



**Social Sciences**

## **Sustainable Accessibility of the Randstad**

**Summarised programme brochure for the third round of SAR (2011)**

# Content

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>Aim</b>	<b>5</b>
	2.1 The six SAR themes	5
	2.2 The theme for the third round of SAR	9
	2.3 Coordination with completed and ongoing research	12
	2.4 Budget of the SAR programme	12
<b>3</b>	<b>Guidelines for applicants</b>	<b>13</b>
	3.1 Who can apply	13
	3.2 What can be applied for	13
	3.3 When can applications be submitted	15
	3.4 Drawing up the application	16
	3.5 Specific subsidy conditions	16
	3.6 Submitting an application	17
<b>4</b>	<b>Assessment procedure</b>	<b>18</b>
	4.1 Procedure	18
	4.2 Criteria	19
	4.3 Committee members	21
<b>5</b>	<b>Other information</b>	<b>23</b>
	5.1 Contact	23

# 1 Introduction

**The Minister of Infrastructure and the Environment (I&M) has taken the initiative in concert with the Minister of Economic Affairs, Agriculture and Innovation (EL&I)<sup>1</sup> for the long-term research programme on Sustainable Accessibility of the Randstad.**

The SAR programme covers issues of sustainable mobility in relation to spatial planning, energy transition and climate change. The SAR programme is future-oriented. The time horizon is around thirty years. The programme focuses on the internal and external accessibility of the Randstad, including the mainports and cities, for people, goods and information traffic. It concerns fundamental, strategic research that should produce results that meet a high standard of science. The programme must intensify the cohesion and cooperation between the social sciences and the broad spectrum of science and technology research in the field of traffic and transport.

The programme challenges researchers to outline their vision of the accessibility problems and possible solutions to these problems in inter-university research proposals. The research proposals should show how the results of the proposed research can contribute to tackling the above-mentioned accessibility problems. Intrinsic criteria for defining sustainable accessibility of the Randstad in the future are:

- Limiting travel times, particularly between the main cities, between home and work;
- Increasing the reliability of travel times, by creating sounder infrastructural networks that can cope with unexpected events (e.g. accidents and weather conditions);
- Strengthening the economic vitality and international competitive position of the Randstad;
- Increasing the sustainability of the transport and infrastructure system, partly in view of climate change and energy transition.

The document at hand is a summarised brochure focusing on the third round of SAR. No rights can be derived from this brochure. The SAR brochure from the first round offers a detailed description of the political and social context of the SAR programme and the six SAR themes; see [www.nwo.nl/dbr](http://www.nwo.nl/dbr).

## **Third round of SAR (2011)**

The SAR programme started in 2008 and comprises three rounds of subsidy allocation.

In the first round, four sub-programmes received funding in the field of more sustainable freight transport; recreational transport; traveller information; and integrated networks. In a second round in 2009, the three programmes that received funding covered climate change, spatial planning and transport behaviour; innovative pricing policy; and strategies towards sustainable and reliable multimodal transport in the Randstad. Three smaller programmes received funding from the

---

<sup>1</sup> In essence, this is the predecessor in office at what was then the Ministry of Transport, Public Works and Water Management, which merged with the Ministry of Housing, Spatial Planning and the Environment; the Ministry of Economic Affairs, Agriculture and Innovation is the result of the merger between what were formerly the Ministry of Economic Affairs and the Ministry of Agriculture, Nature Management and Food Quality.

remaining budget in 2010; these programmes concerned the introduction of electric transport; mobility management and climate change; and climate-proof management and maintenance of infrastructure networks.

This brochure covers the third round of limited funding and focuses on the theme of 'Coordinating spatial planning and accessibility', also known as Transit Oriented Development (TOD). The third round of SAR funding also facilitates practice-based research and research modelled on international examples, with the aim of researching two actual cases in the North Wing (the greater Amsterdam area) and the South Wing of the Randstad urban conglomeration. The third round of SAR funding targets town and country planners with an affinity for mobility and traffic experts with an affinity for spatial planning. Other disciplines, such as management experts with an affinity for spatial planning, could be part of the consortium. See section 2.2 for a technical description of the theme of this third round of SAR funding.

The SAR programme will be implemented by the best academic research groups in the Netherlands. The research should be innovative, achieving high scientific standards (quality and level of utilisation compliant with NWO criteria), multidisciplinary, maintaining an international orientation, and relevant to questions being raised in societal and political spheres. It should be fed by the strategic knowledge questions raised by the Ministries of I&M and EL&I and other public parties as well as, possibly, private parties. The research conducted in the third round of SAR should also be inspired by the report from the Netherlands Bureau for Economic Policy Analysis (CPB) on 'Stad en Land' [City and Countryside] (2010). Finally, it should be noted that the SAR programme takes place within the theme of Connecting Sustainable Cities, and is therefore also linked to knowledge that has been or is being developed in other research programmes in the Connecting Sustainable Cities theme.

Research proposals will be selected and prioritised in the framework of the assessment procedure. The implementation of the programme makes a significant contribution to the knowledge base for sustainable accessibility of the Randstad in the longer term. In addition, the programme contributes to the education and training of young researchers in this field. (Because PhD students and post-doctoral researchers will be involved, there are opportunities to do internships in the government, and government officials can give guest lectures.) The programme is also aimed at strengthening the knowledge infrastructure for (and in) the Randstad.

## 2 Aim

The research programme leads to interesting scientific questions in various fields. The following strategic principles are important in developing knowledge in Sustainable Accessibility of the Randstad:

- The programme must contribute to strengthening the knowledge infrastructure for transport within the Netherlands, as part of Europe;
- The programme must generate innovative knowledge regarding sustainable accessibility of the Randstad, from which private and public parties can profit;
- The knowledge infrastructure will be bolstered in part by strengthening and anchoring university research in the long term and by improving cohesion between university and non-university research;
- Fundamental, strategic research should produce results that meet a high standard of science;
- Practice-oriented research should take place in cooperation with local and national authorities and with private parties (e.g. project developers) and should produce knowledge relevant to society and to policy (both case-specific knowledge and generic knowledge);
- The programme must intensify the cohesion and cooperation between the social sciences and the broad spectrum of science and technology research in the field of transport;
- The research results from the programme will be open to the public, since the research is pre-competitive.
- The results will have a trickle-down effect in education. The education component in the programme will be provided in part by the fact that young scientists (primarily PhD students) will gain knowledge and training by conducting research. It is also important for the research to be integrated into master's and PhD degree programmes.

