Notice of Prior Information Notice (PIN) of research and development requests for smart mobility assignments

MobilitymoveZ.NL 2020-2023

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1. Introduction

MobilitymoveZ.NL started in July 2017. This notice is an update of the notice published then, which was referred to as the Prior Information Notice, or the PIN. Although the ambitions and goals still apply, developments have moved on and the environment has changed. For that reason the decision has been taken to update the original notice and to replace it with this notice.

This document is a general notice for research and development requests (hereafter referred to as R&D). The requests and resulting calls for proposals will be issued via the partners in SmartwayZ.NL during the period 2020-2023.

This document is an English translation for your convenience. In the event of discrepancies, the version in Dutch language shall prevail.

Reading guide
After a short introduction to MobilitymoveZ.NL and the SmartwayZ.NL programme in Chapter 1, we describe what MobilitymoveZ.NL has to offer and what we are looking for in Chapter 2. In Chapter 3 we examine the procedure relating to the publication of R&D requests via SmartwayZ.NL in more detail.

1.1. SMARTWAYZ.NL

SmartwayZ.NL is an innovative mobility programme for the south of The Netherlands. The Ministry of Infrastructure and Water Management, Rijkswaterstaat, the Provinces of Noord-Brabant and Limburg, various municipalities, companies, knowledge institutions and other stakeholders are working together intensively under the SmartwayZ.NL flag in order to create the fastest, safest, smartest and most robust mobility network in The Netherlands. The 2020-2023 implementation plan was adopted in 2020. It clarifies the objectives and how the parties are collaborating. The details are clarified in Annex I.

1.2. MOBILITYMOVEZ.NL

Innovation and collaboration are explicit elements of SmartwayZ.NL. MobilitymoveZ.NL is one of the programme parts which is being used to realise this. During the past three years various attractive and successful innovation projects have been carried out on the basis of public-private partnerships. MobilitymoveZ.NL allows us to test and develop in a real environment with real users. We are working on the building blocks of tomorrow, but are making sure that those building blocks can already be used today. We are gaining an insight into the impact on technology, usage and behaviour, organisation and the contribution to the programme's goals. We are also gaining an insight into the primary processes for the end users (such as road authorities) and the effects on the environment for cyclists, pedestrians, car drivers, freight traffic and the emergency services. We then use all these insights to create a bridge to actual usage and application in all types of area. In this way we are stimulating the knowledge and economic development of companies and knowledge institutions and we are strengthening the business climate in the region. At the same time the public authorities are gaining an insight into the consequences of these developments for the management (asset management) and design of public spaces.

Consequently, the goal of MobilitymoveZ.NL is not so much to carry out (experimental) research into the actual roll-out/application of innovations, but is focused much more on the intervening step, namely verifying the suitability of existing mobility innovations. In this way we can provide building blocks for:

- The mobility system: traffic management, infrastructure and digitalisation, vehicles (automated driving) and the communication between these (connected).

- Users: emergency services, public transport, cyclists, pedestrians and passenger and goods transport.
- The development of asset management and the consequences for the design of public spaces (such as future infrastructure).
- The organisational consequences.

The test and development environment is enabling us to stimulate the knowledge and economic evolution of companies, knowledge institutions and the region. In this way we can strengthen the business climate of these organisations in the region. At the same time the public authorities are gaining an insight into the consequences of these developments for the management (asset management) and design of public spaces.

Scope

MobilitymoveZ.NL is facilitating public-private partnerships aimed at innovative issues relating to Cooperative, Connected and Automated Mobility (CCAM) and developments related to CCAM in traffic management, smart logistics, asset management, data and digitalisation, sustainability, propulsion techniques and traffic safety. The primary focus of MobilitymoveZ.NL is therefore not on, for example, Mobility as a Service (MaaS), the employer approach, Reduced Nuisance [Minder Hinder] and influencing behaviour. The attention paid to the behaviour and user side is guaranteed in other parts of SmartwayZ.NL. However, propositions can be submitted within the individual projects which overlap with those themes. In those instances, attempts will be made to cooperate with these clusters. MobilitymoveZ.NL focuses on pre-commercial cooperation in the development and demonstration phase. These are TRLs (Technical Readiness Levels) four to eight. MobilitymoveZ.NL is consequently a test and development environment which extends from Breda to Venlo and from Helmond to Maastricht.

1.3. CONTRIBUTION TO PROGRAMME OBJECTIVES

MobilitymoveZ.NL projects must be in line with the long-term objectives of SmartwayZ.NL. Those carrying out the project must demonstrate that they are likely (in time) help to achieve these objectives. The objectives are defined as follows:

Domain	Main objective	Sub-objectives
Process	Proper processing	Efficient / Effective / Careful
Accessible	Better accessibility on through routes	Reduce traffic jams on motorways
	Better accessibility of town/region (in the direction of the town)	A properly functioning regional road network / Promote co-modality (car, public transport, bicycle, ...) / Freedom of choice for the traveller / Social inclusion
	Better accessibility in the town	A properly functioning urban mobility network (we are encouraging co-modality between car, public transport, bicycle,...) / Freedom of choice for the traveller
Innovative / competitive	Encourage innovation / strengthen the economy	Strengthen business climate in region / Large-scale use of innovative applications / User acceptance of innovations / International embedding
Liveable/attractive	Improve quality of life in towns/cities	Improve quality of living environment (with regard to public spaces and their usage)
Sustainability	Encourage clean mobility	Reduction in CO2, particulate matter, soot, noise exposure
	Improve traffic safety	Reduction in the number of traffic fatalities and injuries
	Circular economy	Use bio-based materials

Table 1.1: The goals and the strategic long-term agenda of SmartwayZ.NL

2. What MobilitymoveZ.NL offers

2.1. FIVE WAYS TO STIMULATE INNOVATION

MobilitymoveZ.NL wants to encourage and facilitate public-private partnerships relating to innovative mobility concepts. That can be done in a variety of ways[1]:

- **Government influence**
  MobilitymoveZ.NL has the option of making agreements with the public authorities involved about the use of their public law instruments for their social tasks.
- **Government participation**
  MobilitymoveZ.NL can decide to participate in a development as public authorities. Various instruments are available for this.
- **Supply development**
  MobilitymoveZ.NL has direct contacts with financial institutions such as the BOM, LIOF and INVEST.NL and has access to various (European) subsidy programmes. These contacts can be used.
- **Managing capital**
  MobilitymoveZ.NL has the mandate for procurement, support with subsidies, etc., but we can also offer support in terms of (temporary) exceptions, permits, etc.
- **Demand development**
  If innovations turn out to be usable, they can be quickly scaled up and rolled out via the area-based approaches of SmartwayZ.NL, via the Mobility Market project, or via other routes. This will create step-by-step development for the roll-out of innovations in the public environment.

The following paragraphs examine the available roles and instruments in more detail.

2.2. GEOGRAPHIC AND TRAFFIC ENGINEERING CHARACTERISTICS

MobilitymoveZ.NL's work area comprises the provinces of Limburg and Noord-Brabant. The area has the following characteristics:

- **Cities/towns with +100,000 residents**[2]
  The area covers six large municipalities with more than 100,000 residents: Breda (150,520), Maastricht (121,317), 's-Hertogenbosch (143,373), Tilburg (197,020), Eindhoven (231,642) and Venlo (100,335). These towns and cities are open to smart innovations. For example, the municipality of Breda has installed intelligent traffic light controllers (iTLCsiTLC) on the northern ring road and a traffic management scenario is available for MobilitymoveZ.NL projects, Tilburg is collaborating on a truck platooning showcase and 's-Hertogenbosch is making its TLCs available for the development of a green light app on bicycles.
- **Towns/cities with 50,000-100,000 residents**[2]
  There are nine medium-size municipalities in the south of The Netherlands with 50-100,000 residents. These are Sittard-Geleen (93,319), Helmond (90,603), Oss (90,376), Heerlen (87,189), Meierijstad (79,864), Roosendaal (77,163), Bergen Op Zoom (66,164), Roermond (57,390) and Oosterhout (54,604).
  These towns or cities are also providing space to test innovative concepts. The municipality of

[1] *The strategies shown below are based on international studies. See Annex 2 for further clarification and substantiation.*
[2] Source: https://allecijfers.nl/

Helmond wants to be a smart mobility living lab. It is participating in numerous European projects. There are various iTLCs, a shuttle is being tested and the new Brainport Smart District (BSD) is intended to become the smartest neighbourhood in the world with plenty of space for experiments in a real residential neighbourhood with real residents. Roermond is also collaborating with MobilitymoveZ.NL with a view to bringing its traffic management scenario in-car for the Factory Outlet.

