PIN document

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Contents

1. Introduction

1.1. Background

The Netherlands wishes to be, and to remain, a frontrunner in the development and application of innovations in traffic, transport and mobility. In recent years, Dutch government authorities have undertaken numerous initiatives and made numerous investments[1], which will be further intensified in the years to come. A wide range of projects, programs and partnerships have been implemented and executed during every phase of the innovation cycle (R&D, pre-deployment and deployment). Public authorities and private companies (from start-ups and SMEs to global companies) are working together on the development and application of new products and services. These encompass a broad spectrum within Smart Mobility, varying from C-ITS, self-driving transport, Mobility as a Service, zero-emission transport and connectivity to data availability. In terms of innovation, the Netherlands now occupies a high position in the top ten of various global rankings[2]. The MobilitymoveZ.NL initiative is in keeping with the ambition to achieve rapid, concrete results for which there is a pressing social need.

The Province of Noord-Brabant, the Municipalities of Helmond, Eindhoven and Tilburg, the Ministry of Infrastructure and the Environment, and Rijkswaterstaat (division Southern Netherlands) are working together on the development and application of mobility innovations within the context of the Optimizing Use (*Beter Benutten*) program. In addition, they are participating in the Talking Traffic Partnership and the SmartwayZ.NL program[3]. Requisite experience has been accumulated via various projects and programs, in terms of collaboration, content as well as technical/commercial development. Utilizing that experience, these authorities have found cause, as well as possibilities, to take the next steps together with the private sector.

The Netherlands in general, and Brabant more specifically, face quite a challenge. Accessibility, quality of life and road safety in and around cities are under pressure. The infrastructure (road, waterways and railways) is overloaded at peak hours, and the number of traffic accidents increases. This results in increased travel times, reduced air quality, economic loss and pressure on the living and working environment. In the years to come, the strain on cities in the Netherlands (and internationally) is only going to increase further, for several reasons:

- within the European Union, The Netherlands has the highest density in build-up area. environments. The built-up area in the Netherlands has increased with 16% between 1989 and 2008. In 2016, approximately 14% of The Netherlands consisted of built-up area;
- urbanization is also increasing. In 1990, 69% of the Dutch population lived in the city. The figure is currently 83%, and will rise to approximately 87% by 2025, with approximately 90% of the population being expected to live in the city by 2050;
- the size of the population is also growing, partly due to demographic ageing. People are also remaining mobile increasingly later in life, but also form a vulnerable group;
- there is an increasing share of car movements, growing car ownership and greater numbers of crisscross movement and multimodal travelling. The share of public transport is declining in relative terms but remains stable in absolute terms. The share of multimodal chain transfers keeps increasing;
- on average, approximately half of all rush hour car traffic on urban ring roads consists of single use by employees living at a commuting distance of less than 7 kilometers. This group of drivers should definitely have more and better transfer alternatives at their disposal.

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[1] http://itsoverzicht.connectingmobility.nl/
[2] https://www.rolandberger.com/publications/publication_pdf/roland_berger_disruption_radar.pdf
[3] http://www.beterbenutten.nl/assets/upload/files/callforinnovation.pdf

Our mobility system will (have to) change drastically. The demands placed on time and space in urban areas by mobility (and other factors) are already a daily strain, resulting in further pressure on urban accessibility, the economy, quality of life and safety. These problems call for new solutions that respond to altered mobility behavior or that can influence that mobility behavior in a positive sense, making better use of the limited capacity, available time and space. This calls for new products and services that can be scaled up (nationally and internationally), be reproduced elsewhere and will be commercially viable on a long-term basis. The collaborating Dutch authorities in the southern parts of the Netherlands are therefore inviting companies and service providers to test out new products and services in the daily practice of urban life, which – if they prove to be successful – will be immediately considered for large-scale roll-out.