### 2.1 The six SAR themes

A brief description of the six themes in the SAR programme is provided below. The themes are schematically displayed in Figure 1. The most important links between the themes are indicated by arrows. To some extent, all six themes are connected and all the boxes should be linked by arrows.

The research conducted in the third round of SAR should take place against the backdrop of these themes. For a more detailed description of all six themes, we refer you to the programme brochure that was compiled for the first round of the SAR programme; the brochure is available at [www.nwo.nl/dbr](http://www.nwo.nl/dbr).

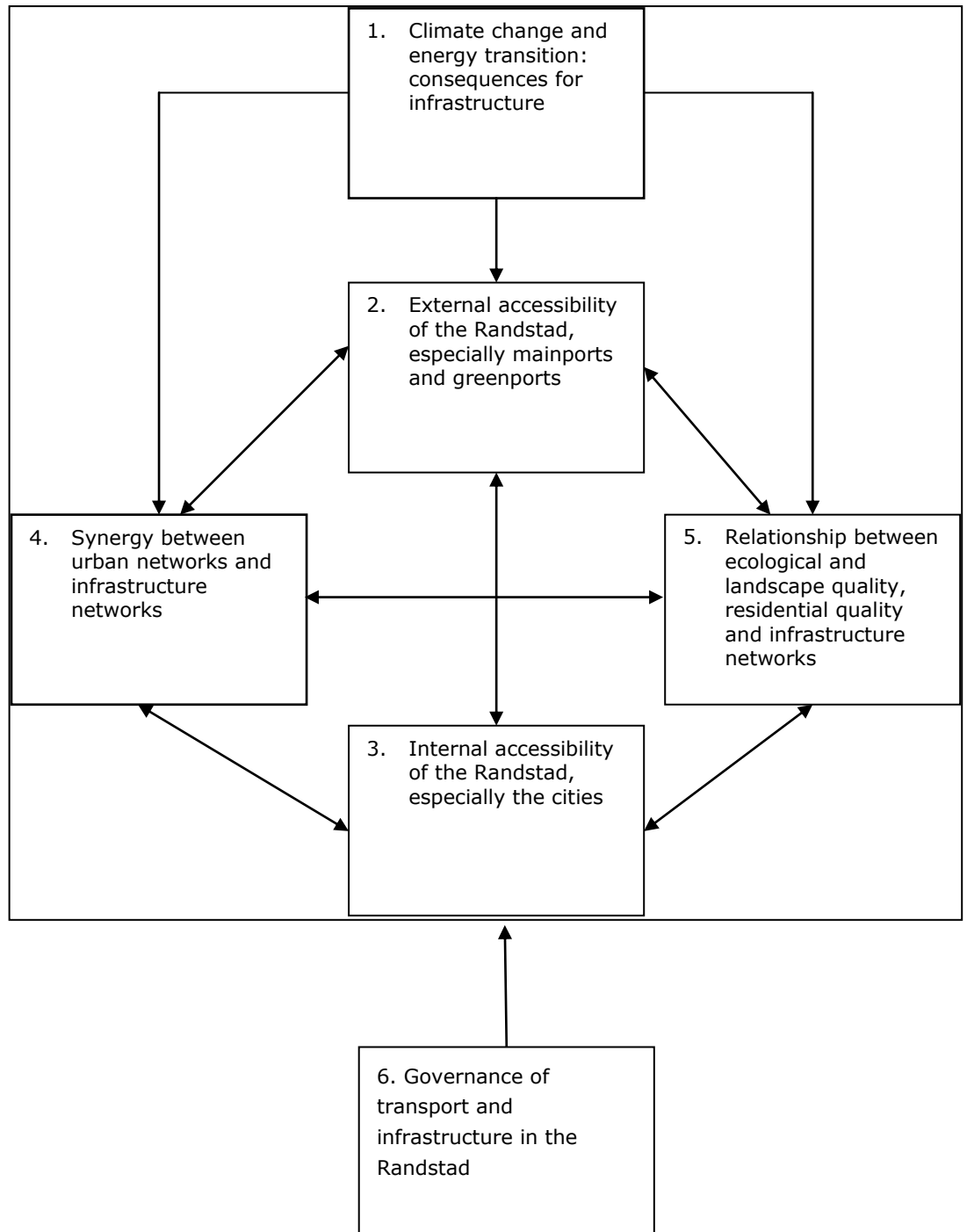


Figure 1. Six Themes on 'Sustainable Accessibility of the Randstad'.

### 2.1.1 Climate change and energy transition: possible consequences for the Randstad infrastructure

In recent years, a great deal of research has been done in the Netherlands on the theme of climate change and possible adaptation issues in relation to the lack of space. There is a growing awareness that the Randstad is among the most problematic locations, because of the convergence of the risks of the rising sea level and the greater water discharge from the rivers, in combination with continuing soil subsidence. This demands spatial strategies, e.g. for multi-purpose land use, such as combining water storage and other functions that create value, in order to overcome the spatial issues. Furthermore, infrastructures have great influence on energy transition. They make new socio-technological options possible, or block existing ones. Therefore, numerous questions requiring particular expertise will be instigated

by the consequences of climate change, the new assignments regarding water, and the proposed energy transition for the accessibility of the Randstad within the preconditions of ecological sustainability, economic vitality and social cohesion, and these questions will have to be answered in the coming years.

### **2.1.2 External accessibility of the Randstad, particularly the mainports and greenports**

The external accessibility of the Randstad is determined to a large extent by the location of the Randstad as a logical transfer and transshipment point between Europe and other continents, and between Great Britain and the European continent. The position in the delta of the Rhine, Maas and Schelde rivers and the proximity to the Rhine-Ruhr region and the Flemish Diamond has a major influence on the traffic of passengers and freight to and from the Randstad. The Randstad has three mainports: Amsterdam Airport Schiphol, the port of Rotterdam and the ICT hub in Amsterdam at Watergraafsmeer. The Randstad also contains a number of greenports (e.g. Westland/Oostland, Aalsmeer, Duin- en Bollenstreek and Boskoop), where growers, auctions, commercial enterprises and horticultural suppliers are located.<sup>2</sup> Furthermore, Europort, like Groningen, acts as an energy junction. Research and policy regarding the mainports and greenports suggests a global chain perspective is necessary.