- **Rural area with excellent connections**
  The towns and cities form regional centres in a rural area with many urbanised villages. All the cores are linked via motorways and provincial and local roads, as well as a large number of cycle paths. This means that new concepts can be tested on almost any type of road offering, for example, excellent possibilities for testing route navigation services and traffic management concepts.

- **Distinctive area characteristics**
  The south of The Netherlands has a variety of area types which are typical for Europe as a whole, such as the urban hub, office park and residential neighbourhood. The SmartwayZ.NL implementation plan contains details for each area type of the tasks, opportunities and possible actions (accessibility, quality-of-life and safety tasks). In addition, an area-oriented package of measures is being developed for each region and an assessment made of the possibilities and strengths, the opportunities that exist and the measures that stakeholders want to develop in the region in question. The area types and regional packages of measures facilitate a more specific search for a launching customer for an innovative mobility concept.

- **Insight into socio-economic data and target groups**
  SmartwayZ.NL has a large panel of travellers comprising +6,000 participants. Various municipalities also have their own digital panels. These sources are regularly used to carry out research and this enables us to provide insights into socio-economic data and characteristics of various user groups via municipalities and businesses. The acceptance of the new concepts was measured in a representative market survey involving 2,900 people. One of the conclusions was that 59% are positive about cooperative and autonomous driving and that 39% are open to concepts like MaaS. In addition to this the West-Brabant and SmartwayZ.NL traveller surveys were conducted at the beginning of 2020. These reports can also be used, in consultation, for specific surveys or questionnaires. More information is available in Annex IV.2.

- **Employer approach**
  There are also various employer communities. Various municipalities with employers and employees have now been identified in Brabant and Limburg that could provide a large group of end users for the mobility concepts. More than half of these communities fall directly within the MobilitymoveZ.NL area of application. Information about these communities has been included in Annex II.1.

- **Mobility characteristics**
  Due to the area characteristics of (small) centres in a rural environment, the residents of the south of The Netherlands have traditionally been car oriented and less inclined to use bicycles and public transport. This is reflected in the infrastructure and mobility in the area.
  People commute on a daily basis between residential neighbourhoods and work locations, particularly from the region to the towns and cities and between the towns and cities themselves. The weak demand for public transport outside the towns and cities has led to less supply and, in this respect, that is a growing problem. If no innovations are implemented, this may lead to a lack of transport options in the suburbs and the countryside.

- **Transition to shared mobility**
  A transition to shared mobility is taking place in the south of The Netherlands. The classic image of public transport involving buses and trains is migrating to a system whereby all mobility is accessible to everyone and is frequently used together. This may be a bus or train, but also a shared car or a shared bicycle. Catching a lift with someone or travelling via a flex concept can also be classified as shared mobility.

- **Logistical hotspots**
  A particular characteristic of the south of The Netherlands are the logistical hotspots. Venlo and Tilburg are at the top of both Dutch and European logistics lists. In addition to numerous logistical

companies and facilities in the hubs, there is a significant flow of through transport by road from Rotterdam to the European hinterland (the Ruhrgebiet in Germany and southern Europe). The region has logistical hubs and hotspots in its towns and cities and this has already led to innovative mobility services, such as the tyre pressure gauge on the N279, the truck platooning showcase in Tilburg and various projects whereby the fleet of (large-scale) transport companies are given priority at crossroads. The facilities developed for these services can also be made available for other parties. In the south of The Netherlands we are also seeing more complex deliveries of goods in the towns and cities, accompanied by larger volumes (particularly as a result of e-commerce). This also presents opportunities for innovative concepts.

- **Electric vehicles**
  There are almost 200,000 (plug-in) electric vehicles in The Netherlands. On 1 January 2020 there were 107 thousand registered fully electric vehicles (FEVs) and there are also 91 thousand plug-in hybrid electrical vehicles (PHEVs). The majority of residents in the south of The Netherlands expect electric transport to take off within the next five years and the Provinces of Noord-Brabant and Limburg are going to support this growth.

2.3. TECHNICAL FACILITIES

- **Intelligent traffic lights (iTLCs)**:
  Brabant and Limburg have more than 170 intelligent traffic lights which communicate with the environment via the cloud. This number is going to be further increased in the coming years. The iTLCs are part of the Talking Traffic architecture and communicate using cellular technology. A significant number of iTLCs in Brabant have hybrid functionality and can also communicate via WIFI-P.

- **Operational iTLCs use cases**
  Six standardised use cases are available via the national Talking Traffic system (via several private parties). A number of use cases are being developed in more detail in the south of The Netherlands, including the GLOSA service, public transport priority and priority for cyclists.

- **Traffic data**
  SmartwayZ.NL can also provide a lot of data. The region has access to extensive traffic and transport data from a number of different sources. This concerns real-time and reliable traffic-related data, for example via the NDW, SPaT and MAP-data and static and dynamic parking data (mobility data marketplace).

- **Open Trip Model**
  The Open Trip Model is an open source system for the logistics sector. The model facilitates communication between various types of systems without complicated connections or translations. It is a kind of dictionary for the sharing of logistics data. It provides shippers and transport companies with real-time information from municipalities and road authorities, as well as giving traffic control centres a better insight into (current) logistical movements.

- **Communication technology**
  With regards to communication technologies, the region has an excellent 4G LTE cellular communication network with LTE-V and 5G possibilities. For example there is a 5G field lab in the region that is available for testing a wide range of use cases. A DSRC IEEE 802.11p network is also available on some motorways and local roads. If required, MobilitymoveZ.NL can arrange additional technical (tailor-made) facilities. Examples include (temporary) extra iTLCs, WiFi-P beacons, access to data and additional steps in TLTE-V and 5G facilities.

- **High smartphone usage**
  Smartphone usage in the south of The Netherlands and the rest of the country is high. Approximately 93% of the population had a smartphone in 2019. A smartphone penetration rate of 96% is predicted

for 2024[3]. There is a good mobile network, with almost national coverage for 4G, with 5G being rolled out from 2020 onwards. Work is actively being carried out on 5G use cases in East and West Brabant. Being connected at any time and any place, in a way which is adapted to individual needs, has become a basic requirement and a life without digital connectivity with family, friends, employers, banks, shops, public utilities, tax authorities and hospitality venues is now unimaginable, or even impossible.

2.4. FINANCIAL ARRANGEMENTS

Public funds can be used in a variety of ways. Money is available via MobilitymoveZ.NL which is to be used, in principle, for commissioning R&D assignments. It can also be used for (permitted) state aid or for regular tender processes.
MobilitymoveZ.NL can also help with obtaining (subordinated) loans and subsidies, or with finding good investors. MobilitymoveZ.NL has an extensive network of relevant contacts which can be used. In all cases suitable agreements have to be made, on the basis of a project proposal, concerning public co-financing and the required facilities.

2.5. PERMITS AND EXEMPTIONS

Sometimes (temporary) exemptions or permits under existing regulations are needed during the development process and/or in pilots. MobilitymoveZ.NL can provide support with submitting an application. The process is described in procedures such as the Resolution on the Granting of Exemptions for Exceptional Transport [Besluit Ontheffingsverlening Exceptioneel Vervoer] (BOEV) and the Law Governing the Experimental Use of Self-Driving Vehicles [Experimenteerwet]. The Netherlands Vehicle Authority [Rijksdienst voor het Wegverkeer] (RDW) often has a leading role in this respect and road authorities and other relevant stakeholders have a legal responsibility. They make their own judgements independently. However, MobilitymoveZ.NL can provide support to the applicant party and fulfil a coordinating role.

