioned others for these studies, with KiM in a supervisory role:

- Participating in advisory board and critically reviewing draft products from the commissioned impact studies;
- Helping to think through and further develop a meaningful segmentation in order to get a better view of distributive effects. In addition to a study into the impacts on purchasing power on incomes, these might include distribution across regions, across different degrees of urbanisation, or across different traffic patterns;
- Exploring the effects of pay-per-use on behavioural changes of Dutch people who travel abroad. For instance, are they travelling shorter distances by car, taking fewer trips or using a different method of transport? Based on the literature and information from the Mobility Panel Netherlands (MPN), we will compile a brief synopsis (two-pager) with insights.

Research line C, knowledge-at-the-table

Also involved: Roads and Traffic Safety Directorate

Digitalisation and innovations

Exploration of innovative but still immature technologies as potential contributors to carbon-neutral and energy-neutral mobility (DG2301)

In the KiM study on energy chains for carbon-neutral mobility (Bakker et al., 2022), the central focus was on technologies in an advanced stage of market development. That means, their Technology Readiness Level (TRL) is at a minimum of 6 (on a

scale of 9). In this follow-up study, we focus on technologies for carbon-neutral mobility that are at an earlier stage of development (TRL<6), but which may be interesting options in the future. For instance, because they supply carbon-neutral energy, or because they can severely reduce the energy use of vehicles (on the way to energy neutrality). In a concise internet survey of which innovative technologies with a low TRL are on the horizon worldwide, we explore such things as tech newsletters, reports of big international organisations (IEA, ITF-OECD) and the perspectives of universities and research institutions. We do this along the lines of the energy chain from well-to-wheel. We also contemplate the question of what role these innovative technologies could play in the transition to carbon neutrality in the decades ahead.

Research line B, preliminary study
Also involved: Sustainable Mobility Directorate

Uncertain future

Similarities and differences in mobility between the generations (MG1910)

This study investigates the extent to which mobility patterns differ between generations, and what options we have to take advantage of this in policy decisions. Do young people use and experience the car, the bicycle and public transport differently than the elderly? And how is mobility affected by the fact that people are living longer in good health and all kinds of medical aids are available that increase an individual's ability to get around? At what times of day do elderly people usually drive their cars, and at what age do they stop driving? Do seniors take more or fewer journeys by car than other generations as passengers? And is there an identifiable trend from more physical to more online activities? The results of this study are important for further improving mobility prognoses, while also providing leads for developing policy instruments dedicated to specific age groups in society.

Research line A, research project

Mobility Vision (MB2220)

The Ministry of IenW is currently drafting a new Mobility Vision. In this document, IenW, in collaboration with colleague departments, outlines the mobility and accessibility policy for the future. The visions for subsections of mobility that recently appeared, or will soon appear, form the basis for the Mobility Vision. KiM contributes all kinds of knowledge for the creation of the Mobility Vision, such as:

- reflections and presentations, for example about developments in mobility and accessibility, about mobility and accessibility requirements in different sectors (such as healthcare and education), and about the differences and similarities between the subsection visions;
- input in intra and interdepartmental advisory boards;
- answers to ad hoc questions.

Research line A, knowledge-at-the-table

Integrated Mobility Analysis 2025 (MB2322)

In 2025, IenW will again issue an Integrated Mobility Analysis (IMA). KiM is contributing to the focus and structure of this analysis, in particular about the indicators that will be used. KiM may also work out a number of the core issues, for example about the implications of a changing energy system on mobility.

Research line A, knowledge-at-the-table

Paradigm shift in transport planning: monitoring transitions (ER2204)

In 2021, the ITF report "Travel Transitions: How Transport Planners and Policy Makers Can Respond to Shifting Mobility Trends" appeared. In order to determine what to do about the deep uncertainty plaguing planning and investment decisions, the report advocates a new approach for strategic transport planning, as well as a new way of thinking about future trends. Instead of first predicting and then implementing policy measures, this shift entails first deciding what goals need to be achieved and then devising transitional pathways to those goals ("decide and provide"). In 2022 KiM formulated an interpretation of the ITF report and applied it to problems and working methods at IenW. Follow-up actions in 2023 include providing input about the way in which "decide and provide" can be integrated into the Mobility Vision and the Integrated Mobility Analysis (IMA), as well as how "decide and provide" could impact prognoses. KiM is also drawing up a plan for monitoring transitions.

Research line C, knowledge-at-the-table

Considerations in times of scarcity

Consequences of scarcity for mobility (ER2205)

Scarcity and shortages can currently be felt in mobility sectors in various forms: labour shortages, fuel scarcity due to high prices and the war in Ukraine, shortages in transport capacity. KiM is investigating the phenomenon as it impacts transport of both passengers and freight. For freight transport, various forms of scarcity are involved, for example high prices for containers due to limited shipping capacity. But also the shortage of drivers and other transport personnel has an influence on the market. Passenger transport is also feeling the effects of scarcity, for example personnel shortages and high prices due to fuel shortages. In this study, we investigate the causes of the scarcity in mobility sectors. For instance, are market regulation issues (monopolisation) at the root of this, or has the transport sector been disproportionately hit by the effects of the pandemic and the war in Ukraine? We are also making an inventory of the courses of action open to the national government, IenW in particular, in order to manage the consequences of scarcity.

Research line C, research project

Also involved: Roads and Traffic Safety Directorate, Public Transport and Railway Directorate, Directorate for Maritime Affairs

Funding issues (ER2302)

When it comes to questions about alternative funding models, KiM is available as a sparring partner for the Mobility Fund division of IenW based on its previous research. Such questions might include: What are the options? How have other countries organised things financially in terms of investment in mobility? What does it mean for the role of government?

Research line C, knowledge-at-the-table

Data and models

Knowledge inputs for Statistics Netherlands mobility study ODIN (DM1719)

Statistics Netherlands has been commissioned by IenW to conduct the mobility study "On Your Way in the Netherlands" (ODiN). For this study, Statistics Netherlands surveys mobility of the Dutch population every year. IenW and Statistics Netherlands have also decided to explore innovations in collecting the data

and analysing the results. This applies to, among other things, development and use of an app, and performing trend analyses. KiM is contributing knowledge and expertise. Further, KiM is participating in the core team, the supervisory group and management consultations for ODiN.

Research line A, knowledge-at-the-table

IenW integration and governance models trajectory (DM1106)

In the IenW integration and governance models trajectory the main focus is on better guidance for developing models on mobility and accessibility. The trajectory covers structuring the relevant data requirements for various policy processes, the corresponding requirements for modelling instruments, as well as developing better governance around the developments in and application of these instruments. KiM participates in the steering committee of the project, and supplies knowledge inputs for a variety of actions for developing and improving modelling, mainly led by the Water, Traffic and Environment division (WVL) of Rijkswaterstaat (RWS). KiM is also a member of the Strategy Group on Modelling.

Research line A, knowledge-at-the-table

Also involved: Roads and Traffic Safety Directorate, Public Transport and Railway Directorate, Directorate for Maritime Affairs, Directorate for Aviation, Sustainable Mobility Directorate

Professionalising policy assessment

Major study of the value of travel time and reliability (EA1903)

The index numbers (for valuation) of changes in travel time and reliability are updated approximately every ten years by means of a major study of travellers' experiences in practice. In 2019, the data collection for the update was launched. In connection with COVID-19 pandemic, however, field research was postponed until 2022. Data collection has now been successfully concluded. Publication of the new index numbers will follow in 2023, with considerable attention to the value of comfort in public transport and on footpaths and bicycle paths. This study covers all modalities of passenger and freight transport, including walking and cycling.

Research line C, research project

Also involved: Roads and Traffic Safety Directorate, Public Transport and Railway Directorate, Directorate for Aviation, Directorate for Maritime Affairs

Broad-based economic prosperity and mobility follow-up (ER2201)

In 2021, KiM published a short paper on broad-based economic prosperity and mobility containing proposals for improving monitors and evaluation instruments. Since that time, in this context, we have been supplying a contribution to the monitor on broad-based economic prosperity with meaningful indicators and an analysis of the distributive effects in SCBAs of mobility investment. In addition, KiM is also supplying expertise for parallel research studies in the area of broad-based economic prosperity, including projects initiated by the General Strategic Advice Directorate (ASA). KiM is also participating in consultations on the question of how broad-based economic prosperity can be incorporated into IenW's ambitions, the monitoring and roll out of the entire policy cycle, and the problem analysis of assigned tasks.

Research line C, knowledge-at-the-table

Also involved: General Strategic Advice Directorate (ASA)

Re-evaluating (price) elasticities (ER2208)

Many future projects make use of elasticities to estimate the effects of changes in the price of transport, due to the higher fuel prices, for example. Implicit in these elasticities are a variety of behavioural options, such as switching to a different mode of transportation, driving more economically or driving less. KiM is exploring questions such as, can we get a better understanding of what current elasticities are based on and what kind of uncertainties they entail? Are price elasticities changing, for example due to the COVID-19 pandemic? What do we need in terms of elasticities to keep estimating transport models properly, in the years ahead, we can provide prognoses for policy purposes? What can we learn from recent behavioural responses to the huge energy price rises? KiM can, in the first instance, find out what elasticities are used, how reliable they are and what they are based on (empirical studies or model studies). A previous KiM study of price incentives will supply the initial data input. If it turns out that new or additional elasticities are required, we can design a research for collecting the data, which can be implemented or commissioned from a third party at a later stage.

Research line C, preliminary study

Also involved: Roads and Traffic Safety Directorate, Public Transport and Railway Directorate, Directorate for Aviation, Directorate for Maritime Affairs

Assessment method for mobility funding (ER2303)

The Ministry of IenW is developing a method for collecting concrete policy data for decision making about the various investment options within the Mobility Fund (MF) in a structured, uniform manner. We can use such data, together with political leaders and the House of Representatives of the Dutch Parliament, to determine the commitment of resources from the generic investment capacity of the Mobility Fund. The new method will contribute to facilitating a conscious assessment across the entire ministry. ISM has set up an advisory board to collect valuable input from the different units of IenW. KiM is a participant in the advisory board representing its own area of expertise. We will thus be directly reflecting on the new assessment method.

Research line C, knowledge-at-the-table

4 Sustainable Mobility Directorate

Theme	Project	Number	Track	Type
Give direction to accessibility	The relation between active modes of transport and accessibility	MB2204	A	Knowledge-at-the-table
Developing sustainable mobility	Greening travel behaviour for everyone	MB2305	A	Knowledge-at-the-table
Developing sustainable mobility	Greening business mobility	MB2306	A	Research project
Developing sustainable mobility	Greening leisure travel	MB2307	A	Preliminary study
Developing sustainable mobility	How can we prevent counting CO ₂ reductions for multiple measures twice?	DG2302	B	Research project
Developing sustainable mobility	What are the climate impacts of exporting cars to Africa?	DG2303	B	Preliminary study
Developing sustainable mobility	What incentives are there for making long-haul road freight transport more sustainable?	DG2304	B	Preliminary study
Developing sustainable mobility	Transitional charts for sustainable mobility	DG2221	B	Knowledge-at-the-table
Developing sustainable mobility	Distribution of biogas between mobility and housing	DG2220	B	Knowledge-at-the-table
Developing sustainable mobility	What are the functionality thresholds of electric cars?	DG2305	B	Preliminary study
Modalities and measures	Effects of cycling on human health and importance of cycling employees for employers	DG2107	A	Research project
Modalities and measures	A better understanding of walking	MB2203	A	Research project
Modalities and measures	Biking facts 3.0	MB2308	A	Research project
Modalities and measures	Costs of cycling	MB2309	A	Research project
Modalities and measures	Knowledge input for active modes	MG1603	A	Knowledge-at-the-table
Uncertain future	Remote work and remote learning: were the expectations right?	MB2202	A	Knowledge-at-the-table and research project
Data and models	Developing models for lorries and delivery vans	MB2201	A	Knowledge-at-the-table

Give direction to accessibility

The relation between active modes of transport and accessibility (MB2204)

For this project, KiM is investigating the relation between accessibility and cycling or walking. This relationship is influenced by a variety of things, such as distance of

travel, the infrastructure in place and the presence of other vehicles on the road. KiM is also studying what kind of developments are relevant to accessibility, such as the increasing use of e-bikes. In this project, KiM differentiates between journeys from A to B and just taking a walk. KiM is also analysing the connection between objectives in the area of accessibility and objectives in the areas of climate change and health, where cycling and walking can make important contributions. KiM is also analysing the relationship with the accessibility of new housing locations. Active modes of transport have the potential of making a significant contribution to the accessibility of these locations, certainly in areas where there is little capacity left in the car and public transport systems.