The external accessibility of the mainports and greenports is intercontinental (by air and via the oceans of the world) and continental (by land via road, rail, inland shipping and pipelines, and by continental air routes).

For intercontinental external accessibility, there is a growing trend to take the ecological footprint of logistical chains into account, and the mainports and greenports are an important link in such chains. This presents both threats and opportunities. It is important that the climate to establish business activities in the Randstad remains attractive and that both now and in the future, it is considered important to go through Schiphol or Rotterdam respectively.

With regard to continental external accessibility, the multimodal hinterland connections from Rotterdam and Amsterdam are of primary importance: motorways (which sometimes have separate haulage truck lanes), rail lines (including the Betuwe Line), inland waterways, coastal shipping and pipelines. The high market share of inland shipping is characteristic of freight traffic in the Netherlands. Crucial factors include the location, nature and capacity of the terminals in the network of hinterland connections.

### **2.1.3 Internal accessibility of the Randstad, particularly the cities**

The main task is to conduct a coherent analysis of the accessibility of the Randstad. In many cases, that means an analysis of networks, in which the relationship between networks is studied on various scales. The internal accessibility of the Randstad is linked to a significant extent to the task of limiting and controlling the travel time from point of origin to destination. On the one hand, this is about

---

<sup>2</sup> See recent studies on this topic, as referred to e.g. in the following reports: 1) Bereikbaarheid van mainports en greenports in de Randstad [Accessibility of mainports and greenports in the Randstad] (2008, commissioned by the Ministry of Transport, Public Works and Water Management) and 2) Naar een Gedeelde Agenda voor Infrastructuur en Agrologistiek rondom Greenports [Towards a Shared Agenda for Infrastructure and Agrologistics] (conducted by Wageningen University and commissioned by the Ministry of Agriculture, Nature Management and Food Quality).

reducing the door-to-door travel time; on the other, it is about increasing the reliability of the connections and reducing uncertainties about travel times. This could involve a single modality, but it is often about a combination of modalities, linked by transit points (stations, etc.) and transshipment points (terminals). The researchers should bear in mind potential technological innovations in vehicles, transport systems, ICT applications, energy carriers and/or propulsion mechanisms.

The internal accessibility can be considered at the level of the Randstad as a whole, but also at the level of the individual urban regions within the South Wing and the North Wing. Particular attention should go to the interaction between internal and external accessibility: the relationship that the Randstad has with the rest of the Netherlands and the European Union.

#### **2.1.4 Synergy between urban networks and infrastructural networks**

Transport systems and spatial development in the Randstad are in a constant flux of co-evolution, in which developments in one system are both the determinant and the result of developments in the other system. The demand for travel arises from the phenomenon that people want to do various activities (living, working, shopping, recreation) at different locations, or because businesses derive various input from various locations and then sell their products in different locations altogether. At the same time, the location behaviour of households and companies is determined to a large extent by transport costs, linked to accessibility and reliability. This interaction between different forms of transport, networks and junctions, as well as spatial planning makes it very important to understand how mainports, greenports, cities and other interchanges develop, but also to find ways to guide them in a direction acceptable to society. New logistic and agro-logistic concepts can also play an important role in this issue, while consistent monitoring of the spatial quality is an important challenge. However, a great deal of the knowledge in this field is fragmented and anecdotal, which creates the risks of unwise decision-making in and around junctions, often based on difficult-to-verify but appealing arguments involving economic growth, prosperity and employment.

#### **2.1.5 Relationship to ecological and landscape quality, residential quality and infrastructural networks**

This theme deals with the influence of transport infrastructure on the qualities of the landscape and ecology in the Randstad. The challenge is to consistently combine the accessibility advantages that infrastructure offers - as part of integral regional assignments or otherwise - with improvement of the spatial quality. Particularly in the Randstad, where there is much spatial pressure, the interpretation of the qualities of landscape and ecology form essential preconditions for good quality of life in relation to infrastructure networks. There are ample opportunities here to ensure that the infrastructure is integrated into the landscape.

#### **2.1.6 Governance of transport and infrastructure in the Randstad**

Increasing the long-term sustainability of Randstad accessibility requires efforts from public and private actors in a broad range of fields. It is possible that different management and steering techniques will be needed than what has been customary to date. Economic, governmental and behavioural approaches will have to be combined in order to arrive at valid insights and policy recommendations.

This field of research aims to create a better understanding of the operation and regulation of network markets. This involves the prices, the capacities, the user demand, and the associated prosperity, as it can be expected in various institutional arrangements and models of market regulation. An important question is always

how public values can be secured in the face of these arrangements. Another important factor is to gain further insight into the value and significance of accessibility, how the demand for mobility develops, what the factors that influence mobility are and how these insights can be integrated into policy in order to secure the sustainability of mobility/accessibility.

## 2.2 The theme for the third round of SAR

Metropolitan regions in Europe compete with each other to attract smart, enterprising people. The target audience for their efforts requires an appealing place to work and live, and good public transport is an essential part of that. The Netherlands is internationally renowned for its urban and regional planning, linking spatial planning to sustainable forms of mobility. Recent research has shown, however, that the 'rose-tinted image' no longer reflects reality in 2011. The actual situation in the Netherlands has shown to be highly resistant to change, and there are quite a few barriers to overcome before the objectives can be achieved. Although sustainable accessibility of cities and economic centres are a high priority on regional policy agendas, there are difficulties and obstacles in the Netherlands in converting these policy objectives into investments and policies. Relevant references in this respect include the report published in November 2010 by the Netherlands Bureau of Economic Policy Analysis (CPB) on *Stad en Land* [City and Countryside].<sup>3</sup>

The cyclical relationship between space and mobility is widely accepted and, from a scientific perspective, substantiated by multiple sources. However, this knowledge is rarely put into practice and has to date not resulted in further integration into policy. Quite the opposite, in fact: strategies for developing areas in coordination with the transport network have decreased rather than increased in frequency over the past decades. Desk research shows that the Netherlands is not the only country to face these problems. Other countries also exhibit what could more accurately be termed *transit-adjacent development*, rather than *Transit Oriented Development (TOD)*. Although developments may take place in proximity to public transport, they do not necessarily lead to more use of public transport and to fulfilment of the intended socio-economic and environmental objectives.