2.6. ADDITIONAL SUPPORT

MobilitymoveZ.NL can help organise any additional support which might be needed for a pilot, for example in order to change road markings, area knowledge of the road network, knowledge relating to traffic safety, access to specific parking areas, temporary cordons and/or access to certain data.

2.7. REGIONAL AND NATIONAL NETWORKS

SmartwayZ.NL is a close collaboration between public authorities, the private sector and knowledge institutions. There is an excellent official and administrative network at both regional and national level:

- **Administrative commitment**
  The state, provinces, municipalities, businesses and knowledge institutions are represented on the SmartwayZ.NL programme council. There is commitment to the innovation task at administrative level and directors' level and the parties have expressed their commitment to supporting innovations. The lines of communication are short, meaning that action can be taken quickly in the event of discussions.
- **Area-oriented teams**
  A team is active for each region within SmartwayZ.NL that develops and implements packages of

[3] *https://www.statista.com, Smartphone penetration in The Netherlands 2014-2019, S. O'Dea, 9 June 2020.*

measures which are appropriate for the area in question. These teams know where the opportunities are and which public authorities are open to innovations.

- **Knowledge institutions**
  There is regular cooperation with the knowledge institutions in Brabant and Limburg. There are, for example, close contacts with, among others, Eindhoven University of Technology (TU/e), Fontys University of Applied Sciences, Breda University of Applied Sciences (BUas) and SUMMA, as well as with parties such as Automotive.nl and the Automotive Campus in Helmond.

- **Regional coordination of traffic management**
  Within SmartwayZ.NL there is a network of professionals that regularly hold structural consultations about traffic management at tactical, operational and strategic levels. Contacts can quickly be established via them in order to assign innovations relating to traffic management to the right place.

- **Talking Traffic**
  Excellent networks at national level and in the municipalities exist in relation to Talking Traffic. The content-related developments within Talking Traffic are continually being coordinated so that the right contacts can quickly be established.

2.8. COORDINATION AND PRE-COMMERCIAL COOPERATION

Often the perspective of standardisation, large-scale development and interoperability cannot be achieved within a single consortium. We can provide support in this area as well. MobilitymoveZ.NL is able to initiate pre-commercial cooperation for innovation and assessment and coordinate it with various stakeholders in order to create new possibilities. No matter how good the solution is, support can be desirable in terms of additional standards, changing standards for external systems, redefining business processes and other matters which fall outside the scope and influence of the consortium in question. Coordinating pre-commercial cooperation between public and private parties can strengthen the roll-out of the innovation. MobilitymoveZ.NL supplies the requested coordination, moderates and finances specifications (for standardisation) of 'open' interfaces, invests in communal (large-scale) testing facilities and brings together all the elements in the value chain, including public parties.

3. Procedure, process and schedule

3.1. FOR WHOM?

MobilitymoveZ.NL wants to innovate in public-private partnerships. There are four (4) categories of entities that are taking part in this programme:

1) **Public road authorities**
   They have a direct interest in new innovative solutions which have positive effects on improving the tasks which road authorities have to carry out. They have budgets to purchase new innovative solutions and are therefore a very important category in terms of demand generation.

2) **Technology companies**
   They play a role in improving and implementing the facilities which are needed for the role of the new innovations.

3) **Knowledge institutions**
   They have a direct interest in collecting and/or aggregating the new insights into policy or instruments which can be used.

4) **Last but not least: you!**
   The company that dares to submit a proposal to improve smart mobility in The Netherlands and Europe.

3.2. VARIOUS CALLS FOR PROPOSALS

MobilitymoveZ.NL intends to publish several innovation calls during a three-year period. Each call to submit proposals will have its own scope, requirements, objectives and awarding criteria. The public-private innovation is to be designed via two tracks:

Track IAn open call for private initiatives (facilitated but not coordinated by MobilitymoveZ.NL)

MobilitymoveZ.NL wants to facilitate private initiatives. For that reason a general call will first be made to submit private proposals (Open Call for Proposal 2020-1). The call will remain open during the term up to and including 2023. This call will detail the exact procedure, conditions and criteria. The goal of that call is to test and evaluate innovative products and/or systems which have already been (privately) developed in the mobility domain. It may be that (minor) changes are needed to make the already developed innovations usable in practice in the mobility domain and/or (a) change(s) to the existing infrastructure in order to facilitate testing.

Individual companies or consortia will be invited to submit a project proposal. If it is decided that the proposal links up with the objectives of MobilitymoveZ.NL, the required changes will be discussed and a decision will be taken on the basis of consultation as to whether, and if so how, any contribution by MobilitymoveZ.NL should be made. The goal of this process is to enter into a single individual R&D agreement and/or to create an agreements framework within which (financial) resources or facilities can be made available (subsidy, permitted state aid, etc.).

In that case a contract will be drawn up containing suitable and balanced articles which are geared to the proposal. The point of departure for this contract (depending on the type of proposal) are the procurement conditions of the Province of Noord-Brabant, based on the ARVODI 2018 or the ARBIT 2018, supplemented with the annexes which focus on issues such as intellectual property, transfer of background, privacy, security, etc. You can find these standard documents at https:// www.pianoo.nl/nl/regelgeving/voorwaarden .

Track II A call for public-private partnerships aimed at a specific issue (coordinated by MobilitymoveZ.NL)

Mobility consists of various systems and services. Innovations often require cooperation between various systems, processes or business cases. This cannot be initiated by a single public or private party, but instead requires multi-public-private partnerships. In such situations MobilitymoveZ.NL will coordinate pre-commercial cooperation between several private and public stakeholders and, in that way, create the terms and conditions which are needed in order to achieve the desired innovation.
The public authorities that are collaborating within SmartwayZ.NL have the option of issuing a call, via the parties registered with MobilitymoveZ.NL, for an R&D assignment which involves several private and public stakeholders engaging in pre-commercial collaboration. If a gap analysis reveals that there is, indeed, no existing solution for the observed challenge and that cooperation between various elements in the potential value chain is necessary for a successful solution, MobilitymoveZ.NL can take the initiative of starting a dialogue. The goal of this is to achieve a collective R&D agreement.

If basic facilities, or other support facilities, are needed for the realisation of an innovation proposal, these will, in principle, be allocated individually – depending on their nature – by means of the tender procedures which are most suitable for those actions.

Fundamental research remains outside the scope of MobilitymoveZ.NL and the same applies for the roll-out of mature services. However, it is possible for guest projects (for example fundamental research and European projects) to use the facilities which have already been developed within MobilitymoveZ.NL. In the above-mentioned cases specific agreements are made with the guest projects in question.

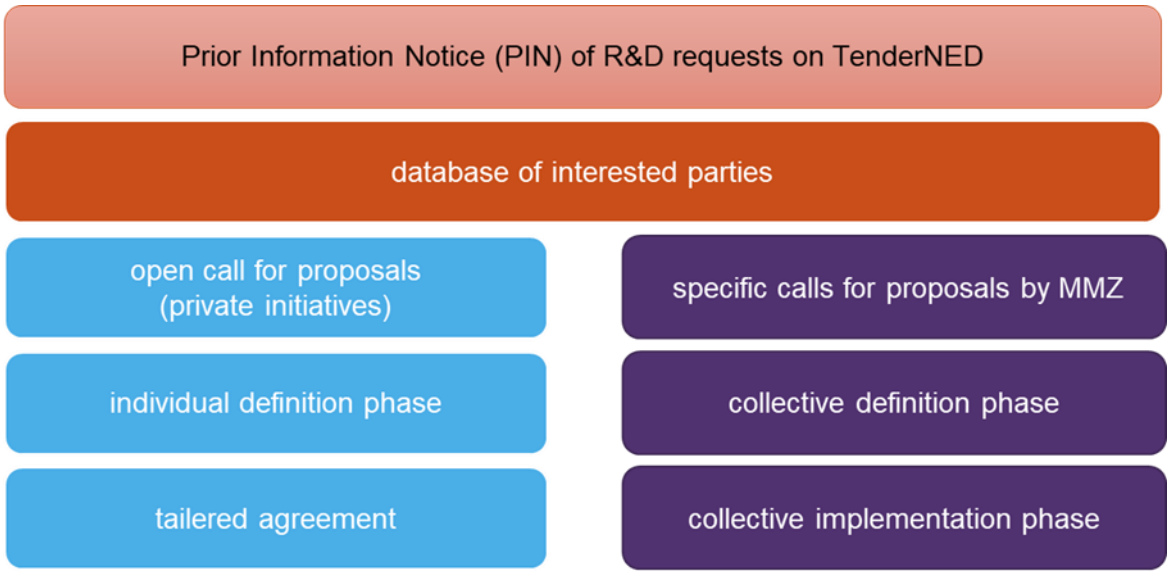


Figure 3.1: MobilitymoveZ.NL procedure and process

3.3. CLARIFICATION OF THE PROCESS

Registration of interested parties for both tracks

Based on this prior information notice (PIN) interested companies are asked to provide details of their interest. Only registered companies are eligible for one or more R&D assignments or contracts. Registration is possible by filling in an online digital registration form via www.MobilitymoveZ.NL. On this