Research line A, research project

Developing sustainable mobility

Greening travel behaviour for everyone (MB2305)

IenW is committed to greening travel behaviour, and considers it of the utmost importance that everyone can participate in this transition to sustainable mobility. KiM is consulting on the question of which groups in society have difficulties participating in the transition to sustainable mobility, and what particular policy actions can influence this. Part of this is the question of which groups benefit more from sustainability measures and which benefit less (the distributive effects of sustainability measures).

Research line A, knowledge-at-the-table

Greening business mobility (MB2306)

Greening business mobility is important for achieving carbon-neutral mobility by 2050. However, relatively little is known about commercial mobility (who are commercial travellers, why are they travelling, what modes of transport do they use, etc.). KiM did publish a study on commercial air travel in 2021. We need a greater understanding of the nature and scope of business mobility in order to further develop policy instruments targeting business mobility (such as the recent CO₂ standard for companies with more than 100 employees). Possible sources are data that will become available from a new CO₂ standard, IenW's employer survey and the Netherlands Mobility Panel (MPN).

Research line A, research project

Also involved: Roads and Traffic Safety Directorate, Public Transport and Railway Directorate

Greening leisure travel (MB2307)

The research question for this preliminary study is how can we influence leisure travellers' choice behaviour? This pertains to choice of destinations and mode of transport for holidays, family visits and day excursions. To answer this question, we need more understanding of leisure travel from the traveller's perspective. For this preliminary study, KiM will investigate how the scope and nature of leisure travel can be measured, and whether there are potential action points for policy makers.

Research line A, preliminary study

Also involved: Roads and Traffic Safety Directorate, Public Transport and Railway Directorate, Directorate for Aviation, Directorate for Maritime Affairs

How can we prevent counting CO₂ reductions for multiple measures twice? (DG2302)

Many measures exist that target CO₂ reduction. By assigning the full effect to each measure, one loses sight of the fact that the effect of an individual measure is smaller because of the existence of the other measures. Examples of this include the BPM measure for delivery vans as opposed to the European CO₂ standard for delivery vans, or the employers' approach as opposed to subsidies for electric cars. This leads to overestimating the total effect of the measures. For this study, KiM is exploring the magnitude of this overestimate, and how we can factor it into our calculations. It is important for, among other things, the current Interdepartmental Policy Study (IBO) on climate policy.

Research line B, research project

What are the climate impacts of exporting cars to Africa? (DG2303)

UNECE has initiated a project on the export of new and used cars to Africa. African countries have noted that these are poor-quality highly-polluting cars. The Netherlands supports the UNECE position, and is aiming at mandatory technical inspection certificates for all exported cars in order to meet climate targets. In a preliminary study, KiM is investigating the number and technical aspects of cars exported from the Netherlands to Africa; what those exports mean in terms of climate targets; and what alternatives there are, both for this export and for Africa.

Research line B, preliminary study

Also involved: Directorate-General for the Environment and International Affairs

What incentives are there for making long-haul road freight transport more sustainable? (DG2304)

By 2050, all long-haul road freight transport must be carbon neutral. Is it possible to give hauliers a push in the right direction to reach this target? Is there an advantageous economic outlook that could be offered to hauliers? And if none can be found, are there other ways of working towards standards for CO₂ emissions in freight transport? Such things might include a system requiring the shippers to improve their CO₂ performance. KiM will be exploring how the questions above can be investigated.

Research line B, preliminary study

Transitional charts for sustainable mobility (DG2221)

RVO is developing transitional charts for sustainable mobility. These charts will explore the possible distribution of energy carriers through 2050 based on existing publications and expert advice. The charts for possible transitional pathways will contribute pertinent insights for energy transition policies. KiM is offering knowledge and expertise, and giving feedback on others' advice.

Research line B, knowledge-at-the-table

Distribution of biogas between mobility and housing (DG2220)

In 2022, CE Delft investigated making it obligatory for gas suppliers to mix green gas in the supply of natural gas for low-volume users. In 2023, the government will make a definite decision on the mix obligation. The idea is to re-align, if necessary, the annual obligation for mobility (road transport, aviation, shipping), that is based on the EU Renewable Energy Directive (RED), by this means. In order to prepare for this decision, the connection and potential tensions between both obligations need

to be further analysed in a follow-up study. KiM is participating in an advisory board for this project, and contributing knowledge about the function of energy carriers for sustainable mobility.

Research line B, knowledge-at-the-table

Also involved: Ministry of Economic Affairs and Climate

What are the functionality thresholds of electric cars? (DG2305)

It's suspected that consumers' choice of car is to some extent dependent on the incidental demands they make on their cars, such as pulling caravans, campers or other trailers. Electric cars are still less suitable as a vehicle for pulling than cars with a combustion engine because of their limited range. This raises the question of whether an electric car is a good choice if you need to haul a trailer on a long-distance holiday. If that's not an option, then it's quite possible that many people won't want to buy an electric car yet. KiM is conducting a preliminary study into whether the wish to use private cars as a vehicle for pulling is causing hesitancy in choosing to buy an electric car. The preliminary study mainly focuses on options for this group, and whether policy instruments can be devised.

Research line B, preliminary study

Individual modalities and measures

Effects of cycling on human health and importance of cycling employees for employers (DG2107)

In 2019 and 2020, KiM conducted studies into the relationship between body mass index (BMI) and active forms of travel, and between health and active forms of travel. In order to stimulate employers to encourage employees to cycle to work, we need to better understand the impact of cycling and health in general, and the return on an investment in cycling for employers in particular. Encouraging employees to cycle to work may well influence sick leave, productivity and vitality. In collaboration with the RIVM and potentially also the universities, KiM is studying the health effects of cycling and the added value of cycling for employers.

Research line A, research project

A better understanding of walking (MB2203)

We have little understanding of how many people in the Netherlands walk, and what their destinations and motivations are, in relation to other forms of mobility. The national mobility study ODiN is limited when it comes to journeys by foot. At the same time, the importance of walking as a form of mobility is increasing, for one thing because of its effect on health. Since the COVID-19 pandemic, we have been taking more walks. For this project, KiM is exploring how we can get a better understanding of walking, and what kind of data sets about walking are needed.

Research line A, preliminary study

Knowledge input for active modes (MG1603)

Active modes of travelling (cycling and walking) play an important role in our mobility system. KiM is participating in a variety of activities with the goal of enriching policies on cycling and walking with data and analysis. One of these involves knowledge input for the IenW core team Active Mobility, while another involves collaborative partnerships like Bike Community. KiM is also providing advice on the monitoring and evaluation of IenW goals in the field of cycling, including the potential social costs and benefits. For walking, a national platform was launched in

2019 called Space for Walking. KiM is participating in a variety of activities both within and outside IenW with the goal of enriching policies on walking with data and analysis.

Research line A, knowledge-at-the-table

Biking facts 3.0 (MB2308)

In 2020 we published the brochure: Biking Facts: new insights. An updated version of this brochure will be published by KiM in 2023. 2024 will see publication of a Walking Facts brochure.

Research line A, research project

Cost of cycling (MB2309)

In this project, KiM will be making an analysis of the cost of cycling, both for the user and for the government. Because cost is an important determining factor in travellers' choice of transport, it's useful to understand what the costs of cycling are, especially in comparison with other modes of transport. KiM is also exploring how it might be possible to influence the cost of cycling. More importantly, the bicycle is seen as a possible solution for combating mobility and accessibility poverty. Whether this is actually the case depends on what it costs to own and use a bicycle.

Research line A, research project

Uncertain future

Remote work and remote learning: were the expectations right? (MB2202)

In recent years, KiM has issued various reports and brochures about the structural effects of the COVID-19 pandemic on remote working, online meetings/teleconferencing, remote learning and their effects on mobility. KiM regularly analyses how these effects are developing using the Netherlands Mobility Panel (MPN). In 2023, KiM will again be using the MPN for this purpose. Such analyses are important in order to ascertain whether mobility developments – and the effects of mobility on accessibility, safety and sustainability – deviate from prior prognoses. In addition, KiM is advising on policy options that aim to continue to incentivise hybrid working.

Research line A, research project and knowledge-at-the-table

Also involved: Innovation and Strategy for Mobility Directorate, Roads and Traffic Safety Directorate, Public Transport and Railway Directorate

Data and models

Developing models for lorries and delivery vans (MB2201)

The Ministry of IenW is exploring the need for developing a model for lorry and delivery vans, and what possibilities are available. There are already models on the ownership and use of private cars, and have been for many years, that provide greater understanding of the future size and composition of the national passenger car fleet. A similar model for the size and composition of the national lorry and delivery van fleet, that complements the current collection of strategic modelling instruments of IenW, does not yet exist. KiM is a member of the team guiding development of this model.

Research line A, knowledge-at-the-table

5 Public Transport and Railway Directorate

Theme	Project	Number	Track	Type
Give direction to accessibility	Revision of the TEN-T Regulation and rail transport	MB2310	A	Knowledge-at-the-table
Modalities and measures	Demand-driven public transport: experiences and opportunities	MB2211	A	Research project
Modalities and measures	Opportunities for the main rail network	MB2213	A	Research project
Modalities and measures	Car costs vs public transport costs	MB2214	A	Preliminary study
Modalities and measures	Revising priorities for the rail network	MB2311	A	Knowledge-at-the-table
Modalities and measures	Ex post analysis Bus Rapid Transit	MB2113	A	Knowledge-at-the-table
Modalities and measures	International passenger transport	MB2210	A	Knowledge-at-the-table
Modalities and measures	Social effects of public transport	ER2209	C	Research project
Modalities and measures	Monitoring the costs of rail freight transport	ER2224	C	Knowledge-at-the-table
Modalities and measures	The future of rail freight transport	ER2307	C	Knowledge-at-the-table
Modalities and measures	Social importance of rail freight transport	ER2304	C	Research project
Modalities and measures	International benchmark performances of NS and Prorail	ER2305	C	Knowledge-at-the-table and research project
Modalities and measures	SCBA update 3RX	ER2024	C	Knowledge-at-the-table
Modalities and measures	Deregulation of the taxi market: an assessment	ER2210	C	Knowledge-at-the-table
Modalities and measures	Policy assessment of accessibility allowances for public transport	ER2306	C	Knowledge-at-the-table
Uncertain future	Where did the traveller go? Changes to the market in the medium term	MB2312	A	Research project
Uncertain future	Knowledge inputs for monitoring the public transport forecast	BR1420	A	Knowledge-at-the-table
Uncertain future	Long-term vision of market regulation for the main rail network	ER2229	C	Knowledge-at-the-table
Data and models	Data needs for public transport	DM1404	A	Knowledge-at-the-table
Professionalising policy assessment	Urban public transport: are results outpacing expectations?	ER2211	C	Research project
Professionalising policy assessment	MIRT study of the Lely line	ER2227	C	Knowledge-at-the-table

Give direction to accessibility

Revision of the TEN-T Regulation and rail transport (MB2310)

The European Commission is revising the Trans-European Network for Transport Regulation (TEN-T). This has consequences for the range of the TEN-T network and the requirements that can be demanded of the TEN-T network, including rail transport. KiM is helping in preparations of the Dutch contribution to this revision with knowledge and expertise.

Research line A, knowledge-at-the-table

Individual modalities and measures

Demand-driven public transport: experiences and opportunities (MB2211)

Demand-driven concepts within the regular public transport system as well as within Special Transport Services can provide a valuable contribution to the effectiveness and efficiency of the overall system. Demand-driven public transport can offer an alternative for bus lines with a low transport performance. Past experiences have often been less than positive, particularly in terms of funding options. Nonetheless, a number of regions are currently exploring this concept, including Groningen-Drenthe and Gewest Vlaanderen, often in conjunction with developing mobility hubs. In the US (e.g. Florida), there are also practical examples of offering ride hailing, a form of demand-driven transport, some of them subsidised, whether or not with ride sharing. In this study, KiM is investigating what the pros and cons of demand-driven public transport are for society, and what success-factors and common failures could be relevant. For this research KiM will explicitly explore the connections between regular public transport and Special Transport Services (STS). KiM will also find out what role national government can play in such operations.