It has become apparent from *Bereikbaarheid in Crisistijd*<sup>4</sup> [Accessibility in a Time of Crisis], from *SAR research* (see the SAR website), from the *Carrefour Connecting Sustainable Cities* on 4 February 2011, and from the *Madurodam* session on 12 April 2011 that was organised by the Ministry of Infrastructure and the Environment, that Transit Oriented Development not only represents an implementation issue, but also a lack of knowledge. For instance:

- *Lack of policy instruments* for the regional urbanisation and mobility network: In recent years, policy and investments have focused primarily on specific junctions, separate lines in the network in the Randstad, and the network at the national level. In contrast, there was a reduced focus on the regional level within the Randstad.<sup>5</sup> However, the level of the urban regions is becoming more and more important, because this level increasingly functions as the daily urban system of people and companies in those regions. Within this system, movement patterns are no longer limited to several lines between the city and its periphery; rather, they are developing into complex chains and networks.

---

<sup>3</sup> The conclusion of this report links e.g. accessibility, land value, advantage of using local public facilities, differences in land prices and financeability of municipalities.

<sup>4</sup> An initiative of Delft University of Technology and the Deltametropolis Association.

<sup>5</sup> With the exception of the Stedenbaan programme, on synergy between junctions and railway.

Regional and national policy agendas acknowledge the importance of the regional network. Recent updates in the 'Spatial Planning Act' and the 'Multi-year Programme on Infrastructure, Spatial Planning and Transport' have also led to greater room for policy manoeuvres at the regional level. In practice, however, suitable instruments are often lacking to take effective advantage of this increased administrative leeway.

- *Lack of a common language*: The various administrative levels, each with its own responsibilities, focus on various aspects of spatial planning and mobility. In addition, the interaction between spatial developments and mobility developments receive different attention in sector-specific policy. Different methods are used for substantiation and evaluation, based on divergent criteria and applied in different policy cycles. In order to apply policy to larger, regional networks, characteristics of separate systems will need to be integrated. A significant degree of mutual incomprehension is seen in practice, however; a common language is lacking.
- *Lack of sufficient knowledge regarding the effects of innovation incentives*: New knowledge, which could lead to innovation in methods and strategies, is not finding its way to application. The effects and value of knowledge exchange and policy transfer, e.g. between the regions or by comparing best practices internationally, are not sufficiently known or acknowledged. Due to the lack of knowledge about alternatives, people often fall back on traditional planning methods in practice. Spatial investment funds, for instance, are not used efficiently due to traditional calculation models in which infrastructure and spatial planning are kept separate.
- *Lack of sufficient focus on spatial planning*: Research and approaches in policy are generally driven by mobility and are not sufficiently linked to urbanisation. There is a mismatch between assumptions based on mobility models and the way that regional urbanisation works. In addition, these models are not sufficiently validated in comparison to actual practice in regional urbanisation and relevant spatial characteristics are still difficult to assess and validate. The knowledge available in practice is not sufficiently utilised.
- *Lack of access to data*: In order to apply knowledge of the interactions between spatial planning and mobility in the regions and to comprehend respective positions in the network and sustainability, spatial data and data on infrastructure systems will be needed. Although such data is partially available, it lacks sufficient public accessibility/applicability and is too fragmented to use as a basis for policy and strategy for all stakeholders.

**The SAR Programme Committee has decided to focus research in the third round of the SAR programme on promoting the integration of urbanisation and mobility via regionally and practically oriented studies on opportunities and obstacles that affect such integration, modelled on examples of success abroad.**

Particular emphasis will be placed on the development of urban environments around multi-modal chains, especially passenger transport chains. In future, urbanisation will have to have a stronger focus on utilising the development potential in the existing transport networks, including the influence it has on the harmonisation and coordination of spatial planning programmes. Projects should focus both on practice-oriented research modelled on international examples and on fundamental, generic research and should be based in part on a strong articulation of demand in the network of policy-makers and practitioners. In order to arrive at effective policy and strategies for the link between mobility and spatial planning, to guarantee accessibility and to make optimal use of the potential of locations and the regional network, it will be necessary not only to pursue the current fundamental research on institutional obstacles and economic effects, but also to develop research that can be used for experiments conducted in actual practice. The research should be initiated on the basis of actual, practice-based issues, it should be modelled on international examples, it should produce scientific (generic)

knowledge, and it should generate substantive results that serve as input in specific governmental discussions.

The third round of the SAR programme focuses on the integration of urbanisation and mobility. Three sub-themes can be identified in that context:

**1. Common knowledge base**

Intended result: *An applicable key: a common language in which urbanisation and mobility settings are defined*, that lends itself to systematic integration and evaluation of policy and investments at the regional level. In view of the limited room for investment and the (high) regional level in future, the settings should primarily be amenable to coordinate and prioritisation of interventions and policies. In this context, issues that will need particular attention include objectified characteristics of areas and transport networks, verification of assumptions regarding the effects<sup>6</sup> that arise from the correlations between these characteristics, compilation of characteristics in order to fill a public database with location characteristics, validation and development of models to associate effects with implications for policy<sup>7</sup>, etc. etc.

**2. Funding for integration of urbanisation and mobility**

Intended result: *A costing model/financial analysis of a business case for urbanisation and mobility at network and location (junction) levels*. The primary focus here is exploring the applicability of new costing models, utilising synergies derived from integrated development of infrastructures and regions (value capturing), linking operating costs (management and maintenance) to investments, etc. Increasing the appeal of investments in infrastructural and regional development for transport companies, private developers, institutional investors and other parties may contribute to a balanced business case for Transit Oriented Development (TOD).