form the company uses CPV codes[4] to state which type of assignments it is interested in. Throughout the duration of MobilitymoveZ.NL newcomers can always register and companies that have already registered can withdraw or amend their registration (for example by adding or cancelling various CPV codes). MobilitymoveZ.NL does not want to exclude parties that offer desirable solutions out of hand. For that reason no suitability requirements are imposed during registration with regard to knowledge, experience, financial clout, equipment, etc.

On the basis of current insights the CPV codes published in this notice are the most suitable for the type of works, services and companies for which MobilitymoveZ.NL expects to issue a call for proposals. The broad scope results partially from the fact that, by definition, the CPV table (with codes for works, supplies and services) lags behind reality (as yet, for example, there is no CPV code for a GLOSA service). If necessary or desirable MobilitymoveZ.NL can add more CPV codes, for example if there is interest among parties involved in completely different services than have now been selected on the basis of CPV codes. The new CPV codes will then be made known by means of an updated notice. Already registered companies will also be informed about this to give them an opportunity to change their registration.

Process for open call for private initiatives

After a company has registered, it will be able to respond to the call for private initiatives. The rules and the procedure have been laid down in the document that describes this call for proposals. The document and the templates to be used are available at www.MobilitymoveZ.NL.

Calls for public-private partnerships aimed at a specific issue

Companies that have expressed their interest will be eligible for one or more R&D assignments. During the next three years MobilitymoveZ.NL will issue several calls for specific issues. Each call will have its own scope, requirements, objectives and awarding criteria. For that reason a specific, tailor-made procedure will be described for each call. Typically, however, the process will be as follows:

The project team uses the database of the interested parties with CPV codes to make an initial selection themselves of the market parties which very probably fulfil the requirements and criteria to be imposed. The team will then send out two mailings by email:

I. The first mailing will be directed at the market parties which MobilitymoveZ.NL believes may fulfil the requirements and criteria. This mailing will contain the following questions:
   a. Are you interested in this call?
   b. Are you prepared to make the necessary investment in terms of time?
   c. Can you confirm that you fulfil the set requirements and criteria?

   The answers to these questions will then be emailed to MobilitymoveZ.NL.

II. The second mailing will be directed at the market parties which MobilitymoveZ.NL believes do not fulfil the set requirements and criteria. MobilitymoveZ.NL will indicate which call is being made and why the party in question is not being invited. Recipients will be asked to respond immediately if they do not agree with the assessment by MobilitymoveZ.NL. They will be asked to send an email with information which shows that they actually do think that they fulfil the set requirements and criteria. If that is indeed the case in accordance with the project team's assessment, the party in question will be sent the call after all.

All the potential candidates will then be informed about the process, content and context of the call in question. If the project team considers it to be necessary, a decision can be taken to publish the call on

[4] The Common Procurement Vocabulary (CPV) is a communal word list provided by the EU which is used to allocate codes to all possible types of public contracts for services, supplies and works.

TenderNed and/or the TED as well. Interested parties will then still be able to express their interest and be invited to take part in the proposal in question.

3.4. FINANCIAL SCOPE

SmartwayZ.NL has reserved approximately 10 million euros for innovation and development in the period up to and including 2023. Of this approximately 3.5 million euros have been reserved for MobilitymoveZ.NL. The expectation is that, in a period of three years, approximately 450,000 euros will be spent on private initiatives and 400,000 euros per year on specific calls for proposals. It is possible that additional resources will be made available for specific calls for proposals via other partners, projects of programmes within SmartwayZ.NL.

3.5. SCHEDULE

From time to time MobilitymoveZ.NL will issue new calls for proposals in the period up to and including 2023. The point of departure is that all proposals and projects will have been completed on 31-12-2023. The open call for proposals will be published as soon as possible after publication of this notice. The first specific call for proposals is expected in the final quarter of 2020. The aim is to publish at least one specific call per year after that.

Annex

Annex I: SmartwayZ.NL

The Dutch economy has been performing well in recent years. The Eindhoven region is performing better than the rest of The Netherlands. Up until the Covid-19 pandemic and the resulting recession, consumers spent more, the shops were busy and the pavement cafés were full, but there were also more cars and trucks on the roads. Good accessibility and traffic flows are essential for the smartest region of The Netherlands, and this will also apply after the pandemic has passed and the economy starts to improve.

I.1 COOPERATION

Public authorities, the private sector and knowledge parties and other stakeholders are working together intensively, under the SmartwayZ.NL flag, to improve traffic flows in the south of The Netherlands and to encourage innovation in this smart region. In short, SmartwayZ.NL is an innovative mobility programme that is working to create the fastest, safest, smartest and most robust mobility network in The Netherlands, based on collaboration with the Ministry of Infrastructure and Water Management, Rijkswaterstaat, the Provinces of Noord-Brabant and Limburg, various municipalities, companies and knowledge institutions. For today's journey and tomorrow's world.

The SmartwayZ.NL mobility programme was started in 2016 (and is going to be operational until 2026). The SmartwayZ.NL work area is the Breda-Venlo corridor (A58, A2, A67), the A2 from Weert to Eindhoven, the N279 from Veghel to Asten and the south-east Brabant area. The ambition of SmartwayZ.NL is to use smart mobility to achieve optimal accessibility and create the smartest road network in Europe. Travellers are the linchpin in a network of mobility systems and the purchasers of smart solutions and services.

I.2 COMBINED FORCES

In 2020 SmartwayZ.NL drew up the 2020-2023 implementation plan together with BrabantStad, as part of the Smart Mobility for the South of The Netherlands Collaboration. The core of this implementation plan can be translated into eight themes:

1. the travelling public is key;
2. accessibility is crucial;
3. there is currently momentum for smart mobility;
4. acceleration of existing implementation agendas;
5. smart mobility as an economic driver;
6. area-oriented;
7. concentration around towns and cities;
8. visible results.

In order to frame these themes, smart mobility has been defined in the implementation plan as the continuous exchange of information between travellers, vehicles and infrastructure via information systems, aimed at both traffic and transport services and on influencing the behaviour of travellers and freight transport operators. As a result not only the available networks will be optimally used, but also the time of the user of the private sector' resources (finances, facilities and capacity).

The SmartwayZ.NL and BrabantStad partners want to use the implementation plan to build on the mobility system of the future. That mobility system will not consist of separate means of transport, mobility services and infrastructural projects. Instead, we are building an integral mobility system in which vehicles, infrastructure and services form a single whole, in conjunction with environmental qualities. Travellers and carriers/shippers are at the centre as the linchpin in this smart mobility system. For them it has to be a natural structure with which they can plan and carry out their journeys in a way that is in line with their wishes and preferences. We are approaching the mobility system on the basis of a 'layer model' and we will consistently assess the results we want to achieve in the coming years in the light of this system. We will determine how smart mobility projects and activities can make a healthy contribution to a sustainable structural strengthening of the mobility system.