Research line A, research project

Opportunities for the main rail network (MB2213)

The capacity of the main rail network is limited, while extensions cost a lot of time and money. Many different national policy ambitions are calling for extra capacity in the main rail network, but meeting the total demand is not feasible. The Public Transport Forecast 2040 outlines various options from which to choose, without advocating any one in particular. There is currently also a EU strategy that aims to utilise the railways much more for international passenger travel. This raises the question of what the main rail network is really good at delivering (and what it isn't good at), and where the biggest social gains can be made with limited capacity commitments. We list here several examples of the opportunities for the main rail network:

- relieving high volumes of road traffic at rush hour, primarily by providing urban/regional journeys;
- contributing to urgent climate targets, primarily by providing long-distance journeys which if they were to be covered by car or air would produce high emissions;
- contributing to the functioning of the polycentric system in the Netherlands, where many journeys are needed to pluck the fruits of specialisation and job sharing;
- connecting all parts of the country with the Randstad conurbation in the west.

In this KiM research project, we try to answer these questions, possibly using scenarios. The results of this research will provide input to aid in making the policy choices listed above.

Research line A, research project

Car costs vs public transport costs (MB2214)

The variable costs of a journey are an important factor for travellers when choosing between the car and public transport. But the government has a somewhat less clear view of the costs of public transport since the strip-card was phased out, and increasing rate differences in public transport have been phased in. Car owners do not always know themselves what the use of their vehicle really costs. In this preliminary study, KiM wants to find out what the possibilities are for mapping out the costs of public transport and car use in an unambiguous, consistent way. This applies to both the current situation as well as the expected developments in the years ahead. This work may complement a project of Statistics Netherlands.

Research line A, preliminary study

Also involved: Roads and Traffic Safety Directorate

Revising priorities for the rail network (MB2311)

The Public Transport and Railway Directorate is revising the priorities of the rail network, in connection with a possible different classification of the rail network. KiM is contributing knowledge and expertise to this project, based on such things as the project Opportunities for the main rail network (MB2213).

Research line A, knowledge-at-the-table

Ex post analysis Bus Rapid Transit (MB2113)

In 2020, KiM published a report on Bus Rapid Transit (BRT), a system where buses ride with high frequency and at high speeds, which combines reliable travel times with a considerable transport capacity. The question put forward by the Public Transport and Railway Directorate (OVS) of IenW is whether such a system will generate additional transport effects and if social costs would arise from these, in addition to the effects that can be expected based on the usual SCBA system for new public transport projects. To answer this question, it is important to weigh up data on BRT projects in an accurate manner against other types of mobility projects, like train links. There may be a university that is interested in conducting this research. KiM would then supervise such a project.

Research line A, knowledge-at-the-table

International passenger transport (MB2210)

The Ministry of IenW is working on a strategy for international passenger transport by railway. To do so, it is important, given the scarce financial resources available, to weigh the construction and extension of infrastructure against other measures, such as improving the comfort of international travel (for example, improving the connection between multiple train schedules and making it easier to buy international tickets). One important goal of this project is stimulating substitutes for air travel. KiM will contribute knowledge and expertise on such substitution, as well as about what motivates people to make certain choices when selecting a foreign destination. KiM will conduct this project in concert with the project Substitutions for flying by travelling by train (MB2319).

Research line A, knowledge-at-the-table

Also involved: Directorate for Aviation, Road and Traffic Safety Directorate

Social effects of public transport (ER2209)

The Public Transport and Railway Directorate (OVS) would like to know whether all the social effects of public transport can be accurately calculated in assessment frameworks. In 2009, KiM and CPB took an in-depth look at whether all relevant social effects are adequately represented in the then customary assessment frameworks (in particular the SCBA). Do they need to be brought up to date, given developments in how we have come to view public transport SCBAs in recent years? What might public transport mean for current government challenges in the areas of climate change, biodiversity and housing? Do we know better than ten years ago what the impact of a public transport project is on the economy? Are policy decisions taking sufficiently into consideration the benefits of measures that improve comfort over those that shorten the travel time? What does the growing integration of projects (transport and planning) mean for methods of assessment methods?

Research line C, research project

Monitoring the costs of rail freight transport (ER2224)

The Public Transport and Railway Directorate (OVS), as promised to the House of Representatives, has begun working out the details of a future vision of rail freight transport. At this stage they will also give some attention to monitoring. KiM has been asked to contribute to the setting up of the monitor (specifications such as reference year, cost components and data sources), and to advise on a potential outsourcing. KiM will also contribute to the integrated cost comparison of the baseline measurement, and hold discussions with Statistics Netherlands about expanding the data set on service prices to include rail freight transport rates, and if this is not successful, to help find an alternative.

Research line C, knowledge-at-the-table

The future of rail freight transport (ER2307)

The future vision of rail freight transport, which is currently in preparation, will balance the possibilities for incentivising freight transport by rail in view of wider national and European policy objectives. In addition to projects about monitoring (ER2224) and the social importance of rail freight transport (ER2304), KiM is available as an advisory board for issues related to the role of the government and the interests of citizens.

Research line C, knowledge-at-the-table

Social importance of rail freight transport (ER2304)

In the context of the future vision of rail freight transport, in preparation by OVS, the Directorate has asked KiM to outline the social importance of rail freight transport in all its facets. This would also include the commercial interests of rail freight transport. We are considering a somewhat similar approach to the study on the social effects of public transport (ER2209).

Research line C, research project

International benchmark performances of NS and Prorail (ER2305)

This benchmark is performed every three years. In 2017, KiM carried out an extensive review of the first edition. In the subsequent version, KiM carried out a light review, with a focus on the changes in approach compared to the 2017 benchmark. We will repeat this light approach for the next edition of the benchmark.

Research line C, knowledge-at-the-table

Policy assessment of accessibility allowances for public transport (ER2306)

In 2023 the availability fee for public transport will be evaluated. This fee was paid out during the coronavirus period to public transport companies so that they would continue with their agreed service schedules despite the drastic fall in traveller numbers. KiM is guiding the evaluation study.

Research line C, knowledge-at-the-table

SCBA update 3RX (ER2024)

In 2017 a social cost-benefit analysis was carried out on 3RX (Rhine-Ruhr rail network, as known by the name 'Iron Rhine'), and two other variants to improve rail transport between Antwerp and Germany. In partnership with the Belgian and German governments, an update of the SCBA will be carried out. KiM has been asked to join the team setting up and supervising this study, from specifying the research question through completion of the outsourced investigation (forecast for 2023).

Research line C, knowledge-at-the-table

Deregulation of the taxi market: an assessment (ER2210)

For the forecast assessment of the deregulation of the taxi market, KiM is advising on the research approach, as well as guiding the assessment study which will be outsourced by the Public Transport and Railway Directorate (OVS)

Research line C, knowledge-at-the-table

Uncertain future

Where did the traveller go? Changes to the market in the medium term (MB2312)

At present, the demand for public transport remains below expectations, even when the structural effects of the COVID-19 pandemic on mobility, with the rise of working from home and online meetings, are taken into account. For this project, KiM will explore what the cause of this might be. Suggested avenues include changes in behaviour of certain groups of travellers, or some connection with the shortages on the job market. The results of this project will be used by KiM to draw up medium term prognoses on the demand for public transport, among other things.

Research line A, research project

Knowledge inputs for monitoring the public transport forecast (BR1420)

KiM is supplying input for monitoring the proposed objectives of the public transport forecast. Monitoring will be carried out by the Knowledge Platform for Traffic and Transport (KPVV).

Research line A, knowledge-at-the-table

Long-term vision of market regulation of the main rail network (ER2229)

For the concession period from 2025 through 2035, IenW is committed to privately award transport on the main rail network to NS on the basis of a transitional provision. Future market regulation of the main rail network after 2035 is uncertain

and demands a great deal of preparation in the coming years, among other things by conducting research that involves making future scenarios and a market analysis. KiM is providing expertise on the content in an advisory board.

Research line C, knowledge-at-the-table

Data and models

Data needs for public transport (DM1404)

KiM is participating in a number of actions with the goal of collecting more and better data about public transport, and making it usable for the Dutch government (user data, but also data about such things as infrastructure and stations). The background to this is that the government is responsible for the system of public transport, and thus wants to monitor developments. Moreover, data are important for evaluating the policies, both those planned and those already in force.

Research line A, knowledge-at-the-table

Professionalising policy assessment

Urban public transport: are results outpacing expectations? (ER2211)

The Public Transport and Railway Directorate is expecting a lot of interest from governmental and regional parties in assessing the social effects of urban public transport systems. Governments and transport companies often have the feeling that urban public transport projects are more successful than had been previously forecast. To what extent do recent urban public transport benefits ex-post deviate from previous expectations? KiM is examining four case studies to find out whether there has been a systematic under or over estimation in transport prognoses. If there seems to be good reason for tightening up the way these are calculated, the results will be incorporated into the project on the social effects of public transport (ER2209).

Research line C, research project

MIRT study of the Lely line (ER2227)

The research process for planning the Lely line is current underway. The quartermasters, national and regional governments, have drafted a Plan of Approach for preparation of the Multi-year Infrastructure, Spatial Planning and Transport Programme (MIRT). The MIRT study is working on an integrated development perspective and the necessary decision-making information for an initial decision on a MIRT exploration of the Lely line. KiM is reflecting on the research questions, and providing knowledge input for assessment frameworks.

Research line C, knowledge-at-the-table

6 Roads and Traffic Safety Directorate and Directorate on Heavy Goods Vehicle Charges

Theme	Project	Number	Track	Type
Give direction to accessibility	Traffic flow and behavioural measures	MB2313	A	Knowledge-at-the-table
Developing sustainable mobility	What behaviours go with filling up and recharging at service stations?	DG2306	B	Preliminary study
Developing sustainable mobility	Which traffic safety problems cannot be solved with infrastructural measures, and what are the alternatives?	DG2114	B	Research project
Developing sustainable mobility	Integrated approach to reduce driving under the influence	DG2307	B	Knowledge-at-the-table
Developing sustainable mobility	Preparatory evaluation for the Strategic Traffic Safety Plan	DG2308	B	Knowledge-at-the-table
Modalities and measures	The future of car sharing	MB2217	A	Research project
Modalities and measures	New types of car availability	MB2315	A	Research project
Modalities and measures	The car atlas	MB2316	A	Research project
Modalities and measures	Understanding attitudes of travellers on modes of transport	MB2314	A	Preliminary study
Modalities and measures	Electric Road Systems (ERS) pilot	DG2309	B	Knowledge-at-the-table
Modalities and measures	National oil crisis plan	DG2219	B	Knowledge-at-the-table
Modalities and measures	Evaluation of tax exemptions for commuter traffic	ER2222	C	Knowledge-at-the-table
Modalities and measures	Price differentiation for heavy goods vehicle charges under the revised Eurovignette Directive	ER2309	C	Knowledge-at-the-table
Digitalisation and innovation	Monitor on smart mobility	MB2115	A	Knowledge-at-the-table
Digitalisation and innovation	Knowledge inputs for smart mobility	MB2117	A	Knowledge-at-the-table
Uncertain future	Is the BREVER law still valid?	MB2317	A	Research project
Uncertain future	The future of car mobility	MB2015	A	Knowledge-at-the-table
Considerations in times of scarcity	Basic level of quality for Rijkswaterstaat's networks	ER2310	C	Knowledge-at-the-table
Professionalising policy assessment	Evaluation of the heavy goods vehicle charges programme	ER2311	C	Knowledge-at-the-table
Professionalising policy assessment	Policy audit of Article 14 of Roads and traffic safety	ER2312	C	Knowledge-at-the-table

Give direction to accessibility

Traffic flow and behavioural measures (MB2313)

KiM is helping to think about how traffic flow can be enhanced on the main road system using non-infrastructure measures. For example, using behavioural measures, such as spread travelling over time or avoid it. KiM is basing its thinking on studies on the effectiveness of measures (or packages of measures), such as the evaluation of the programme *Beter Benutten* (Better Utilisation), evaluations on the effects of accessibility measures on traffic congestion, and an analysis of measures and openings provided by regional programmes KiM will be making.