**3. Realisation and organisation of the integration of urbanisation and mobility**

Intended result: *A governance model for Transit Oriented Development*. Changes in society necessitate reassessment and redefinition of the roles and responsibilities of the government, the market and societal organisations. Tasks in this context include analysis of the institutional barriers to integration of policies on spatial planning and mobility in other countries and approaches used there, the application of high-potential public-private regional arrangements and recommendations for amendments to Dutch laws and regulations, development of various institutional public-private arrangements and market regulation models.

**In the third round of the SAR programme, the primary task is to supplement the missing fundamental knowledge through empirical research modelled on successful examples abroad in two specific situations in the Netherlands and to adapt that knowledge for practical application. How do we create a market that truly seizes opportunities for high-quality living, working and public transport, and a government that facilitates this? The practical situations should be located in the North Wing and the South Wing of the Randstad, respectively. This involves the question of how regional and supra-regional networks can be linked to urban networks and what this means for the urbanisation task.**

---

<sup>6</sup> Effects concern the socio-economic development of regions, as well as environmental development.

<sup>7</sup> These models should be suitable to provide insight into policy options and to develop spatial planning scenarios at the regional level.

In order to facilitate effective interaction with actual practice, regional problem owners should associate themselves with the reason with the aim of increasing policy relevance. In addition, research in one practical situation should be organised and coordinated with the other practical situation in such a way as to generate generic knowledge that can be applied in other regions.

The project consortia are naturally free to suggest their own proposals for how they would like to carry out the research. However, funding is subject to the condition that the two projects that receive funding must coordinate their approaches in order to reach generic conclusions regarding Transit Oriented Development (TOD). The *Connecting Sustainable Cities* partnership will facilitate coordination by means of an overarching TOD community, in which knowledge and practical experiences from both SAR projects and other TOD initiatives within the *Knowledge for Strong Cities* and *Urban Regions in the Delta* programmes can be shared and enriched. This TOD community will provide advisory reports to the various government authorities at national and regional levels, in the form of specific proposals for amending policies, laws and regulations at various levels (e.g. the national programmes *Benutten [Utilisation]* and *Programma Hoogfrequent Spoor (PHS)* [High-Frequency Rail Transport Programme] and the regional policy agendas). This requires active participation from the project managers of the two regional projects that will be established in this third round of the SAR programme.

### 2.3 Coordination with completed and ongoing research

The programme on Sustainable Accessibility in the Randstad is not unfolding in splendid isolation. The research programme builds on a number of ongoing or completed BSIK projects: Transumo, Next Generation Infrastructures and (to a lesser extent) Innovative Use of Space. Cooperation with the FES programme 'Knowledge for Climate' goes without saying. The programme also builds on the NWO-Connekt programme on Traffic and Transport.

It is important that within research proposals it is indicated how will be elaborated on research that has already been carried out, and how connections with recent and current research will be made. Besides university research, research that was/is being performed at, amongst others, KIM, CPB, SCP, MNP, RPB, NICIS and KNMI is also involved.

In addition, the following are specifically relevant to the third round of SAR funding:

- the relationship to the ongoing SAR programmes, see <http://www.nwo.nl/dbr>
- the programme Urban Regions in the Delta (URD), see <http://www.nwo.nl/urd> [[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_88PJKB\\_Eng](http://www.nwo.nl/nwohome.nsf/pages/NWOP_88PJKB_Eng)]
- the publication by the Netherlands Bureau of Economic Policy Analysis entitled *Stad en Land* [City and Country-side], December 2010, see <http://www.cpb.nl>

### 2.4 Budget of the SAR programme

The programme will be implemented using contributions from the Ministries of I&M and EL&I. Contributions will also come from NWO and the universities. The contribution from the above-mentioned ministries and NWO exceeds ten million euros. In the third round of SAR funding, over 1 million euros will be available to carry out two case studies. The Programme Committee will also commission several synthesis studies. The contribution from the scientific institutes consists of a supplement to the NWO contribution up to the level of the actual costs of the researchers, as well as the deployment of the supervisory capacity of the individual institutes.

## 3 Guidelines for applicants

### 3.1 Who can apply

- A subsidy application can be submitted on behalf of a consortium by a professor or senior university lecturer working at a Dutch university. In particular, professors and senior university lecturers in the field of spatial planning with an affinity for mobility and traffic experts with an affinity for spatial planning will be invited to submit a proposal. Other disciplines, such as e.g. management experts with an affinity for spatial planning, could be part of the consortium;
- A consortium consists of 2 or 3 cooperating university research groups in the Netherlands; the research leaders must have a persuasive track record in the field of Transit Oriented Development. Universities of applied sciences can also be consortium members.  
To be able to carry out region-specific practical research, consortia should have provable ties to relevant societal partners (especially local and regional government authorities) in the North Wing or the South Wing of the Randstad.
- In order to promote inter-university cooperation, the explicit aim is for a sub-programme to be implemented by researchers who are affiliated with different universities. The multidisciplinary cooperation within and between sub-programmes is also an important aspect of the SAR programme.
- The intention is for the consortium to indicate which authoritative foreign researchers will/could cooperate and what form such cooperation could take. Submission of successful examples abroad is required.
- Applicants are expected to be prepared to bear scientific, organisational and financial responsibility for the research, if the subsidy is granted. This entails the compilation of progress reports, contributing to the interim and final evaluations and participating in the handover of research results, both interim and final, to potential users, by means of workshops, conferences, trade publications, book contributions etc. Furthermore, all applicants are expected to be willing, if asked, to give advice based on already acquired knowledge.
- An important aspect from the very start of this programme is the handover of the developed (as well as available and relevant) knowledge to the users, such as the departments involved, the regional and local governments and other involved parties.

### 3.2 What can be applied for

The SAR programme is multi-disciplinary and interdisciplinary in nature and comprises six intrinsic themes, which will form the foundation for research programmes. The third round of SAR funding focuses on two practical cases in the North Wing (greater Amsterdam area) and the South Wing of the Randstad. The research will be conducted by a multidisciplinary consortium of 2 to 3 university research groups in the Netherlands; in very rare exceptions, it will be done by one or more public research institutes, such as TNO. Professors and senior university lecturers from the participating university research groups will manage and coordinate the implementation of those research programmes. Subsidies can be requested for research programmes consisting of three projects to which post-doctoral and junior researchers can be assigned and associated materials, up to a total scope of a maximum of 550,000 million euros per application. It is expected that the indirect government funding for research (the first flow of funding) will be used to ensure proper supervision for the researchers appointed to work on the programmes that receive subsidies, as well as a provision for the usual overhead for conducting research. As is customary for NWO programmes, the

contribution from the institutes involved will come in the form of supervision, provision of basic facilities and overhead.