This system approach will help us create a cohesive package of measures for each task. Action will be necessary at all four layers of the mobility system in order to ensure that the system works well for users. With this plan we want to connect the knowledge and experience with mobility services and measures (primarily the top layer(s)) more effectively to the changes in the traffic systems and infrastructure. In other words, we are using data and digitalisation, regional traffic management, mobility as a service, connected/cooperative and automated driving, structural changes in behaviour, smart logistics and Reduced Nuisance [Minder Hinder] to obtain and exchange the necessary information and to change the behaviour of travellers in the desired direction and to make it easier for freight transport operators to optimise their routes. These measures become even more effective as soon as they are accompanied by, for example, the right bicycle provisions, transfer opportunities and hubs at the right locations (e.g. construction hubs) and state of the art traffic management systems.

The system approach helps to determine our role.
In the physical **infrastructure** the public authorities will generally take a leading role as owner and manager of railways, waterways and roads. In the case of digital infrastructure (for example digital communication technology) the division of roles between the market and public authorities is based on various models, both in terms of construction and operation.
Traffic services are provided on the instruction of public authorities (for example traffic lights and traffic information signs), but the market parties are not only the suppliers but also frequently the managers and developers of these systems and applications.
At the layer of the **transport services** we find a mix of private vehicles such as the bicycle and the car, as well as public transport provided by public authorities. Car share systems and electric scooters may well be means of transport provided by private operators, but they are still subject to the regulations.
In the layer of **mobility services** we find both market and public services, whereby the allocation of roles is affected primarily by the question of how public authorities can create limiting conditions which enable companies to scale up and create healthy business cases for their services and make it easier for travellers to make clean, sustainable and safe choices when fulfilling their transport needs.

I.3 SMARTWAYZ.NL'S WORKING METHOD

SmartwayZ.NL's working method is based on four principles:

Together

Collaborating and sharing knowledge are entrenched in the DNA of the south of The Netherlands and form the basis for the characteristic open innovation which makes Brainport Eindhoven smart and strong and enables the Brightlands campuses of Limburg to have a cross-border impact. There are, therefore, good reasons why SmartwayZ.NL represents both the public authorities and the business community and knowledge institutions and explicitly seeks to cooperate with similar mobility and accessibility programmes. We are, for example, in contact with BrabantStad, the Brainport National Action Agenda, the South-east Goods Transport Corridor [Goederenvervoercorridor Zuidoost] programme, the Brabant Mobility Network, South Limburg Accessible [Zuid-Limburg Bereikbaar], Roermond Accessible [Roermond bereikbaar], the Trend Portal [Trendsportal], the public transport innovation programme [Vernieuwing OV] and De Verkeersonderneming (a multi-faceted initiative to keep traffic of all kinds moving).

Sustainability

We are keen to achieve our goals in the most sustainable way possible so that our actions link up with the Paris Agreement and government policy. We are also focusing on making a contribution to the circular economy, the energy transition and to the reduction of CO_2. We are also trying to reduce demand for mobility and bring about a shift to more sustainable means of transport and a reduction in environmental impact by encouraging smart and economical behaviour.

Adaptive

We need to be flexible if we are to achieve our goals and our programming has to be adaptive. This is in line with our focus on smart mobility innovations which requires, almost by definition, continuous tweaking. The various SmartwayZ.NL projects are influencing each other in terms of content. We are continuously translating the knowledge acquired within one project to other projects.
We also respond to changes in our environment, such as recent investments by the public authorities at national and provincial level in improving the business climate and promoting new technologies.

Learning by doing

We use the latest technologies and, where necessary, we develop these ourselves, together with the private sector. We dare to experiment and learn from our experiences, but we stay realistic. For example we are gaining experience with social design, a new way of working which places the role and responsibility of the design at the heart of society. In other words, the end user makes an active contribution to the design process. We also evaluate the cooperation with our partners continuously in order to fulfil our goal of working in the most efficient way possible.

I.4 INNOVATION AND DEVELOPMENT

Together with the SmartwayZ.NL Area-oriented Development and Shared Services teams, the Innovation & Development (I&D) team is one of the features of the implementation agenda for the coming years. Together with public authorities, the market, knowledge parties, road authorities and users we are focusing on development and innovation. Together we are working on the ultimate mobility system of the future. In this context, connected and automated transport is here to stay and infrastructure and vehicles will be continually connected with each other. This will enable us to provide better information to travellers, assist them and guide them and direct them so as to create new mobility services with healthy business cases. We are anchoring the knowledge we acquire and products we develop in the shared services (see below) and are applying these in the area-oriented realisation so that we can make the step to deployment.

Within I&D SmartwayZ.NL is therefore supporting companies that want to innovate with smart mobility solutions and develop, test, improve and roll out on a larger scale. This support is being provided at various Technology Readiness Levels (TRLs). See Figure I.2. The Mobility Lab helps start-ups test their

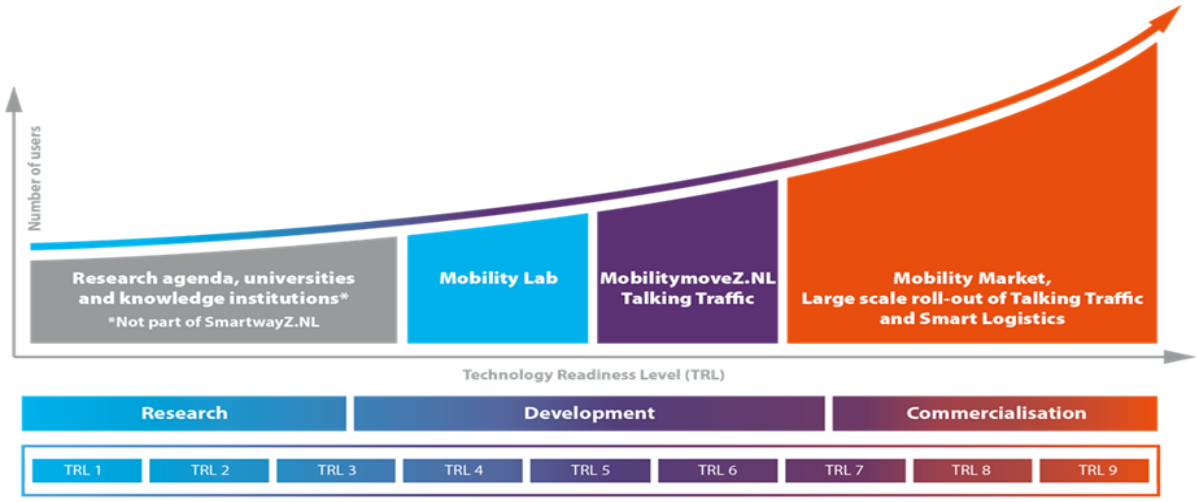


Figure I.2: the various stages of development

prototypes in practice. MobilitymoveZ.NL makes it possible to test new and more highly developed mobility concepts in the real environment and with real users. Mobility Market is a platform via which – already proven – concepts can be scaled up within SmartwayZ.NL (or elsewhere in The Netherlands and Europe). In addition to this the Smart Logistics part offers opportunities for participation in logistics companies. In short: SmartwayZ.NL is building on the integral mobility system of the future.

I.5 THE SMARTWAYZ.NL ORGANISATION

SmartwayZ.NL is managed by a programme council made up of directors from various public authorities, knowledge institutions and the private sector. This council has final responsibility for implementing the entire programme and ensures that SmartwayZ.NL is more than the sum of the various sub-projects.

I.6 MOBILITYMOVEZ.NL

The goal of MobilitymoveZ.NL is to reinforce the cooperation and innovation at TRL levels 5-8 and to make innovations available for the public domain. The scope of MobilitymoveZ.NL is broad. Digitisation and automation are causing major changes and widely available data and communication resources are facilitating technical innovations, including in the field of mobility. This is leading to new forms of connected, cooperative and automated transport. We make a distinction between a number of fields:

- The development of self-driving vehicles is set to continue in the coming years. Industry is investing and developing heavily in this field. Innovations in software, artificial intelligence, sensor technology and consumer electronics are going to play a more and more important role in the automotive industry and are going to progress at a rate we never thought was possible. The trend in society from ownership to usage and the shared economy are creating even more options.