Research line A, knowledge-at-the-table

Also involved: Innovation and Strategy for Mobility Directorate, General Strategic Advice Directorate

Developing sustainable mobility

What behaviours go with filling up and recharging at service stations? (DG2306)

To reach carbon-neutral mobility by 2050, service stations will have to change from offering fossil fuels to offering energy carriers like electricity and hydrogen. In creating a roadmap for the transition of service stations, it's particularly important to know how and where users charge their vehicles, and what behavioural changes mean for service stations. KiM is conducting a preliminary study into the behaviours of car drivers and lorry drivers, and the difference between charging and fast charging. Behaviours are also important for such things as modifying regulations about parking times for heavy goods transport for carbon-neutral mobility or setting up ERS (Electric Road Systems).

Research line B, preliminary study

Also involved: Sustainable Mobility Directorate

Which traffic safety problems cannot be solved with infrastructural measures, and what are the alternatives? (DG2214)

The traffic safety department is wondering whether, in addition to changes to infrastructure or already existing behavioural measures, there might be other kinds of measures that could be taken to improve safety on the roads. This could involve ways of incentivising acceptance of new measures. Discrete (one off) decisions that enhance traffic safety, such as requiring bicycle helmets, an alcohol lock in cars, progressive traffic fines or ISA are the places to start. We will be looking at this question from two different perspectives: behavioural measures and system measures.

The first step is to make a synopsis of what is already known by consulting the Scientific Research for Traffic Safety Foundation (SWOV) and the published literature. The next step could be an expert session. The second step depends on the outcomes of the first steps. An objective is engaging the expertise of the SWOV.

Research line B, research project

Integrated approach to reduce driving under the influence (DG2307)

IenW has commissioned a study to work out an integrated approach for preventing driving under the influence. KiM will join the supervising committee and contribute its know-how on research, while also advocating for inclusion of SWOV's expertise.

Research line B, knowledge-at-the-table

Preparatory evaluation for Strategic Traffic Safety Plan (DG2308)

In 2025, the Strategic Plan for Traffic Safety (SPV), published in 2018, is up for review. In 2023, IenW will start an inventory of which parties have to be onboard, which approach is most effective, and how the review can be inserted into a wider context. KiM is contributing to the review project, providing knowledge and expertise on monitoring and evaluating policy.

Research line B, knowledge-at-the-table

Individual modalities and measures

The future of car sharing (MB2217)

In 2021, KiM conducted a study into car and bicycle sharing. This revealed that use of car sharing and bicycle share is still quite limited, and that there are many obstacles to scaling up this type of mobility. Car sharing does reduce car ownership and CO₂ emissions. In this follow-up project, we will investigate what is required for scaling up shared mobility at the expense of car ownership. We will be examining both supply-side factors (e.g. what is required for a successful business case) as well as demand-side factors (how government and providers can incentivise demand for shared mobility at the expense of personal car use). This research project will thus give us greater understanding of the ways shared mobility can be scaled up. In more specific terms, KiM will be making an analysis of peer-to-peer car sharing. At the present time, there are many cars available for peer-to-peer sharing, but they are hardly being utilised. Why is that, and how can government exert an influence? Moreover, KiM will be proposing a conceptual framework for car sharing, in consultation with CROW.

For this project, KiM will also be working with HU University of Applied Sciences Utrecht, with whom we have a working partnership. This will allow us to incorporate practical data on car sharing in the city and province of Utrecht into the project.

Research line A, research project

New types of car availability (MB2315)

In 2022, KiM published an extensive study on car ownership. Moreover, at the beginning of 2023, KiM will be completing a study of the future of car sharing (MB2217). There are numerous new ways of making cars available, such as private lease, short-term lease, or lease and share combinations. In this follow-up project, KiM will investigate these new forms in order to ask what the attraction of such options is for the traveller, what the pros and cons are, and what possibilities governments have to incentivise or de-incentivise these new forms of ownership.

Research line A, research project

The car atlas (MB2316)

In this project, KiM will be mapping the geographic distribution and growth of the total car fleet. This project is a follow-up to the research into car ownership published in 2022. The study will collect data on, among other things, the type of vehicle, segment, age and emissions. We may also be integrating characteristics of the user of the car into this analysis. The point of the atlas is to provide a greater understanding of the various types of car-related problems in the different regions. The results of this project will be useful for further development of The Future of Car Mobility (MB2015).

Research line A, research project

Understanding attitudes of travellers on modes of transport (MB2314)

When making choices about transport, travellers' experiences and perceptions of different modes of transport are a decisive factor. In the past, KiM conducted research into the perceived image of the car, public transport and bicycle. In this preliminary study, KiM will explore whether it is possible and helpful to obtain greater depth of understanding of changing attitudes by bringing the data up to date.

Research line A, preliminary study

Electric Road Systems (ERS) pilot (DG2309)

A number of reports commissioned by IenW have been published exploring the option of setting up Electric Road Systems in the Netherlands. In the next phase, we look at what steps should now be prepared, including surveying whether there is sufficient support across society, whether an ERS pilot is feasible in the Netherlands, and what we want to learn from it. This would include systems management and traffic management. KiM is participating in the advisory board.

Research line B, knowledge-at-the-table

National oil crisis plan (DG2219)

In partnership with IenW and others, EZK is making an update of the national oil crisis plan in order to prepare for any future scarcity of oil products, diesel in particular. KiM is offering support for the question, how much diesel and other fuel can be saved by means of a few crisis measures? Where possible, KiM is responding to requests to consult on the details.

Research line B, preliminary study

Also involved: Directorate of Maritime Affairs, Sustainable Mobility Directorate

Evaluation of tax exemptions for commuter traffic (ER2222)

At the request of the Ministry of Finance, an evaluation of the policy on the tax-free travel allowance is underway. This policy evaluation is investigating the effectiveness and efficiency of the tax-free travel allowance. A determination will also be made about how increases in the tax-free travel allowance, as proposed in the coalition agreement, will contribute to its working. Thirdly, experts will explore how the tax-free travel allowance can be made future-proof. KiM is participating in the advisory board.

Research line C, knowledge-at-the-table

Price differentiation for heavy goods vehicle charges under the revised Eurovignette Directive (ER2309)

The revised Eurovignette Directive contains new rules for price differentiation based on CO₂ emissions, with vehicles sorted into five CO₂ emission classifications. IenW is commissioning research into the effects of price differentiation aimed at tackling CO₂ emissions. What effects would price incentives have on the mandatory CO₂ emission reductions for heavy goods vehicles? KiM is participating in the advisory board.

Research line C, knowledge-at-the-table

Digitalisation and innovations

Monitor on smart mobility (MB2115)

IenW is developing a monitor focusing on developments in smart mobility for road traffic. The purpose of the monitor is to get a good view of developments, and work out how policy objectives will be influenced by those developments. KiM is advising on the details and use of the monitor.

Research line A, knowledge-at-the-table

Knowledge inputs for smart mobility (MB2117)

IenW and other parties are joining forces in the area of smart mobility. An advisory board of experts has been set up to reflect on how the effects of smart mobility measures can be tracked, and what kind of information demands are circulating. KiM is a participant in this group.

Research line A, knowledge-at-the-table

Uncertain future

Is the BREVER law still valid? (MB23017)

Invented in 1977, the BREVER law is a mobility principle that says a person always spends a fairly constant amount of time on travel each day. This begs the question of whether it is still valid today since digitisation and the COVID-19 pandemic have given many more people the option of working from home. Is this causing people to move further away from their workplaces because the commute to work only has to be traversed a few times a week? Do people use the time saved by working from home for more leisure travel? The results of this research project are useful for the functioning of traffic and transport models, devising policies on commuter traffic and on determining locations to live and work.

Research line A, research project

The future of car mobility (MB2015)

IenW is developing a vision of the future of car mobility in the Netherlands. KiM is contributing knowledge and expertise.

Research line A, knowledge-at-the-table

Considerations in times of scarcity

Basic level of quality for Rijkswaterstaat's networks (ER2310)

IenW is engaged in setting a basic level of quality for Rijkswaterstaat's networks, i.e. the main drinking water system, the main road network and the main waterway network. Determining a basic level of quality for networks is intended to be a step towards creating a stable and long-term level of maintenance, at a level of quality users can rely on, while also being equipped for future developments, such as climate change. KiM is involved in supplying knowledge-at-the-table as requested for both the main road network and the main waterway network. During this urgent process of determining basic levels of quality may give rise to concrete research questions. We will then prioritise these, in consultation with the relevant directorates, to see if they should take precedence over already scheduled projects.

Research line C, knowledge-at-the-table

Also involved: Innovation and Strategy for Mobility Directorate, Directorate for Maritime Affairs

Professionalising policy assessment

Evaluation of the heavy goods vehicle charges programme (ER2311)

In 2023, an evaluation of the HGV charges programme will be launched. KiM has been asked to advise on the methods of evaluation and the mobility effects of the policy by participating in an advisory board.

Research line C, knowledge-at-the-table

Policy review of Article 14 of Roads and traffic safety (ER2312)

Each policy article is reviewed once every six years approximately, and the proposed measures evaluated in terms of effectiveness and efficiency. In 2023 the Policy review of Article 14 of the Roads and traffic safety policy will get underway. KiM is participating in the supervisory committee.

Research line C, knowledge-at-the-table

7 Mobility and Spatial Planning Directorate and Ministry of Interior Affairs and Kingdom Relations

Theme	Project	Number	Track	Type
Urbanisation and housing	Where is room in the mobility system for new housing?	DG2210	B	Preliminary study
Urbanisation and housing	Tightening NOVI	DG2310	B	Knowledge-at-the-table
Urbanisation and housing	Conditions for inclusive programming	ER2313	C	Preliminary study
Professionalising policy assessment	Unity and integrality in assessment frameworks	ER2110	C	Knowledge-at-the-table

Urbanisation and housing

Where is room in the mobility system for new housing? (DG2210)

The government is investing in 17 major new housing areas, with € 7.5 billion earmarked for making housing units accessible. While it's true that urbanisation offers opportunities for accelerating a transition towards a more sustainable mobility system, there is also a downside. The capacity of roads in and around the major cities and urban public transport systems are already under considerable pressure. This pressure will only grow, unless the choice of locations for new housing starts and increased human activity includes taking account of existing and potential future infrastructure. The question that's front and centre in this preliminary study is: where is there still room to meet new housing needs, according to the logic of the infrastructure network?

Research line B, preliminary study

Tightening NOVI (DG23XX)

In 2023 a start will be made on tightening up the provisions of the National Strategy on Spatial Planning and the Environment (NOVI); this project will incorporate the programmes *NOVEX* (NOVI Extra) and *Mooi Nederland*. The government expects to finalise the tighter NOVI sometime in 2024. In the meantime, work will be carried out on a knowledge and innovation programme that will become part of the tighter NOVI. This programme demands, among other things, an overview of trends and influence factors that are central to the relationship between spatial planning, mobility and accessibility. Based on our own studies in the recent past and consulting a variety of external sources, KiM will supply knowledge inputs about relevant trends that influence this relationship.

Research line B, knowledge-at-the-table

Also involved: Innovation and Strategy for Mobility Directorate

Conditions for inclusive programming (ER213)

Under what conditions is it possible to help improve the liveability of urban areas with government investment? Regional programmes have drawn a line between investment in infrastructure and opening up an area to a lot more residents with low incomes. Does this mean that it also improves the conditions of current residents? KiM is collecting literature sources that connect infrastructure investment with urban development, and presenting this data in meetings on regional programmes to see

what scope for action this might offer. Depending on what we find, we will then decide about any possible follow-up study.

Research line C, preliminary study

Professionalising policy assessment

Unity and integrity in assessment frameworks (ER2110)

Not only individual regional programmes, but corridor programmes and programme directors use their own assessment frameworks for investments and other measures. In addition, policy directorates also have questions about what an assessment framework for measures might involve. In times of restricted budgets, and with the increasing complexity of partnership structures, it's more difficult to set priorities. Moreover, the dividers between the modalities in the Mobility Fund have disappeared, and furthermore, not only the effects of mobility are determined, but also other effects. Setting priorities is the responsibility of political leaders and policy makers, but they can use support from knowledge and data. In this project, KiM is putting forward proposals for the similarities between different assessment frameworks, insofar as these similarities impact methodology. KiM will also find out whether, from the perspective of knowledge function, there are possibilities for an integrated approach to mobility and accessibility. KiM will also explore questions such as, how should we deal with innovative measures in assessment frameworks? How to properly include climate adaptation (more costly measures with long-term benefits) in an assessment framework? How should we deal with management and maintenance problems, given budget limitations? How should we weigh up the challenges of regions with population shrinkage against the challenges of major cities?