The only costs that can be subsidised are costs that can be attributed directly to the implementation of the research programme and the scientific research being conducted in that context. It is possible to apply for a subsidy to cover the costs of both personnel and materials for the research. The duration of the subsidy and/or the appointment of researchers depends on the category in which the researcher falls. The scope of the requested subsidy, the duration of the appointment and the level of the researcher(s) should be proportionate to the research to be conducted. It is not possible to exceed the budget of a subsidy that has been granted. In all cases, research appointments are at a university or another research institute, not with the NWO. If the researcher is not appointed to a position at the university but at a research institute, the university rates set by the VSNU will be used. NWO will not agree to other rates. In case of doubt, please contact the secretariat prior to submitting a request for subsidy; section 5.1 for more details.

The participating university groups are expected to ensure that the research has a trickle-down effect in study programmes, such as MSc programmes, PhD programmes, post-initial education and in-company training. The costs of these activities do not fall within the scope of the research budget and will have to be covered by the educational earnings from tuition, etc.

### **Subsidy for personnel costs**

The subsidy for personnel costs can be used to pay the costs of project implementation staff. The amounts are in accordance with the contracted agreements that NWO has with the universities. These are lump sums in which salary costs are indexed and the retainer risk has been redeemed.

#### *Post-doctoral researcher*

- A post-doc is a researcher who has recently completed his/her PhD (< 2 years ago), who is at the start of an academic/scientific career.
- The duration of the appointment for a post-doc is a maximum of two years. The amount available is € 128,938 for a full-time appointment for two years.
- A bench fee of € 5,000 for a 2-year period is provided for conference attendance and poster presentations.
- The appointment of a post-doctoral researcher should be motivated in terms of the complexity and difficulty of the research.

#### *Junior researcher*

- This position is for PhD students who have reached a relatively advanced stage of their PhD programme. The amount available for a junior researcher (who has not yet obtained a PhD degree) is a maximum of € 108,889<sup>8</sup> for a period of two years, in a full-time appointment (40 hours a week).

The programme leader may request a combination of post-docs and advanced junior researchers for the implementation of the programme.

### **Subsidy for material costs**

This subsidy can be used to pay the costs of the research. This could include:

---

<sup>8</sup> The amounts listed are based on the tables valid from 01-07-2010 through 30-06-2011. When the funding is awarded, the rates applicable at that time will be used. The subsidies allocated for personnel costs are based on the agreements that NWO has reached with the universities in this matter, in accordance with the NWO-VSNU contract (Table G - items for subsidy allocation).

- The purchase of special equipment and non-durable items required for the research, with the exception of computers;
- Conducting interviews and surveys;
- Purchasing data files;
- Travel, both domestic and international, which is necessary in the framework of the research.

Not all costs will be eligible for compensation:

- The costs of computer use at university computing centres and the costs of laboratory time are not eligible for subsidy;
- Housing, overhead and depreciation costs are not eligible for subsidy;
- The costs of equipment, non-durable items, or administrative or technical assistance, which should be part of the usual facilities at a university or research institute, are similarly not eligible for compensation, unless the supported research requires the use of facilities that clearly exceeds normal use;
- The teaching costs for PhD research assistants in training (OIO) are specifically the responsibility of the institute at which the research is being done.

Other costs that are not covered include:

- Costs incurred to acquire an audit certificate;
- Costs incurred to mediate on behalf of and/or acquire and carry out contract research, including the indirect costs that can be attributed to such;
- Reservations for future costs and/or maintaining reserves.

### 3.3 When can applications be submitted

In order to gauge the interest and structure a sufficient assessment procedure, Letters of Interest (LOI), i.e. preliminary applications, for the third round should be submitted before, but **no later than 8 September 2011 before 12 noon**.

Submitting a Letter of Interest is compulsory! Applicants who do not submit a Letter of Interest will also be excluded from submitting a full application later. In this context, see also section 3.6 and the timeline in section 4.1. Applications cannot be corrected or supplemented after the deadline. The Programme Committee will select a maximum of 2 or 3 LOIs per case study to be eligible to submit a full application. The least likely applications to be accepted will be strongly advised by the Programme Committee *not* to elaborate or expand on their proposal. In this context, particular attention will be given to:

- How applicants respond to the SAR theme for the third round (see section 2.2);
- The originality of the proposals;
- Relevance to society and policy;
- The multi-disciplinary and interuniversity composition of the research consortium;
- Which researchers are in the consortium, including a short CV demonstrating their academic credentials and practical experience in relation to Transit-Oriented Development;
- The *envisaged* link to practice with respect to decentralised public authorities in the indicated study; participation by decentralised public authorities is not necessary at this stage (although the full application must include concrete collaboration with – and therefore commitment by – public sector problem owners in the region);
- Link with current SAR projects;
- General action plan for conducting the case study;
- Submission of successful examples abroad is required
- The possibilities for interaction with other projects and programmes within Connecting Sustainable Cities (VerDuS), or added value with respect to the theme of Connecting Sustainable Cities.

The deadline for submitting completed applications is 14 November 2011.

### 3.4 Drawing up the application

Subsidy applications must be submitted according to the instructions in this brochure; the proposed format should be written in English. Letter of Interest forms for subsidy applications and the accompanying instructions can be downloaded from the NWO website from mid-June 2011:

[http://www.nwo.nl/nwohome.nsf/pages/NWOA\\_794DXJ\\_Eng](http://www.nwo.nl/nwohome.nsf/pages/NWOA_794DXJ_Eng). Electronic submissions should use the Iris system, which can be accessed via the NWO website ([www.iris.nwo.nl](http://www.iris.nwo.nl))

### 3.5 Specific subsidy conditions

In order to be eligible for admission to the procedure, each application has to meet a number of formal requirements, as described below. The NWO Subsidy Approval Regulations also apply.