- Possibilities are also arising for data-driven services and processes. The automation of vehicles is producing data which is useful for numerous applications, such as traffic management, traffic safety and asset management. Good communication between the vehicle and other vehicles and the environment is precondition for this. However, this does mean that there is a huge task in terms of the digitalisation of mobility-related data. Data has to be collected, analysed and distributed carefully in order to protect people's safety and privacy.

- Huge strides of also being made in the development of drive systems and technologies. Electric transport in its current form has a number of limitations (such as charging time and range). However, if vehicles become self-driving, many of these limitations will disappear and that will make these vehicles much more interesting from an economic perspective.

- All kinds of new possibilities are emerging for traffic management. Given the available data and means of communication, it is becoming more and more feasible to inform, guide and direct traffic flows at individual level and/or by focusing on a target group in a way which is in line with social objectives.

- New services and processes are being created for asset management and traffic safety. Sensors in vehicles and along the roadside can provide a continuous flow of information about the road's status and usage. For example, issues such as wear and tear, changes in the weather and (potentially) hazardous situations can be identified at an early stage, thereby allowing control measures to be implemented.

- New possibilities are being created to combine services relating to the transport of people and goods and logistical processes can be combined even more effectively and coordinated with traffic-related data.

MobilitymoveZ.NL is open to innovative ideas from the private sector which relate to any of the above-mentioned fields. What is more, MobilitymoveZ.NL reserves the right to publish calls for proposals on behalf of other elements of SmartwayZ.NL which will focus on services and processes in the field of MaaS, employer approach, Reduced Nuisance [Minder Hinder] and influencing behaviour, provided these are connected in some way to the digitalisation and automation of mobility data.

Annex II: successful innovation strategies

The solutions offered by MobilitymoveZ.NL are based on scientific knowledge about innovation. Based on extensive international research, six successful strategies have been identified which public authorities can use to stimulate innovation[5]. Innovation is defined as interventions in a market or the creation of a new market. A market consists of three parts. There is a **supply side** comprising the capital providers, including public authorities, private individuals, foundations, banks, investments and pension funds. Then there is a **demand side** comprising companies, cooperatives, projects and other organisations which need capital. There is also a market in which **exchange** takes place, subject to rules governing the conditions of trade and in which buyers and sellers determine their prices. In order to have an impact, there are three possible routes to take in order to intervene in this cycle:

- supply development: increasing the investment amount (development of provision);
- demand generation: increasing the availability or strengthening the capacity of capital recipients; or
- managing capital: changing the trade conditions, market standards, or prices.

As the following model (Figure II.1) shows, the public authorities can participate directly in each of these three routes (bottom part) or exert indirect influence by means of policy or regulation (top part). The model helps clarify the various instruments and actions of MobilitymoveZ.NL. In the following paragraphs we provide a more detailed clarification of the various roles and actions.

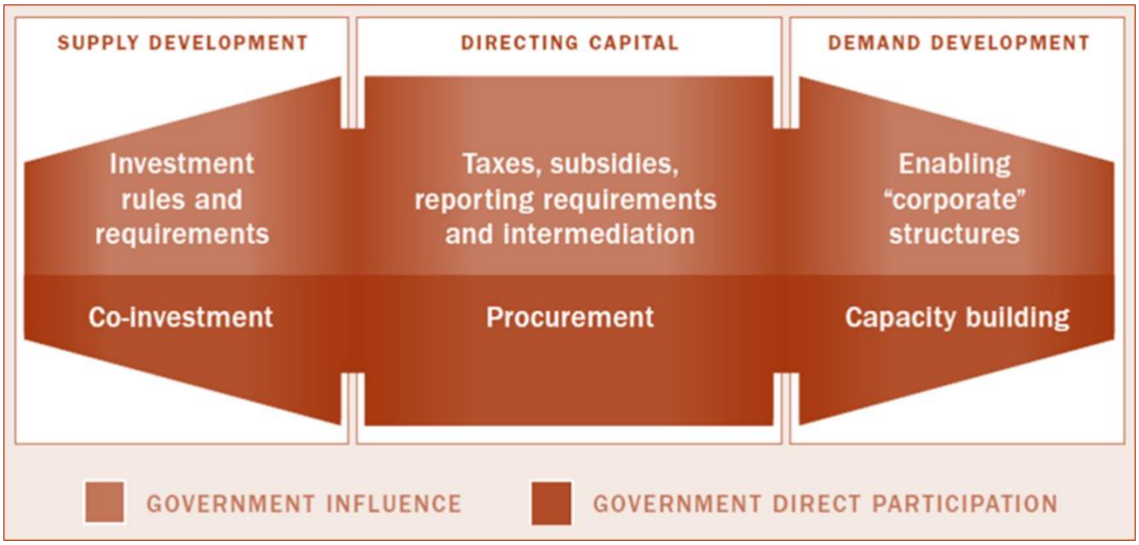


Figure II.1 Six innovation strategies

Translated into practice MobilitymoveZ.NL has the following options based on this framework:

[5] *Source: Impact Investing. A FRAMEWORK FOR POLICY DESIGN AND ANALYSIS. http://www.pacificcommunityventures.org/wp-content/uploads/sites/6/2015/07/Impact_Investing_Policy_Full_Report.pdf*

- **Government influence (1, 2 and 3)**
  MobilitymoveZ.NL has the option of making agreements with the public bodies involved about the use of their public law instruments for their social tasks.

- **Government participation (4, 5 and 6)**
  MobilitymoveZ.NL can decide, together with the public authorities involved, to participate in a development. Various instruments are available for this.

- **Supply development (1 and 4):**
  MobilitymoveZ.NL has direct contacts with financial institutions such as the BOM, LIOF and INVEST.NL and has access to various (European) subsidy programmes. These contacts can be used.

- **Managing capital (2 and 5):**
  MobilitymoveZ.NL has the mandate for procurement, support with subsidies, etc., but we can also offer support in terms of (temporary) exceptions, permits, etc. For example, MobilitymoveZ.NL has direct contact with The Netherlands Vehicle Authority [Rijksdienst voor het Wegverkeer] (RDW) with a view to discussing the conditions under which exemptions and permits are possible when it comes to carry out tests in the public environment.

- **Demand development**
  If innovations turn out to be usable, they can be quickly scaled up and rolled out via the area-based approaches or via the SmartwayZ.NL Mobility Market project. This will create step-by-step development for the roll-out of innovations in the public environment.

Annex III: Characteristics of the south of The Netherlands

The south of The Netherlands includes a number of areas that are typical of Europe as a whole (Figure III.1). The implementation plan describes opportunities and actions for each area type. The following is a short clarification of the area types.