Research line C, knowledge-at-the-table

Also involved: Innovation and Strategy for Mobility Directorate, Directorate for Maritime Affairs,

8 Directorate for Aviation

Theme	Project	Number	Track	Type
Give direction to accessibility	The importance of direct flights	MB2318	A	Research project
Developing sustainable mobility	Climate awareness and flying	MB2121	A	Research project
Developing sustainable mobility	What is the role of government in the transition of airports into energy hubs?	DG2311	B	Preliminary study
Developing sustainable mobility	What is the role of private aircraft in achieving sustainability goals?	DG2312	B	Knowledge-at-the-table
Developing sustainable mobility	Establishing a CO ₂ ceiling	DG2127	B	Knowledge-at-the-table
Developing sustainable mobility	Effects on CO ₂ of differentiating aviation taxes	DG2313	B	Knowledge-at-the-table
Modalities and measures	Air freight	MB2207	A	Research project
Modalities and measures	The inclination to travel by air	MB2209	A	Research project
Modalities and measures	Replacing air travel by rail travel	MB2319	A	Research project
Modalities and measures	Airport capacity monitor	MB2208	A	Knowledge-at-the-table
Modalities and measures	Aeolus	B1014	A	Knowledge-at-the-table
Modalities and measures	The value of night flights	ER2219	C	Knowledge-at-the-table
Digitalisation and innovation	The role of drones and vertiports in the mobility system	MB2320	A	Preliminary study
Digitalisation and innovation	Innovation strategy for aviation	DG2218	B	Knowledge-at-the-table
Considerations in times of scarcity	Capacity restrictions at Schiphol and connectivity	ER2314	C	Research project
Considerations in times of scarcity	Airport policy for regional airports	ER2104	C	Knowledge-at-the-table
Professionalising policy assessment	The value of travel time for pre and post transport aviation	ER2125	C	Research project
Professionalising policy assessment	Follow-up to the research agenda of the guide for aviation-specific SCBAs	ER2221	C	Knowledge-at-the-table

Give direction to accessibility

The importance of direct flights (MB2318)

In discussions on the size of Schiphol, direct flights from the airport are given considerable importance. For this project, KiM will investigate how important travellers find it to take a direct flight from the airport to their final destination. One

part of the study will be an analysis of changes in the perception of transfers: has it become easier to transfer flights, thanks to better information, more comfort, shorter waiting times or distractions? And thus how important are differences between direct and indirect flights for air travellers?

Research line A, research project

Developing sustainable mobility

Climate awareness and flying (MB2121)

The purpose of this research project is to determine the extent to which a connection exists between leisure travellers' awareness of the CO₂ emissions of aircraft, their intention to fly and their flying behaviour. KiM will survey the reciprocal relations between explanatory factors, such as the experience of control, social standards and the current level of public knowledge of the CO₂ emissions of aircraft. KiM will also investigate the extent to which the framing of information about CO₂ emissions influences the factors. When people have a high awareness of the climate impact of flying, but still decide to travel by plane, KiM will analyse the reasons they present for this behaviour.

Research line A, research project

What is the role of government in the transition of airports into energy hubs? (DG2311)

Energy storage and distribution are essential elements in the transition to a more sustainable energy system. The Ministry of IenW would like to know what role government should play in the transition of airports to energy hubs. It may well be that, despite differences in context, airports have similar opportunities to seaports, for example for the installation of solar panels, or still undefined ways they can contribute to energy storage or energy distribution. Energy demand and infrastructure are key to this transition, with a special role set aside for aviation and airports. KiM is building on previous studies of sustainable energy carriers, and exploring these opportunities.

Research line B, preliminary study

What is the role of private aircraft in achieving sustainability goals? (DG2312)

Because private aircraft generate high emission volumes, but are only used by a few people at a time, they are still much less sustainable modes of flying than commercial aircraft. The current set of policy instruments, however, still has little grip on this group. IenW would like to know how private aircraft can contribute to achieving sustainability goals. For instance, it is not yet clear which regulations govern private aircraft, and what instruments are possible to incentivise owners towards sustainability goals. IenW has already begun the exploratory phase of this project.

Research line B, knowledge-at-the-table

Establishing a CO₂ ceiling (DG2127)

In the Civil Aviation Policy Memorandum 2020-2050, the government indicated it was devising a CO₂ ceiling for the aviation sector. For the level of the ceiling, the CO₂ targets set in the memorandum are the determining factors. Any potential growth will only be possible, according to the memorandum, within the

environmental limits, such as those set for CO₂ emissions. The detail of the CO₂ ceiling is further detailed in variants. In a follow-up study, the emphasis will be on the method for monitoring CO₂ emissions from aviation, as well as how prognoses will be made.

Research line B, knowledge-at-the-table

Effects on CO₂ of differentiating aviation taxes (DG2313)

The current tax on airline tickets could possibly be smarter. This requires differentiation from the current flat rate. For instance differentiation by distance or CO₂ differentiation in order to put tax on airline tickets in the service of climate policy. Alternative designs would have to generate just as much for the government's treasury at a minimum, but create a better balance between the pros and cons of the tax. KiM is advising on the carrying-out of the study.

Research line B, knowledge-at-the-table

Individual modalities and measures

Air freight (MB2207)

In this research project, KiM will analyse the scale, composition, social and economic importance of air freight routed through Dutch airports, and how the field is developing. Air freight is a relatively small segment of freight transport, but often concerns high quality and time-sensitive products. Much air freight is shipped in the cargo holds of passenger aircraft (so-called belly freight), which makes capacity strongly dependent on the scale and destinations of passenger aviation. Some air freight is also actually shipped in by road in HGVs (trucking). This project will explore policy instruments that could influence developments in air freight.

Research line A, research project

The inclination to travel by air (MB2209)

In 2010, 2013 and 2016, KiM investigated air travellers' inclination to travel by air and their choice of airport. See, for example, the factsheet *The Flying Dutchman*. In this document, KiM outlines which population groups travel by air, where they travel to and what their motives are. KiM also investigated how Dutch travellers choose a flight, as well as who does not fly and why. In 2023 KiM would like to repeat this study in connection with potential behavioural changes as a result of the COVID-19 pandemic and the roll out of the flight tax.

Research line A, research project

Replacing air travel by rail travel (MG2319)

IenW is committed to replacing air travel by rail travel for medium-range international journeys. KiM has already conducted research into this issue, and will be summarising the insights and, where necessary, updating them. Relevant aspects include cost structures and price setting in aviation and rail travel; travellers' choice of mode of transportation; transfers; and the potential implications of capacity limitations at Schiphol and on the railways. KiM will also be surveying the preferences and needs of transfer passengers. KiM will conduct this project in concert with the project *International passenger transport* (MB2210).

Research line A, research project

Also involved: Public Transport and Railway Directorate

Airport capacity monitor (MB2208)

The Ministry of IenW's Directorate for Aviation would like to monitor the airport capacity of Dutch airports in relation to foreign airports. KiM is a member of the guiding committee that will be commissioning this project.

Research line A, knowledge-at-the-table

Aeolus (B1014)

KiM is providing knowledge inputs for the management and development of the model called Aeolus, and its application in new aviation prognoses.

Research line A, knowledge-at-the-table

The value of night flights (ER2219)

In 2022 KiM provided the Directorate for Aviation with research options for a study into the social value of night flights. This study will soon be commissioned, with KiM taking a guiding role.

Research line C, knowledge-at-the-table

Digitalisation and innovations

The role of drones and vertiports in the mobility system (MB2320)

In the future, it may be possible to deploy drones as taxis, thus as part of the mobility system for persons. This move will require vertiports, a place they can take off from like a helicopter platform. In this preliminary study, KiM will survey the general feasibility, including energy consumption, and effectiveness of drones as passenger transport, and the potential for developing and finding locations for vertiports.

Research line A, preliminary study

Innovation strategy for aviation (DG2218)

The Directorate for Aviation has initiated development of an innovation strategy for aviation because it has observed that a strong innovation system is necessary in order to realise the goals of the aviation policy document. In order to roll out the innovation strategy, the Directorate for Aviation is conducting an analysis of such things as the development of innovation tracks and innovation potential. These will serve as the basis for the strategic choices IenW makes to strengthen the innovation system. KiM is participating in the advisory board.

Research line B, knowledge-at-the-table

Considerations in times of scarcity

Capacity restrictions at Schiphol and connectivity (ER2314)

Starting in 2023, Schiphol's maximum capacity will be capped at 440,000 flights per year. This is a significant reduction from the current cap of 500,000. What effects will reducing the airport's capacity have on its connectivity? And what are the knock-on effects for the surrounding area, including the natural environment? What is the relationship between the advantages and disadvantages the airport will experience with a cap of 440,000 flights per year, in comparison to the current situation? These and other questions are the focus of this project.

Research line C, research project

Airport policy for regional airports (ER2104)

In 2023 the Dutch government will take decisions about regional airports in the cities of Groningen, Maastricht and Rotterdam. This will entail a review of the social and economic reasons supporting the interests behind regional airports. KiM will fill a guiding role in the review of socio-economic reasons presented by the regional airports.

Research line C, knowledge-at-the-table

Professionalising policy assessment

The value of travel time for pre and post transport aviation (ER2125)

According to recommendations garnered from the SCBA method for aviation projects, there is a need for valuations of travel time for traffic to and from the airport. The aim of this research is to determine the value of travel time for pre and post flight transport. Secondly, we will also investigate whether this is similar to the travel time valuation of flying (if necessary with a scaling down factor), or by car and public transport with a scaling up factor. Lastly, the index number (valuation) of time spent at the airport will be determined. This project is running parallel to the major research project into travel time and reliability valuations. The data was collected in 2022; publication of the results will follow in 2023.

Research line C, research project

Follow-up to the research agenda of the guide for aviation-specific SCBAs (ER2221)

At the request of the Directorate for Aviation, KiM is providing support for studies that are being outsourced in the framework of the research agenda on a method for aviation-specific social cost-benefit analyses. Among other things, this concerns surveying the net expenditure effects of tourists and the agglomeration effects of airports.

Research line C, knowledge-at-the-table

9 Directorate for Maritime Affairs

Theme	Project	Number	Track	Type
Give direction to accessibility	Update on the freight transport agenda	MB2321	A	Knowledge-at-the-table
Developing sustainable mobility	Can the conditions for a transition to a carbon-neutral inland navigation sector be set on time?	DG2314	B	Research project
Developing sustainable mobility	How can we accelerate the transition to sustainability for maritime shipping, from the social and commercial perspectives?	DG2315	B	Preliminary study
Developing sustainable mobility	Surveying the future of bunkering fuel for ships in the Port of Rotterdam	DG2316	B	Preliminary study
Developing sustainable mobility	The effects of sanctions against Russia on the bunkering fuel market and decarbonisation	DG2317	B	Knowledge-at-the-table
Developing sustainable mobility	Standardisation of inland navigation	DG2318	B	Knowledge-at-the-table
Modalities and measures	The effects of drought on inland waterways from the shipper's perspective	ER2315	C	Preliminary study
Modalities and measures	The business climate for companies with vessels	ER2316	C	Preliminary study
Modalities and measures	Control function and economic value of digitising freight transport	ER2011	C	Knowledge-at-the-table
Modalities and measures	Hands-on modal shift programme for freight transport	ER2218	C	Knowledge-at-the-table
Modalities and measures	Developing a policy framework for pipelines	MM1802	C	Knowledge-at-the-table
Modalities and measures	Programmes for freight corridors	ER2317	C	Knowledge-at-the-table
Modalities and measures	Modal shift: obstacles, long-term instruments and evaluation	ER2318	C	Knowledge-at-the-table
Uncertain future	Effects of recent global developments (war in Ukraine, energy crisis, COVID-19) on freight transport	ER2223	C	Knowledge-at-the-table
Uncertain future	Knowledge agenda on the future of inland navigation	ER2319	C	Knowledge-at-the-table
Data and models	Input, output and throughput statistics	DM1717	A	Knowledge-at-the-table
Professionalising policy assessment	Causality of maritime policy and policy goals	ER2320	C	Research project
Professionalising policy assessment	Evaluation of the effects of transitional provisions for inland navigation	ER2226	C	Knowledge-at-the-table
Professionalising policy assessment	Quality impulse for maritime monitoring and evaluation	EA1614	C	Knowledge-at-the-table

Give direction to accessibility

Update on the freight transport agenda (MB2321)

IenW is working on an update of the freight transport agenda. This update is necessary because of new developments, disruptions and transitions. New areas include the necessity of a more robust transport system, and what is needed to make logistics chains more robust. KiM is contributing knowledge to this update.