Applications are first assessed on the basis of the following formula. Only applications that meet these criteria will be processed and enter the selection procedure. An application will not be processed if one or more of the following applies:

- The application form is inaccurate, incomplete or not filled out according to the instructions;
- The application was not submitted by an established researcher on behalf of a consortium of universities;
- The application was not submitted via the Iris system;
- The application was not submitted on time.

In the event that one of the first three oversights occurs, then the applicant will be given the opportunity to correct his/her application within 48 hours. If the application is not corrected within that timeframe, the application will definitely not be taken into consideration.

Finally, please note that the submission of a Letter of Interest is required. Applicants who do not submit a Letter of Interest will also be excluded from submitting a fully developed application at a later stage.

#### Expected research results

The application should lead to one or more excellent scientific publications attributed to the person or persons proposing the research. Besides scientific publications, articles in professional journals, contributions to popular science and documents containing policy recommendations will also be included in the results of the research. In the third round of SAR funding, it is also important for the research to produce the following concrete products: 1. A legend or key that can be applied in practice, 2. A business case, and 3. A governance model for TOD (see page 11). It is important that the results should also benefit the co-financing government ministries (I&M, EL&I), local and regional governments and other possible users, for example by means of study days, workshops or conferences. From the time that the research starts, active exchange will take place with potential knowledge users and policy-makers in national, regional and local government. The scientific programme leader will institute a users' group to facilitate that goal, in consultation with the Programme Committee. Exchange programmes and guest lectures taught by prominent representatives from the practice of policy should also have a place in the programme. It should be noted that this form of knowledge dissemination requires the active involvement from both the policy and the science sectors. The assessment of the proposals will take into account how the knowledge transfer to potential users

is structured in the application. If the application is accepted, the Program Committee will ensure that the activities announced for knowledge transfer actually take place. The dissemination of knowledge is not simply about knowledge generated during the course of the research. The researchers participating in the SAR programme may also be asked for advice on the basis of knowledge they already possess. The teaching component of the programme may take many different forms. This is partly because young scientists (particularly PhD students) gather knowledge and are given training simply by carrying out research. However, it is also important for the research to be integrated into Master's and PhD degree programmes.

### **3.6 Submitting an application**

Applications can only be submitted using the Iris electronic application system. To use the Iris system, you must request an access code on the NWO website: <http://www.iris.nwo.nl>. More information on Iris is available from the NWO website. If you have questions of a technical nature, please contact the Iris service desk. The service desk can be reached Monday through Friday from 11 a.m. to 5 p.m. on telephone number: 0900 – 6964747. This number can only be called from within the Netherlands.

# 4 Assessment procedure

## 4.1 Procedure

The valid applications (see section 3.5) are assessed in an 'open competition', in which a selection of proposals that could be subsidised will be made based on the assessment criteria. The general procedure for proposal submission and assessment is as follows.

In this brochure, the Programme Committee is publishing a *call for tenders*, accompanied by requirements that proposals must meet. In order to explore the market and set up a sufficient assessment procedure in time, potential applicants are required to submit a *Letter of Intent* (see also the timeline in section 6). A Letter of Intent contains information on the problem definition, the case addressed by the application, the policy relevance, the general action plan for research, the international affiliations/alliances, the composition of the consortium, including a short CV for the researchers in the consortium that demonstrates their academic credentials and practical experience. The programme leaders of the least likely applications to be accepted will be strongly advised by the Programme Committee, for the sake of efficiency and good logistics, *not* to elaborate or expand on their proposition. A maximum of 2 or 3 Letters of Intent will be selected per case and asked to develop a full application. Furthermore, particular attention will be given to the degree to which the LOI responds to the SAR theme in the third round (see section 2.2), to the originality of the problem definition, the societal and policy relevance, which researchers are taking part in the consortium (specifically their academic credentials and practical experience), the envisaged link to practice with respect to decentralised public authorities in the indicated study (participation by decentralised public authorities is not necessary at this stage, although the full application must include concrete collaboration with public sector problem owners in the region), the link with current SAR projects, the general action plan for conducting the case study, the international affiliations/alliances, the possibilities for interaction with other projects and programmes within Connecting Sustainable Cities (VerDuS), and/or added value with respect to the theme of Connecting Sustainable Cities.

On the basis of the following criteria, the complete applications will in principle be assessed by an ad-hoc panel of external experts consisting of a range of international members, so all applications should be in English. The panel of experts will compose recommendations that will be sent to the applicant, offering him or her an opportunity to respond and answer any question (the rejoinder). In principle, each expert will assess multiple applications based on the criteria set out in section 4.2, working on an individual basis. No information will be provided as to which external experts will work on which applications. Assessment by external experts is anonymous. Based in part on the applications, the recommendations provided by the panel of external experts, and the rejoinder, the Programme Committee will rank the applications in order of priority and present them to the Supervisory Board. The applications that receive a positive assessment will be ranked based on the criteria set out in section 4.2.

If unforeseen circumstances cause the situation to change, or if there is an extreme number of applications and/or insufficient cooperation, then the procedure will be changed accordingly. The applicants will immediately be notified in writing of any changes.

The Programme Committee, the members of which are not involved in the contents of the applications, may be supplemented with ad-hoc members for this purpose. The Supervisory Board, consisting mainly of representatives from the financing institutions, supervises the implementation of the SAR research programme and makes the formal decision to grant the subsidies.

### Timeline

The *indicative* timeline for the third round of subsidy applications is as follows:

Mid-June 2011	Call for proposals, SAR brochure and Letter of Intent form posted on the website
8 September 2011	Deadline for submitting Letters of Intent
14 November 2011	Submission of fully developed applications
Mid-December 2011	Preliminary assessments and questions from the panel of external experts sent to the applicants for rejoinder
Mid-January 2012	Assessment meeting of the Programme Committee
End of January 2012	Definitive decision by the Supervisory Board regarding the acceptance of applications
Before 15 April 2012	Research starts

## 4.2 Criteria

The applications will be considered on the basis of the following assessment criteria to judge their scientific objectives and absolute quality, relevance to policy and society, and organisational aspects. *All four* of the sets of criteria will be taken into consideration. This means that an applicant with an excellent track record does not constitute sufficient grounds on its own to achieve a good assessment.