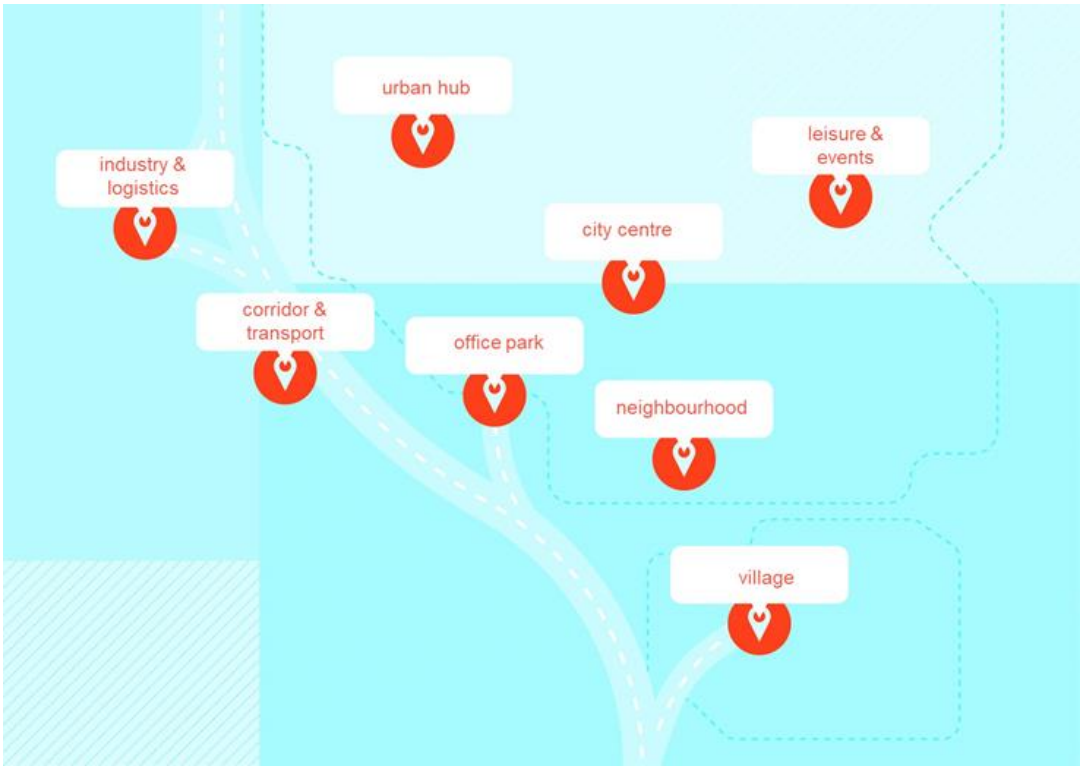


Figure III.1: area types as described in the implementation plan

- **Town or city centre**
  The town or city centre is usually the most historic part of the town that fulfils a central function due to the presence of shops and other social and public facilities. Their density means that a town or city centre generally presents typical mobility challenges.
- **Urban hub**
  The urban hub is a mobility intersection on the edge of the town or city centre. This is where people and goods transfer for the final part of their journey (the 'last mile'). Well-known examples are a public transport hub, a P+R location, a logistics hub or a construction hub. These intersections will start playing an increasingly greater role in terms of keeping the town or city accessible.
- **Neighbourhood**
  A neighbourhood is a core area of a town or city, which is outside the centre. Various functions are united in a neighbourhood, such as residential, working and/or shopping. A neighbourhood can also be a district that primarily has a commuting function.

- **Office park (including a campus, universities and hospitals)**
  An office park is an area of the town or city with a large concentration of companies and commerce. It is an area in which people primarily work and there are few residential properties. Typically these areas are characterised by parking and rush-hour problems.

- **Village**
  A village is a small place where numerous people live together. A village is located in a rural area and is often referred to as a 'small core'. Often, there is limited public transport accessibility and prevalent social themes include limited social inclusion and mobility poverty.

- **Corridor and transport**
  The corridor is the total transport infrastructure for transport from, to and through the region. This includes the motorway network, provincial and local roads and all other transport options.

- **Industry and logistics**
  An industrial area is a zone which is referred to in a spatial planning context as suitable for large companies and industry. A logistical hub is a location where there is a concentration of freight logistics.

- **Leisure and events**
  By this we mean areas and sites which are primarily intended for leisure purposes, or large-scale events in the towns and cities and elsewhere. Events certainly require specific flows of traffic which have to be properly managed.

Annex IV: Employer approach and panel of travellers

IV.1 EMPLOYER APPROACH

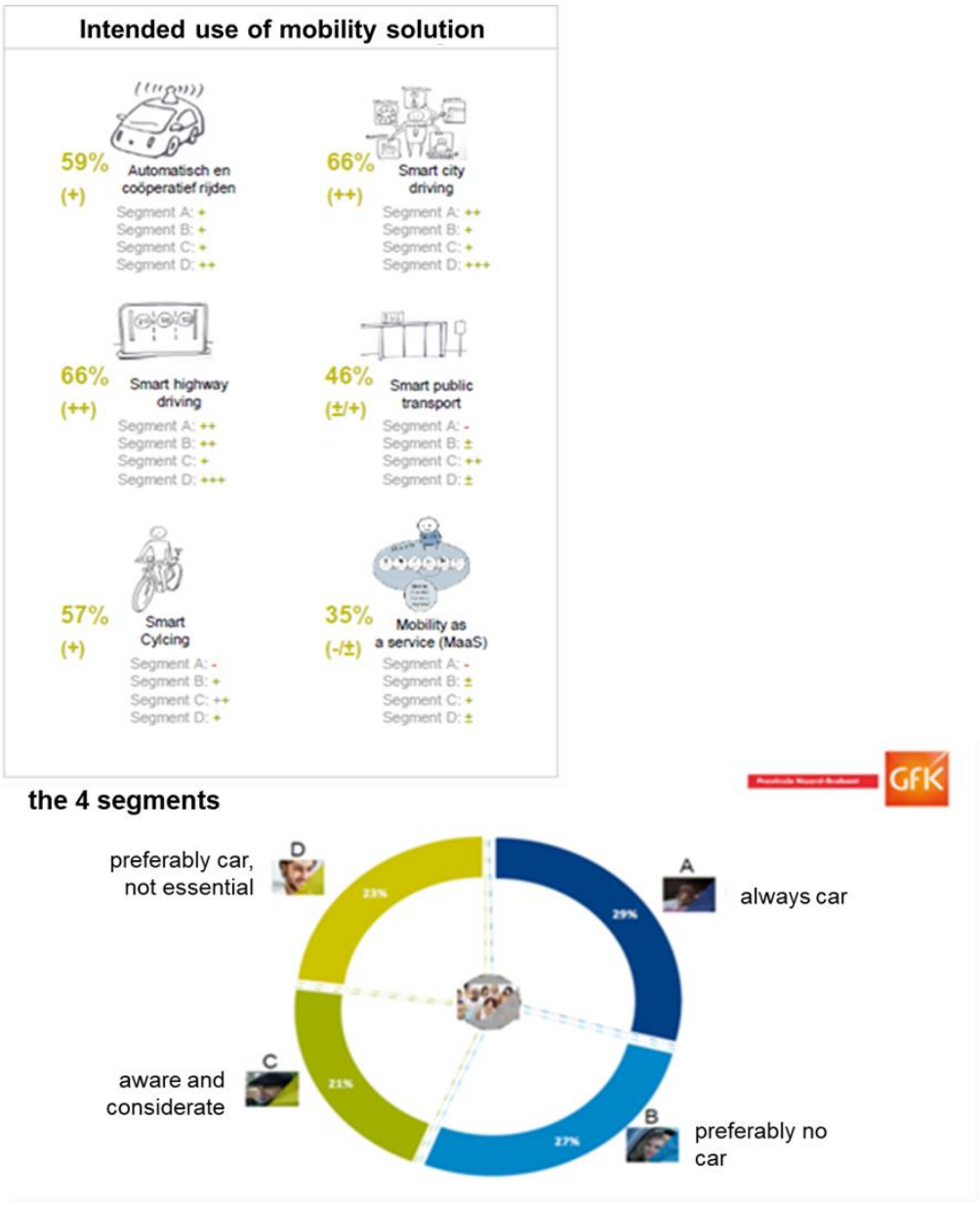
Several communities of employers and employees exist which can provide end users for the mobility concepts. In the province of Noord-Brabant the 'Brabant Mobility Network' has a network of 260 companies divided across 21 municipalities in, for example, Breda, Bommelerwaard (Gld), De Kempen, Eindhoven, Helmond, 's-Hertogenbosch, Heusden, Meierijstad, Rosmalen, Tilburg, Uden, Waalwijk and West-Betuwe (Gld). More information about these communities can be found at: https://brabantmobiliteitsnetwerk.nl/kaart/

Figure IV.1 The mobility networks of Brabant

IV.2 PANEL OF TRAVELLERS AND TRAVELLER SURVEY

In 2017 SmartwayZ.NL had a representative market segmentation survey carried out with approximately 2,900 respondents. The level of acceptance of new concepts by the respondents was measured. One of the conclusions was that 59% of users in the south of The Netherlands are positive about cooperative and autonomous driving and that 39% are open to concepts like MaaS. In the SmartwayZ.NL programme all users are acquired via this classification. A number of characteristics of the GfK market survey are shown below for inspiration purposes.