Research line A, knowledge-at-the-table

Developing sustainable mobility

Can the conditions for a transition to a carbon-neutral inland navigation sector be set on time? (DG2314)

Within discussions on the energy transition, the question has arisen whether the conditions for creating a carbon-neutral inland shipping sector can be set on time. For example, will sufficient batteries for inland shipping be available, and is there sufficient space at the available terminals to store hydrogen? This research project focuses on batteries, hydrogen, biofuels and methanol. Because of safety hazards, ammonia is a less obvious choice. KiM is surveying potential bottlenecks in supplying carbon-neutral energy carriers (hydrogen, batteries/electric, biofuels, methanol) for inland shipping.

Research line B, research project

Standardisation of inland navigation (DG2317)

One aspect of the roadmap of the Central Commission for Navigation of the Rhine is a plan for the staged phase-out of polluting technologies in inland shipping. In the Netherlands, we also want to plan for possible standardisation, especially for setting the points on the horizon as targets for reducing emission levels. In order to do so, an emissions label will be used as the policy instrument. The question remains what phase out can be achieved within the time available by imposing emissions standards, and how will that impact the sector. KiM is advising on devising standards.

Research line B, knowledge-at-the-table

Surveying the future of bunkering fuel for ships in the Port of Rotterdam (DG2316)

Each year, a huge amount of marine fossil fuel is tanked by vessels in the Port of Rotterdam (about 500 PJ). This is because of the strategic location of Rotterdam for international shipping and the proximity of refineries. In an envisioned fossil-free future, Rotterdam as bunker location will possibly come under pressure. Marine fossil fuel will then have to be replaced by a carbon-neutral alternative. The KiM study "Energy chains for carbon neutral mobility" (Bakker et al., 2022) shows that, due to space restrictions, it is not feasible to produce 500PJ of synthetic fuel in the Netherlands. Synthetic fuel and biofuel imports are a more likely scenario, both as fuels that can be immediately tanked and as energy forms that first have to undergo some kind of processing. At present, CE Delft and The Hague Centre for Strategic Studies are working on a study commissioned by IenW to find out what effects sanctions against Russia could have on the supply of renewable fuels and hence CO₂ targets. KiM is conducting a preliminary study into the remaining questions about the effects of synthetic fuels and biofuels on the bunker market in Rotterdam.

Research line B, preliminary study

Also involved: Sustainable Mobility Directorate

The effects of sanctions against Russia on the bunkering fuel market and decarbonisation (DG2318)

The EU sanctions package includes prohibitions on imports of Russian oil products. This will take effect in two phases, December 2022 and January 2023. The Netherlands holds a special position as the biggest bunkering fuel station of Europe. The supply of Russian oil products forms a significant part of this bunkering. What effects could the sanctions have on the Dutch bunkering fuel market? What effects could the sanctions have on the supply of renewable fuels and thus CO₂ targets? CE Delft and The Hague Centre for Strategic Studies are conducting a study for IenW. KiM is reading drafts and providing knowledge inputs.

Research line B, knowledge-at-the-table

How can we accelerate the transition to sustainability in maritime shipping, from the social and commercial perspectives? (DG2315)

This project focuses on the question of what the best path is for a transition to carbon-neutral shipping, both in social and commercial terms. There is a need for knowledge about how the transition to sustainability in maritime shipping can be accelerated. Such knowledge will then form the basis for a consideration of whether it is better from a Dutch perspective to invest in carbon-neutral shipping now, or to actually delay such investments for the time being. In this study, KiM will investigate the kind of perspectives for action open to government, and how the maritime shipping sector itself views becoming more sustainable. For instance, when will the maritime sector be making investments, how much will it invest and in what?

Research line B, research project

Individual modalities and measures

The effects of drought on inland waterways from the shipper's perspective (ER2315)

The inland waterways of the Netherlands are more and more frequently confronted with longer periods of drought and low waterlines. This means that inland vessels cannot transport as much cargo on a journey. KiM is making an overview of the available studies of the effects of long-term drought for use in inland navigation from the shipper's perspective. How are shippers in different sectors affected by long-term drought and what kind of action are they taking? What are the long-term effects of consecutive years of low rainfall on the Dutch economy? What measures could government be taking to address this?

Research line C, preliminary study

The business climate for companies with vessels (ER2316)

In order to create a future-proof Dutch maritime industry, we need an attractive business climate, that is the stance of the sector. In a preliminary study, KiM is investigating existing knowledge of the subject business climate for companies with vessels. This is being carried out by reviewing existing studies and conducting interviews. The focus is on two perspectives. First, the ship owners' perspective: what do we know about the reasons ship owners choose to fly the Dutch flag? Second, from a social perspective KiM will be outlining the relationship between the

Dutch fleet, seafarers and the Dutch economy on the basis of the published literature.

Research line C, preliminary study

Control function and economic value of digitising freight transport (ER2011)

IenW is committed to devising a digitisation strategy for freight transport. We already have a programme drawn up which rests on three pillars: government data all in order; public-private partnerships; and encouraging companies to set up basic data infrastructure. One research question deals with the role of government in relation to private port initiatives. Does digitisation of freight transport demand a different role for government? For example, as the impartial compiler of private data? What are the social benefits of digitisation that transcend private interests? KiM is advising on present issues.

Research line C, knowledge-at-the-table

Hands-on modal shift programme for freight transport (ER2218)

IenW has made an inventory of the practical obstacles and possible solutions for a modal shift in freight transport. These data and findings will now be further developed. KiM is supplying knowledge inputs. In 2023 we will take part in the regular meetings and guide parts of the study, such as an analysis of obstacles.

Research line C, knowledge-at-the-table

Developing a policy framework for pipelines (MM1802)

KiM is supplying knowledge inputs to the Directorate of Maritime Affairs on pipeline transport questions dealing with the potential use, social costs and benefits (the Delta corridor SCBA), and the role of government. In 2023, KiM is particularly focused on advising on the policy framework being drawn up for pipelines, which is dedicated to rolling out pipelines more broadly across the transport system.

Research line C, knowledge-at-the-table

Programmes for freight corridors (ER2317)

The challenges of accessibility and sustainability in MIRT programmes demand a comprehensive approach to all modalities. They also demand partnering with other governments and private parties. The same holds for the MIRT programmes and MIRT studies for freight corridors. This allows accessibility challenges to be comprehensively tackled, in partnership with other governments and private parties. The goal is an optimal, sustainable modal split of all freight flows. This knowledge-at-the-table project consists of supporting the freight corridor programmes, particularly the south-east and east corridors, with useable knowledge and expertise. Guiding outsourced studies, such as the role of shortsea in modal shift corridors, also comes under the purview of this project.

Research line C, knowledge-at-the-table

Modal shift: obstacles, long-term instruments and evaluation (ER2318)

At the beginning of 2023 KiM will be completing a study of what modal shift policy – from road and rail transport to inland shipping – could mean for freight transport in the Netherlands in terms of reducing negative external effects. Theoretically a shift is needed where the transport costs for rail and inland shipping are significantly

lower than for road haulage. This study invokes the follow-up question, where are the impediments blocking full realisation of the potential of that modal shift? (Research project).

A study of those impediments raises the question for policy makers of which instruments would work best in effecting the modal shift. Would that be regulations? Or subsidies, possibly in combination with covenants agreed between relevant parties? Which instruments (or combination of instruments) have which effects? Should policy be directed at specific kinds of freight flows or devise basic generic measures? KiM can advise on these issues.

Finally, policy directors want more insight into the effectiveness of modal shift policy, both ex ante expectations and ex post reality. This requires a metric for effects of that policy based on indicators. Which indicators are relevant? KiM can also advise on this problem (knowledge-at-the-table).

Research line C, research project and knowledge-at-the-table

Uncertain future

Effects of recent global developments (war in Ukraine, energy crisis, COVID-19) on freight transport (ER2223)

The logistics disruptions due to COVID-19, the rising energy prices and the Ukraine crisis in combination with EU sanctions had a tremendous impact on freight transport in the first half of 2022. KiM has compiled a publication on this topic. At the request of IenW, we will continue to monitor developments, forecast the effects of measures taken and answer urgent questions about such things as the impact of tighter security requirements on logistics. In order to monitor developments in freight transport, Statistics Netherlands was able to accelerate its reporting during the coronavirus crisis with assistance from KiM. Such quickly available indicators are not yet available for maritime shipping. KiM will be investigating, in conjunction with Statistics Netherlands, whether up-to-date indicators can also be produced for maritime shipping.

Research line C, knowledge-at-the-table

Knowledge agenda on the future of inland navigation (DG2319)

The Future of Inland Navigation programme requires a knowledge agenda. KiM is helping compile this document. The knowledge agenda follows from the action agenda, which was compiled at the beginning of 2023. The action agenda was organised under four themes, i.e.: energy transition, chain optimisation, climate change and digitisation.

Research line C, knowledge-at-the-table

Data and models

Input, output and throughput statistics (DM1717)

At the request of IenW, Statistics Netherlands is producing input, output and throughput statistics. This data set gives a quantitative representation of the scope and composition of annual international freight flows from, to and through the Netherlands, both in value as well as in weight of the freight. KiM is using the data generated for these statistics for the Mobility Report and in social cost-benefit analyses in order to determine what links the international freight flows have with the Dutch economy. KiM is helping supervise the work of Statistics Netherlands and

review the approach and results, in concert with other commissioning parties DGLM and Rijkswaterstaat.

Research line A, knowledge-at-the-table

Professionalising policy assessment

Causality of maritime policy and policy goals (ER2320)

In the Policy Review of Article 18 Shipping and Ports carried out in 2022, it was ultimately not possible to make any pronouncements on the efficiency and effectiveness of the policy. Determining a causal relationship between current maritime policy and outcome in terms of indicators, such as added value or employment, is difficult. Often we lack a clearly formulated objective, an indicator or quantitative data. KiM is offering suggestions for improvements, and speaking out about the quantification of maritime policy. In support, KiM is researching existing studies measuring taxation, crew and fleet policy, and incorporating foreign insights and insights from other policy domains into its research, when relevant.

Research line C, preliminary study

Quality impulse for maritime monitoring and evaluation (EA1614)

The Directorate for Maritime Affairs makes use of a variety of monitors, including the maritime monitor, the port monitor and the inland port monitor. Further integration of these monitors in terms of methodology and indicators, and the new approach used by Statistics Netherlands, were evaluated in 2021. IenW also sees opportunities in the increasing public availability of data that could help, for example, in forecasting how the maritime sector will develop in the near future. KiM is advising on the various monitors. This work will be continued in 2023.

Research line C, knowledge-at-the-table

Evaluation of the effects of transitional provisions for inland navigation (ER2226)

Transitional provisions prescribe a transition period for a number of technical regulations for inland shipping vessels. This transition period will end on a certain date for inland shipping vessels that were in service at the time these technical requirements had been rolled out (existing fleet). KiM is participating in an advisory board on a policy evaluation of the measure.

Research line C, knowledge-at-the-table

10 General Strategic Advice Directorate and Directorate for Financial and Economic Affairs

Theme	Project	Number	Track	Type
Developing sustainable mobility	Knowledge inputs for the IenW Behavioural Insights Team (BIT)	DG2319	B	Knowledge-at-the-table
Professionalising policy assessment	Follow-up to discount rate working group	ER2119	C	Knowledge-at-the-table
Professionalising policy assessment	Improving budget quality and accountability	ER2121	C	Knowledge-at-the-table
Professionalising policy assessment	Quality assurance and consistency of analytic instruments for SCBAs	E712	C	Knowledge-at-the-table
Professionalising policy assessment	National Growth Fund knowledge inputs for mobility	ER2321	C	Knowledge-at-the-table

Developing sustainable mobility

Knowledge inputs for the IenW Behavioural Insights Team (BIT) (DG2319)

IenW's Behavioural Insights Team (BIT) is a network of knowledge institutions, renowned behavioural scientists and experts in the field of behaviour. KiM is a participant in the knowledge-sharing sessions of the core team. One topic that has been discussed by BIT is monitoring sustainable travel behaviour in support of climate policy prompted by recommendations by behavioural scientists at EZK. KiM shares its knowledge with such things as an overview of available data or reflecting on systems for monitoring.