### Relevance to society and policy

- Concrete representation of the research in actual practice by setting up a case study in which researchers work with public sector problem owners;
- Connection of the research to strategic policy questions, as described in Chapter 2, and the technical quality criteria described in the introduction;
- The extent to which the research brings a solution to societal and policy issues closer to tangible reality;
- The connection between fundamental and applied research, and the applicability of the intended results;
- Which synergies could be achieved by linking the research to other research within the Connecting Sustainable Cities theme;
- How the research results will be disseminated to the (potential) users in the government ministries (I&M, EL&I), local and regional governments, civil society organisations and/or the business community;
- Concrete prospects for incorporating the new knowledge into education and study programmes (MSc, PhD, post-initial).

**Scientific objective**

- The proposal must fit within the framework of the research as described in this brochure;
- The proposal should connect to knowledge in this field in other countries, and to make use of that knowledge (international connection and anchoring). International cooperation is compulsory;
- The relations the research has to existing programmes in this area (such as Transumo and NGI) and whether or not there is synergy;
- Inter-university cooperation is required;
- The research should contribute to strengthening the knowledge infrastructure;
- There should be multi-disciplinary cooperation within and between sub-projects;
- The integrative nature of the application; there should be good cross-connections between the sub-projects.

**Scientific quality**

- The scientific relevance of the research in theoretical, methodical and descriptive respects;
- The originality of the problem as formulated, contribution to the creation of new theories or research methods;
- Methodological and technical structure, appropriateness of the methods and techniques, availability of any data, clarity and motivation;
- Completeness, coherence and consistency; clear development of the problem, including in relation to the theoretical framework; clear delineation of the proposed research;
- Workability and feasibility of the sub-projects, including work and publication plan;

**Organisation and finance**

- The consortium should consist of two or three research groups from two or more universities, and the leading researchers should have a convincing track record. Universities of applied sciences can also be consortium members;
- There should be commitment from public sector problem owners in the relevant region, demonstrated e.g. by contributing 'in kind' to the research and showing willingness to provide access to data for the practical research;
- The consortium should have an interdisciplinary composition involving spatial planners with an affinity for mobility and traffic experts with an affinity for spatial planning. Other disciplines, such as e.g. management experts with an affinity for spatial planning, could also be part of the consortium;
- Balanced combination of junior and senior researchers;
- Management of the research programme;
- Organisation of national and international cooperation.

It should also be noted that research in the third round of SAR funding cannot be considered separate from ongoing research in Knowledge for Powerful Cities, ongoing research in the first round of Urban Regions in the Delta, and new research in the second round of Urban Regions in the Delta. Cooperation and integration will be encouraged as needed with regard to product and approach across the regions, as well as internal knowledge exchange and external knowledge dissemination (and in a European context).

The applications that receive a positive assessment will be ranked on the basis of a) the assessment criteria for the application, b) criteria based on policy, and c) the urgency of the issue.

### 4.3 Committee members

The SAR research programme has a Programme Committee, an ad-hoc panel of external experts and a Supervisory Board.

The co-financing ministries of I&M and EL&I are represented on the Programme Committee, which also includes a number of scientists recommended by NWO. If necessary, the Programme Committee can be supplemented by several ad-hoc members during an assessment round. The Programme Committee is responsible for ensuring the coordination and coherence of the programme, assessing the progress and setting the budget of the SAR programme as a whole. The Programme Committee is also responsible for prioritising the proposals based on programmatic and quality criteria. Prioritisation takes place on the basis of the results of the ad-hoc panel of external experts.

The panel of external experts is composed of independent Dutch and international specialists in the field in question; it reports in writing to the Programme Committee.

The Programme Committee is also tasked with promoting the transfer of knowledge to the users, which is an important aspect of the SAR programme. To facilitate this, the Programme Committee can be temporarily supplemented by both researchers and users during the implementation stage of the research.

A Supervisory Board, consisting primarily of representatives from the financing institutions, supervises the implementation of the SAR research programme and uses the Programme Committee's recommendation to take the formal decision to grant the subsidies.

The members of the Programme Committee and the Supervisory Board are nominated by the institutes involved and appointed by NWO. The committee members are listed below. The NWO Code of Conduct regarding conflicts of interest is applicable to all members of the below-named committees.

#### Supervisory Board

- drs. S. Riedstra, Ministry of Infrastructure and the Environment (I&M) (chairman)
- drs. C.P. Buijink, Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
- drs. M. Frequin, Ministry of the Interior and Kingdom Relations/Housing, Communities and Integration (BZK/WWI)
- mr. P.G.A. Noordanus, Grote steden
- prof. dr. P. Hooimeijer, for NWO

Secretariat: NWO Social Sciences

#### Programme Committee

ir. H. Leeflang, Ministry of Infrastructure and the Environment (I&M) (chairman)

##### *Government representatives*

- drs. A.J. van der Burg, Ministry of Infrastructure and the Environment
- mrs dr. O.A.W.T. van de Riet, Knowledge Centre for Mobility Policy (KIM)
- drs. N. van Paridon, Stadsregio Amsterdam
- dr. E.J. Visser, Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
- drs. E. Reiding, Ministry of Infrastructure and the Environment (I&M)

##### *Scientific representatives*

- ir. A.N. Bleijenberg, TNO
- prof. dr. P.P.J. Driessen, Utrecht University
- mrs dr. M.A.J. Kuijpers-Linde, TNO
- prof. dr. H.J. Meurs, Radboud University Nijmegen
- prof. dr. ir. H. Priemus, Delft University of Technology

- prof. dr. E. van de Voorde, University of Antwerp

*Secretariat*

- drs. H.W. Waaijers, policy official at NWO Social Sciences, h.waaijers@nwo.nl, tel: 070 3440913
- J. Brouwer, secretary at NWO Social Sciences, j.brouwer@nwo.nl, tel: 070 3440947

# 5 Other information

## 5.1 Contact

The NWO website has the most recent information on the SAR research programme, [http://www.nwo.nl/nwohome.nsf/pages/NWOA\\_794DXJ\\_Eng](http://www.nwo.nl/nwohome.nsf/pages/NWOA_794DXJ_Eng). If you have questions about the programme, please contact the secretariat (see former page).