By 2020 SmartwayZ.NL had its own large panel of +5,000 participants. Recently, SmartwayZ.NL has used this panel to carry out traveller surveys for the A58 between Eindhoven and Breda and for West-Brabant as a whole. The results of these surveys will soon be made public. On the basis of consultation this panel can be approached for participation in tests, issuing questionnaires, etc.
Lastly, various public authorities have their own digital panels which can also be used following consultation. When doing so, the rules relating to the GDPR will, of course, be observed.



Annex V: MobilitymoveZ.NL application form

A digital version of this application form is available and must be submitted via www.MobilitymoveZ.NL.

Company:

Official name:		
Official legal form:		
statutory registration number:		
Official address:	Street + number	
	Postal code	
	City	
	Country	
VAT registration number:		
Name of the authorised contact person for matters pertaining to this application form:		
Telephone number of the contact person:		
Email address of the contact person:		

Name and title of representative(s) signing the APPLICATION FORM on behalf of the Candidate:

Name 1:	
Title 1:	

Name 2:	
Title 2:	

Submitted in response to the call for expression of interest with reference number [XXXX]

The undersigned, acting in his/her own name/acting as [a] duly appointed representative(s) on behalf of [official company name],

certifies that s/he is authorised to sign this APPLICATION FORM on behalf of the Candidate.
S/he further certifies that (double-click on the boxes):
☐ The submission of this application is deemed as acceptance of all the terms and conditions of this Call for Expressions of Interest.
☐ The content of this letter and the APPLICATION FORM are true, accurate and complete.

Our [Official company name] is able to provide research and development services within the scope of the selected CPV codes:

The list of CPV Codes to be selected is available on the digital application form.

[You can select the right CPV codes on the application form. Include all relevant CPV codes within the range listed in the notice. You will not be invited to participate if you have omitted CPV codes that are relevant to a specific research and development project! Listing CPV codes not included in the Call for Expression of Interest might result in exclusion from the list!]

Full name: _____

Signature: _____
_____

City: _____

Date: _____

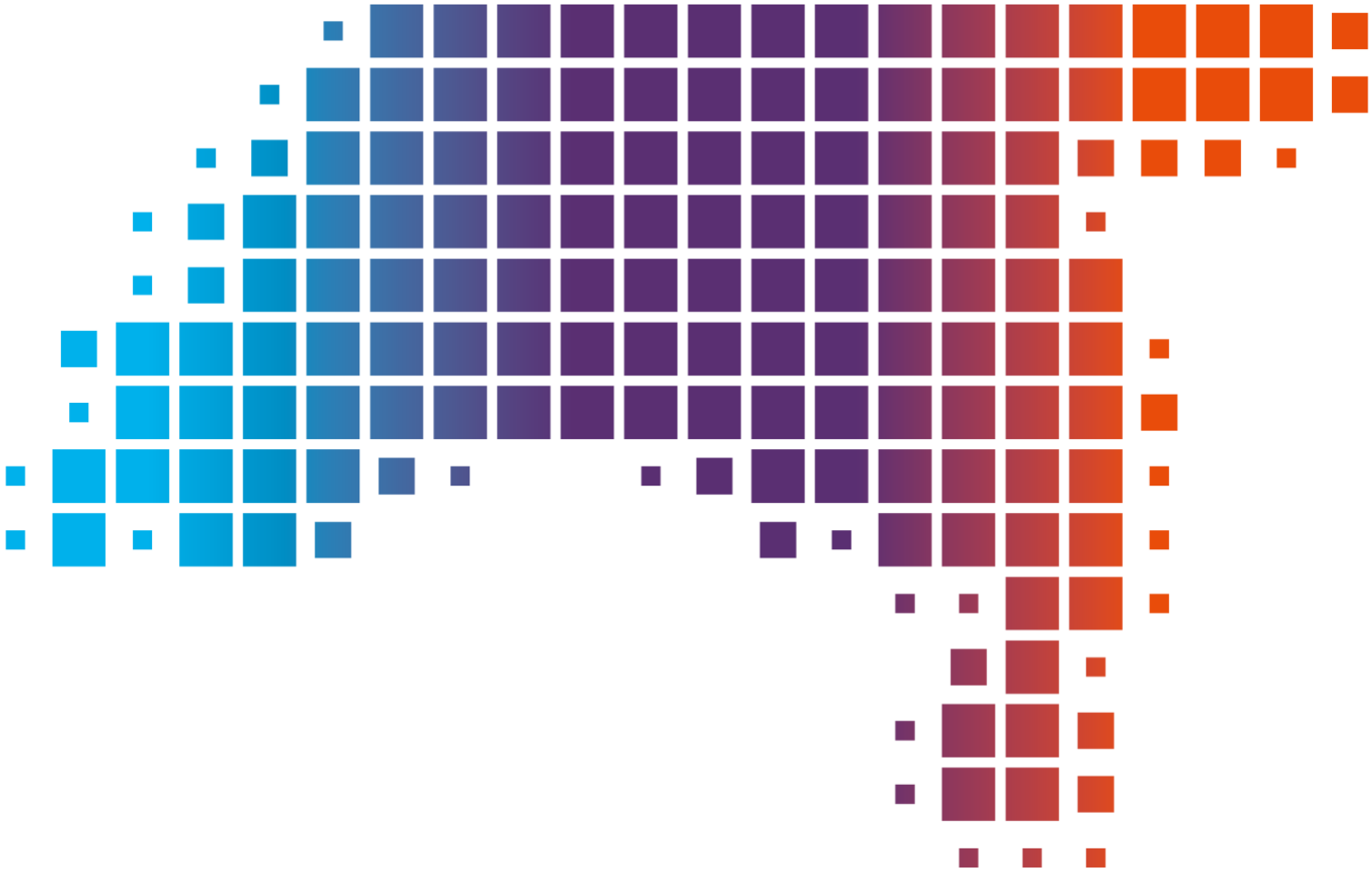
Annex VI: CPV codes

The list of to be selected CPV Codes that are published October 2020. Further information on CPV codes can be found at:

- https://www.pianoo.nl/sites/default/files/documents/documents/eg-verordeningnr2132008.pdf
- http://www.publictendering.com/cpv-codes/list-of-the-cpv-codes/

CPV code	Short Description (ENG)
32400000	Networks.
32500000	Telecommunications equipment and supplies.
34100000	Motor vehicles.
34300000	Parts and accessories for vehicles and their engines.
34900000	Miscellaneous transport equipment and spare parts.
48200000	Networking, Internet and intranet software package.
48300000	Document creation, drawing, imaging, scheduling and productivity software package.
48400000	Business transaction and personal business software package.
48500000	Communication and multimedia software package.
48600000	Database and operating software package.
48700000	Software package utilities.
48800000	Information systems and servers.
48900000	Miscellaneous software package and computer systems.
50100000	Repair, maintenance and associated services of vehicles and related equipment.
50300000	Repair, maintenance and associated services related to personal computers, office equipment, telecommunications and audio-visual equipment.
51100000	Installation services of electrical and mechanical equipment.
51200000	Installation services of equipment for measuring, checking, testing and navigating.
51300000	Installation services of communications equipment.
51900000	Installation services of guidance and control systems.
60100000	Road transport services.
63100000	Cargo handling and storage services.
63700000	Support services for land, water and air transport.

CPV code	Short Description (ENG)
64200000	Telecommunications services.
66500000	Insurance and pension services.
71300000	Engineering services.
71600000	Technical testing, analysis and consultancy services.
72100000	Hardware consultancy services.
72200000	Software programming and consultancy services.
72300000	Data services.
72400000	Internet services.
72500000	Computer-related services.
72600000	Computer support and consultancy services.
72700000	Computer network services.
72800000	Computer audit and testing services.
72900000	Computer back-up and catalogue conversion services.
73100000	Research and experimental development services.
73200000	Research and development consultancy services.
73300000	Design and execution of research and development.
79300000	Market and economic research; polling and statistics.



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