Research line B, knowledge-at-the-table

Professionalising policy assessment

Quality assurance and consistency of analytic instruments for SCBAs (E712)

KiM is contributing to quality assurance and consistency of social cost-benefit analyses (SCBA). For instance, KiM is compiling data on the SCBA available to policy officers, and making contributions to conferences, lectures and courses in this field. KiM is also responsible for the secretariat for the interdepartmental core team SCBA, which is where all government-wide aspects of SCBAs are coordinated (agreed procedures, calculation methods and baseline figures). Lastly, KiM coordinates with other knowledge-producing parties, such as Rijkswaterstaat, PBL and CPB, regarding the index numbers that will be used in SCBAs.

Research line C, knowledge-at-the-table

Also involved: all IenW directorates.

Follow-up to discount rate working group (ER2119)

In 2020 a new discount rate for government investment was set. The working group used a capital add-on based on an assumption. This is because the high fixed costs may not be recovered in a different way, should the use of the infrastructure be disappointing. In response to the report of the discount rate working group, KiM is drafting a research approach for quantifying deviating capital add-ons for transport infrastructure. This will be fine-tuned during an expert session. The issue raises the question, how much does transport infrastructure deviate from average government investments? The research approach may be used as the basis for commissioning further studies. In view of the expected in-depth knowledge of financial markets required, KiM is not the obvious party to conduct such studies. It is also possible that, based on the expert session, a decision is taken to conduct further research into the problem.

Research line C, knowledge-at-the-table

Improving budget quality and accountability (ER2121)

In addition to coordination with the Directorate for Financial and Economic Affairs (FEZ) about other systems for policy reviews, KiM is participating in a ministry-wide policy evaluation committee set up in 2020.

Research line C, knowledge-at-the-table

National Growth Fund knowledge inputs for mobility (ER2321)

In previous years, KiM was involved in editing the supporting reasons of IenW proposals submitted to the growth fund. Among other things, KiM provided insights from relevant studies in the field of mobility, plus instruments for decision making, such as the SCBA. In 2023 we will be answering the research questions of policy support directorate of the National Growth Fund regarding developments in mobility and deployment of assessment frameworks for mobility investments.

Research line C, knowledge-at-the-table

Also involved: all IenW directorates.

11 Directorate-General for the Environment and International Affairs

Theme	Project	Number	Track	Type
Developing sustainable mobility	The earning potential of smart and sustainable mobility	DG2122	B	Knowledge-at-the-table
Developing sustainable mobility	Coordination of (underground) energy supplies and (above ground) energy demands	DG2124	B	Knowledge-at-the-table

Developing sustainable mobility

The earning potential of smart and sustainable mobility (DG2122)

The International Directorate wants to see an overview of the earning potential of Dutch companies abroad when it comes to sustainable mobility. The aim is to achieve better partnerships with six priority countries for the energy transition (Belgium, France, German, the UK, the US and China), which would lead to a better return on sustainable mobility and accelerate the transition. The study of earning potential has been outsourced, with KiM advising on the research design.

Research line B, knowledge-at-the-table

Coordination of (underground) energy supplies and (above ground) energy demands (DG2124)

For this topic, the Directorate-General for the Environment and International Affairs is having a study conducted to find out what the opportunities and obstacles are for energy provision along a variety of European transport corridors. For instance, electrical charging points for HGVs along the North Sea-Baltic corridor or the Rhine-Alpine corridor. Where, in tackling the obstacles, can the Netherlands partner with other countries or form a consortium? KiM has been assigned a guiding role.

Research line B, knowledge-at-the-table

Also involved: Sustainable Mobility Directorate

12 Directorate-General for Water and Soil

Theme	Project	Number	Track	Type
Developing sustainable mobility	Trade-offs in climate adaptation in the mobility system (networks)	DG2201	B	Knowledge-at-the-table

Developing sustainable mobility

Trade-offs in climate adaptation in the mobility system (DG2201)

The Water Safety, Climate Adaptation and Administration Directorate has a coordinating role when it comes to IenW's climate adaptation objectives. The possible impacts of climate change for mobility infrastructure were mapped out by KiM in 2021, as were the potential adaptation measures. Infrastructure networks are sensitive to physical damage to infrastructure and reduced functionality as a result of drought, heat, heavy rain and other extreme weather conditions that are brought on by climate change. IenW is working on an assessment framework in order to answer the question, how can we trade off the functionality of various networks when it comes to preventing the negative effects of climate-change driven incidents? KiM is contributing knowledge and expertise. Other issues involving spatial planning, such as new housing construction, are also prompting awareness of climate adaptation problems. KiM is serving as an advisory board for those working out the relation between housing construction and climate adaptation within the mobility system for the interdepartmental consultation between the DG for Water and Soil and the Ministry of Interior Affairs and Kingdom Relations.

Research line B, knowledge-at-the-table

Also involved: Roads and Traffic Safety Directorate

13 Basic projects

Theme	Project	Number	Track	Type
Give direction to accessibility	Accessibility, sustainability and traffic safety dependent on speed limits	DG2320	B	Research project
Developing sustainable mobility	Mobility in times of sustainable energy shortages	DG2206	B	Research project
Uncertain future	Contributing to Scenarios of Welfare, Prosperity and Quality of the Living Environment (WLO)	ER2207	A	Knowledge-at-the-table
Data and models	Netherlands Mobility Panel (MPN) data collection, data dissemination and communications	DM1720	A	Research project
Data and models	Customised research with MPN	DM1702	A	Research project

Give direction to accessibility

Accessibility, sustainability and traffic safety dependent on speed limits (DG2320)

Measures may affect accessibility, traffic safety and sustainability at the same time. For example, lowering the maximum speed limit is probably good for sustainability and bad for accessibility, while the effect on traffic safety is unclear. In this project, with the aid of one or more case studies, we are making an inventory of how the trade-off between various aspects pans out if the starting point is changing the speed limit. The emphasis is on the degree to which changing the speed limit influences each of these three aspects.

Research line B, research project

Also involved: Roads and Traffic Safety Directorate, Sustainable Mobility Directorate

Developing sustainable mobility

Mobility in times of sustainable energy shortages (DG2206)

If we want to maintain or grow our current level of mobility, and have it run on carbon-neutral energy, it will cost a lot of money, space and (primary) energy, according to the publication Energy chains for carbon neutral mobility (KiM, 2022). KiM is investigating which policy measures could be taken now if we can assume that carbon-neutral mobility objectives will not be achieved by 2050 because of possible shortages of carbon-neutral energy.

Research line B, research project

Also involved: Sustainable Mobility Directorate

Uncertain future

Contributing to Scenarios of Welfare, Prosperity and Quality of the Living Environment (WLO) (ER2207)

The PBL started preparations in November 2021 for the development of new WLO scenarios. KiM is providing knowledge and expertise on topics in one defined area –

mobility. Follow-up stages will take a number of years; the forecast is that the scenarios will be ready in the spring of 2024.

Research line C, knowledge-at-the-table

Data and models

Netherlands Mobility Panel (MPN) data collection, data dissemination and communications (DM1720)

Within traffic and transport policies, the behaviours of specific groups in society are gaining more attention. This is accompanied by a growing need for insights into the effects of changes to the circumstances of persons and groups on mobility, such as changes in family composition, where people are moving to, and so on. In 2012 KiM started a longitudinal mobility study, the Netherlands Mobility Panel (MPN). This study is dedicated to obtaining an understanding of how mobility is influenced by changes in people's circumstances or group behaviour (changes in family composition, where people move, the COVID-19 pandemic, etc.) and policy measures. The eleventh measurement (wave) will be conducted in the fall of 2023.

Data from the Netherlands Mobility Panel (MPN) are and will be used in various KiM projects. External parties, both national and international, are also making generous use of MPN data for their research objectives. This data is available as open access data from Survey Data Nederland. Under strict conditions, external parties can also collect additional data via the MPN, in consultation with KiM.

This project deals with all the activities for the MPN, from drawing up questionnaires to making the data available to third parties. It concerns, among other things: modifying and testing questionnaires and diaries; supervising fieldwork; drafting research rationales; checking, correcting and supplementing data; and communicating the potential and results of the MPN.

Research line A, research project

Customised research with MPN (DM1702)

In addition to regular waves, which will be carried out with MPN in the fall, MPN can also be used for additional research for use by KiM, other levels of government, research institutions and universities. In recent years, MPN has been used, for example, for the purpose of surveying the experience and image of mobility; residential preferences in relation to mobility; and the use of Mobility-as-a-Service (MaaS). Drafting questionnaires takes place jointly between KiM and the researching organisation.

Research line A, research project

Overview of projects by theme

1 Give direction to accessibility

Directorate	Project	Number	Track	Type
Sustainable Mobility Directorate	The relation between active modes of transport and accessibility	MB2204	A	KaT ¹
Innovation and Strategy for Mobility Directorate	Potential accessibility objectives	MB2215	A	Research project
Innovation and Strategy for Mobility Directorate	Knowledge agenda on mobility poverty and study of accessibility poverty	MB2107	A	KaT and research project
Innovation and Strategy for Mobility Directorate	Quantifying accessibility poverty	MB2303	A	Preliminary study
Innovation and Strategy for Mobility Directorate	Affordability of mobility and effect of mobility on purchasing power	MB2304	A	Preliminary study
Innovation and Strategy for Mobility Directorate	Further development and distributional aspects of the accessibility indicator	MB2302	A	KaT
Innovation and Strategy for Mobility Directorate	The value of accessibility	ER2203	C	Research project
KiM	Accessibility, sustainability and traffic safety dependent on speed limits	DG2320	B	Research project
Directorate for Aviation	The importance of direct flights	MB2318	A	Research project
Directorate for Maritime Affairs	Update on the freight transport agenda	MB2321	A	KaT
Public Transport and Railway Directorate	Revision of the TEN-T Regulation and rail transport	MB2310	A	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Traffic flow and behavioural measures	MB2313	A	KaT

2 Developing sustainable mobility

KiM	Mobility in times of sustainable energy shortages	DG2206	B	KaT
General Strategic Advice Directorate and Directorate for Financial and Economic Affairs	Knowledge inputs for the IenW Behavioural Insights Team (BIT)	DG2319	B	KaT
DG for the Environment and International Affairs	The earning potential of smart and sustainable mobility	DG2122	B	KaT
DG for the Environment and International Affairs	Coordination of (underground) energy supplies and (above ground) energy demands	DG2124	B	KaT
DG for Water and Soil	Trade-offs in climate adaptation in the mobility system (networks)	DG2201	B	KaT

¹ Knowledge-at-the-table

Sustainable Mobility Directorate	Greening business mobility	MB2306	A	Research project
Sustainable Mobility Directorate	Greening travel behaviour for everyone	MB2305	A	KaT
Sustainable Mobility Directorate	Greening leisure travel	MB2307	A	Preliminary study
Sustainable Mobility Directorate	How can we prevent counting CO ₂ reductions for multiple measures twice?	DG2302	B	Research project
Sustainable Mobility Directorate	What are the climate impacts of exporting cars to Africa?	DG2303	B	Preliminary study
Sustainable Mobility Directorate	What incentives are there for making long-haul road freight transport more sustainable?	DG2304	B	Preliminary study
Sustainable Mobility Directorate	What are the functionality thresholds of electric cars?	DG2305	B	Preliminary study
Sustainable Mobility Directorate	Distribution of biogas between mobility and housing	DG2220	B	KaT
Sustainable Mobility Directorate	Transitional charts for sustainable mobility	DG2221	B	KaT
Directorate for Aviation	Climate awareness and flying	MB2121	A	Research project
Directorate for Aviation	What is the role of government in the transition of airports into energy hubs?	DG2311	B	Preliminary study
Directorate for Aviation	Establishing a CO ₂ ceiling	DG2127	B	KaT
Directorate for Aviation	What is the role of private aircraft in achieving sustainability goals?	DG2312	B	KaT
Directorate for Aviation	Effects on CO ₂ of differentiating aviation taxes	DG2313	B	KaT
Directorate for Maritime Affairs	Can the conditions for a transition to a carbon-neutral inland navigation sector be set on time?	DG2314	B	Research project
Directorate for Maritime Affairs	How can we accelerate the transition to sustainability for maritime shipping, from the social and commercial perspectives?	DG2315	B	Preliminary study
Directorate for Maritime Affairs	Surveying the future of bunkering fuel for ships in the Port of Rotterdam	DG2316	B	Preliminary study
Directorate for Maritime Affairs	Standardisation of inland navigation	DG2317	B	KaT
Directorate for Maritime Affairs	The effects of sanctions against Russia on the bunkering fuel market and decarbonisation	DG2318	B	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Which traffic safety problems cannot be solved with infrastructural measures, and what are the alternatives?	DG2114	B	Research project
Roads and Traffic Safety Directorate (Ch. 6)	What behaviours go with filling up and recharging at service stations?	DG2306	B	Preliminary study
Roads and Traffic Safety Directorate (Ch. 6)	Integrated approach to reduce driving under the influence	DG2307	B	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Preparatory evaluation for the Strategic Traffic Safety Plan	DG2308	B	KaT

3 Urbanisation and housing

Innovation and Strategy for Mobility Directorate	Knowledge inputs for NOVI monitor	MB2221	A	KaT
Mobility and Spatial Planning (Ch. 7)	Where is room in the mobility system for new housing?	DG2210	B	Preliminary study
Mobility and Spatial Planning (Ch. 7)	Tightening NOVI	DG2310	B	KaT
Mobility and Spatial Planning (Ch. 7)	Conditions for inclusive programming	ER2313	C	Preliminary study

4 Modalities and measures

Sustainable Mobility Directorate	Effects of cycling on human health and importance of cycling employees for employers	DG2107	A	Research project
Sustainable Mobility Directorate	A better understanding of walking	MB2203	A	Research project
Sustainable Mobility Directorate	Biking facts 3.0	MB2308	A	Research project
Sustainable Mobility Directorate	Costs of cycling	MB2309	A	Research project
Sustainable Mobility Directorate	Knowledge input for active modes	MG1603	A	KaT
Innovation and Strategy for Mobility Directorate	Mobility Report 2023	MB2301	A	Research project
Innovation and Strategy for Mobility Directorate	Update on commercial cost figures for freight transport	ER2115	C	Research project
Innovation and Strategy for Mobility Directorate	Impact studies of pay according to car use	ER2301	C	KaT
Directorate for Aviation	Air freight	MB2207	A	Research project
Directorate for Aviation	The inclination to travel by air	MB2209	A	Research project
Directorate for Aviation	Replacing air travel by rail travel	MB2319	A	Research project
Directorate for Aviation	Aeolus	B1014	A	KaT
Directorate for Aviation	Airport capacity monitor	MB2208	A	KaT
Directorate for Aviation	The role of drones and vertiports in the mobility system	MB2320	A	Preliminary study
Directorate for Aviation	The value of night flights	ER2219	C	KaT
Directorate for Maritime Affairs	The effects of drought on inland waterways from the shipper's perspective	ER2315	C	Preliminary study
Directorate for Maritime Affairs	The business climate for companies with vessels	ER2316	C	Preliminary study
Directorate for Maritime Affairs	Control function and economic value of digitising freight transport	ER2011	C	KaT
Directorate for Maritime Affairs	Hands-on modal shift programme for freight transport	ER2218	C	KaT
Directorate for Maritime Affairs	Programmes for freight corridors	ER2317	C	KaT

Directorate for Maritime Affairs	Modal shift: obstacles, long-term instruments and evaluation	ER2318	C	KaT
Directorate for Maritime Affairs	Developing a policy framework for pipelines	MM1802	C	KaT
Public Transport and Railway Directorate	Demand-driven public transport: experiences and opportunities	MB2211	A	Research project
Public Transport and Railway Directorate	Opportunities for the main rail network	MB2213	A	Research project
Public Transport and Railway Directorate	Car costs vs public transport costs	MB2214	A	Research project
Public Transport and Railway Directorate	Ex post analysis of Bus Rapid Transit	MB2113	A	KaT
Public Transport and Railway Directorate	International passenger transport	MB2210	A	KaT
Public Transport and Railway Directorate	Revising priorities for the rail network	MB2311	A	KaT
Public Transport and Railway Directorate	Social effects of public transport	ER2209	C	Research project
Public Transport and Railway Directorate	Social importance of rail freight transport	ER2304	C	Research project
Public Transport and Railway Directorate	International benchmark performances of NS and Prorail	ER2305	C	KaT and research project
Public Transport and Railway Directorate	SCBA update 3RX	ER2024	C	KaT
Public Transport and Railway Directorate	Deregulation of the taxi market: an assessment	ER2210	C	KaT
Public Transport and Railway Directorate	Monitoring the costs of rail freight transport	ER2224	C	KaT
Public Transport and Railway Directorate	Policy assessment of accessibility allowances for public transport	ER2306	C	KaT
Public Transport and Railway Directorate	The future of rail freight transport	ER2307	C	KaT
Roads and Traffic Safety Directorate (Ch. 6)	The future of car sharing	MB2217	A	Research project
Roads and Traffic Safety Directorate (Ch. 6)	New types of car availability	MB2315	A	Research project
Roads and Traffic Safety Directorate (Ch. 6)	Understanding attitudes of travellers and transporters on modes of transport	MB2314	A	Preliminary study
Roads and Traffic Safety Directorate (Ch. 6)	The car atlas	MB2316	A	Research project
Roads and Traffic Safety Directorate (Ch. 6)	National oil crisis plan	DG2219	B	KaT

Roads and Traffic Safety Directorate (Ch. 6)	Electric Road Systems (ERS) pilot	DG2309	B	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Evaluation of tax exemptions for commuter traffic	ER2222	C	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Price differentiation for heavy freight vehicle charges under the revised Eurovignette Directive	ER2309	C	KaT

5 Digitalisation and innovation

Innovation and Strategy for Mobility Directorate	Exploration of innovative but still immature technologies as potential contributors to carbon-neutral and energy-neutral mobility	DG2301	B	Preliminary study
Directorate for Aviation	The role of drones and vertiports in the mobility system	MB2320	A	Preliminary study
Directorate for Aviation	Innovation strategy for aviation	DG2218	B	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Monitor on smart mobility	MB2115	A	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Knowledge inputs for smart mobility	MB2117	A	KaT

6 Uncertain future

Sustainable Mobility Directorate	Remote work and remote learning: were the expectations right?	MB2202	A	KaT and research project
Innovation and Strategy for Mobility Directorate	Similarities and differences in mobility between the generations	MG1910	A	Research project
Innovation and Strategy for Mobility Directorate	Mobility Vision	MB2220	A	KaT
Innovation and Strategy for Mobility Directorate	Integrated Mobility Analysis 2025	MB2322	A	KaT
Innovation and Strategy for Mobility Directorate	Paradigm shift in transport planning: monitoring transitions	ER2204	C	KaT
KiM	Contributing to Scenarios of Welfare, Prosperity and Quality of the Living Environment (WLO)	ER2207	A	KaT
Directorate for Maritime Affairs	Effects of recent global developments (war in Ukraine, energy crisis, COVID-19) on freight transport	ER2223	C	KaT
Directorate for Maritime Affairs	Knowledge agenda on the future of inland navigation	ER2319	C	KaT
Public Transport and Railway Directorate	Where did the traveller go? Changes to the market in the medium term	MB2312	A	Research project
Public Transport and Railway Directorate	Knowledge inputs for monitoring the public transport forecast	BR1420	A	KaT

Public Transport and Railway Directorate	Long-term vision of market regulation for the main rail network	ER2229	C	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Is the BREVER law still valid?	MB2317	A	Research project
Roads and Traffic Safety Directorate (Ch. 6)	The future of car mobility	MB2015	A	KaT

7 Considerations in times of scarcity

Innovation and Strategy for Mobility Directorate	Consequences of scarcity for mobility	ER2205	C	Research project
Innovation and Strategy for Mobility Directorate	Funding issues	ER2302	C	KaT
Directorate for Aviation	Capacity restrictions at Schiphol and connectivity	ER2314	C	Research project
Directorate for Aviation	Airport policy for regional airports	ER2104	C	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Basic level of quality for Rijkswaterstaat's networks	ER2310	C	KaT

8 Data and models

Sustainable Mobility Directorate	Developing models for lorries and delivery vans	MB2201	A	KaT
Innovation and Strategy for Mobility Directorate	IenW integration and governance models trajectory	DM1106	A	KaT
Innovation and Strategy for Mobility Directorate	Knowledge inputs for Statistics Netherlands mobility study ODIN	DM1719	A	KaT
KiM	Supervision of and cooperation in customised research with MPN	DM1702	A	Research project
KiM	Netherlands Mobility Panel (MPN) data collection, data dissemination and communications	DM1720	A	Research project
Directorate for Maritime Affairs	Input, output and throughput statistics	DM1717	A	KaT
Public Transport and Railway Directorate	Data needs for public transport	DM1404	A	KaT

9 Professionalising policy assessment

General Strategic Advice Directorate and Directorate for Financial and Economic Affairs	Quality assurance and consistency of analytic instruments for SCBAs	E712	C	KaT
General Strategic Advice Directorate and Directorate for Financial and Economic Affairs	Follow-up to discount rate working group	ER2119	C	KaT
General Strategic Advice Directorate and Directorate for	Improving budget quality and accountability	ER2121	C	KaT

Financial and Economic Affairs				
General Strategic Advice Directorate and Directorate for Financial and Economic Affairs	National Growth Fund knowledge inputs for mobility	ER2321	C	KaT
Innovation and Strategy for Mobility Directorate	Major study of the value of travel time and reliability	EA1903	C	Research project
Innovation and Strategy for Mobility Directorate	Re-evaluating (price) elasticities	ER2208	C	Research project
Innovation and Strategy for Mobility Directorate	Broad-based economic prosperity and mobility follow-up	ER2201	C	KaT
Innovation and Strategy for Mobility Directorate	Assessment method of mobility funding	ER2303	C	KaT
Directorate for Aviation	The value of travel time for pre and post transport aviation	ER2125	C	Research project
Directorate for Aviation	Follow-up to the research agenda of the guide for aviation-specific SCBAs	ER2221	C	KaT
Mobility and Spatial Planning (Ch. 7)	Unity and integrality in assessment frameworks	ER2110	C	KaT
Directorate for Maritime Affairs	Causality of maritime policy and policy goals	ER2320	C	Research project
Directorate for Maritime Affairs	Quality impulse for maritime monitoring and evaluation	EA1614	C	KaT
Directorate for Maritime Affairs	Evaluation of the effects of transitional provisions for inland navigation	ER2226	C	KaT
Public Transport and Railway Directorate	Urban public transport: are results outpacing expectations?	ER2211	C	Research project
Public Transport and Railway Directorate	MIRT study of the Lely line	ER2227	C	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Evaluation of the road freight transport charges programme	ER2311	C	KaT
Roads and Traffic Safety Directorate (Ch. 6)	Policy audit of Article 14 of Roads and traffic safety	ER2312	C	KaT

Publication details

The Netherlands Institute for Transport Policy Analysis (KiM) produces mobility analyses that inform policy and impact society. As an independent institute within the Ministry of Infrastructure and Water Management, KiM conducts strategic studies and performs policy analyses. The content of KiM's publications does not necessarily reflect the views of the Minister or the State Secretary for Infrastructure and Water Management.

English Publication: 24 March, 2023.

Publication in Dutch: 23 January, 2023.

This is a publication of the Netherlands Institute for Transport Policy Analysis (KiM), part of the Ministry of Infrastructure and Water Management (IenW).

Design and layout: KiM

Netherlands Institute for Transport Policy Analysis (KiM)

Bezuidenhoutseweg 20

2594 AV The Hague

PO Box 20901

2500 EX The Hague

Telephone : 070 456 1965

Website : <https://english.kimnet.nl/>

E-mail : info@kimnet.nl

KiM publications can be downloaded as PDFs from our website <https://english.kimnet.nl/publications> or requested from KiM (via info@kimnet.nl). You are of course always welcome to contact one of our staff members.