1.2. Ambition of MobilitymoveZ.NL

There are three developments in the automotive industry that – if they come together – will lead to a revolutionarily different situation: a game changer that can make a significant contribution to tackling mobility challenges:

- **connected, cooperative and automated driving**: massive investments and development work is targeted at self-driving vehicles. More than before, developments in the automotive mobility sector are being driven by innovations in the fields of software, Artificial Intelligence, sensor technology and consumer electronics, and are moving far more rapidly than we were previously used to;

- **mobility as a service (MaaS), car sharing and ride hailing**: we are seeing the inception of on-demand services in all areas: they are common practice and are in line with the needs of modern society. MaaS offers transport tailored to individual demand as and when needed. The same applies to smart logistics in relation to transport of goods. Car & ride sharing services result in more efficient use of relatively expensive mobility resources;

- **electric driving**: although electric transport offers major advantages, in its present form it also has limitations that impede large-scale roll-out. Examples include the long charging time and the restricted range, which may result in the car coming to a standstill at a location that lacks recharging options. Fully self-driving vehicles do not experience these drawbacks, making electric driving and thus sustainable mobility much more interesting.

The ambition in MobilitymoveZ.NL is to pre-deploy new mobility concepts for personal and goods transport in real urban life, bringing these developments together: mobility concepts based on 'level 4 autonomous driving' in the urban area, including on-demand services and sustainable (electric) power to the greatest extent possible. Collaboration is sought with interested and capable private partners to this end.

Private enterprises will be given the opportunity to test, monitor and continually improve scalable and reproducible mobility services on the roads in real-life situations. This takes place in a pre-deployment setting: a large-scale pilot environment with real users in substantial numbers; companies as well as public authorities will gain insight into the preconditions required for large-scale roll-out (technology, legislation and regulations, business rules, etc.). All relevant stakeholders (employers, leasing companies, lessors, road managers, traffic managers and spatial planners) can gain practical experience of the concepts tested, and can assess and value them.

1.3. Objectives of MobilitymoveZ.NL

To achieve this ambition, MobilitymoveZ.NL has set the following two objectives:

- **the social objective:**
  To test innovative mobility concepts that, once scaled up, can contribute to the improvement

of the quality of life, traffic safety and accessibility of the city and region (the economic top locations);

- **the economic objective:**
  To accelerate innovation in the field of smart mobility, thereby substantially strengthening the current international financial and economic frontrunner position of the region and businesses in the region.

To achieve these objectives, we are seeking and promoting intensive, long-term collaboration between public authorities, private enterprise and knowledge institutions. Both of these key objectives have been detailed into a set of underlying objectives, which are included as Annex 1 to this document.

1.4. MobilitymoveZ.NL in conjunction with other projects

MobilitymoveZ.NL is initially a pre-deployment environment that is also used for other projects and programs. One of the most important related programs is SmartwayZ.NL, in which the Ministry of Infrastructure and the Environment and the Province of Noord-Brabant will be investing around 1 billion euros together with their partners between 2017 and 2025 in modifications to the physical infrastructure and in the roll-out of new smart mobility concepts in order to improve accessibility in the southern part of the Netherlands. The ambition of SmartwayZ.NL is to serve 50% of passenger transport, 30-40% of regional logistics transport and 10-20% of international logistics transport with innovative mobility concepts, substantially reducing congestion, emissions and road unsafety in the southern part of the Netherlands. The Ministry of Infrastructure and the Environment and the Province of Noord-Brabant jointly have made some 60 million euros available, specifically for upscaling Smart Mobility solutions in the southern part of the Netherlands that prove successful within MobilitymoveZ.NL.

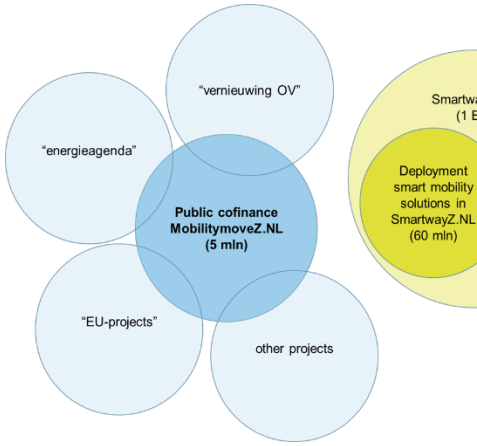


Figure 1.1: MobilitymoveZ.NL in its context

Regional programs such as Reinventing Public Transport (*Vernieuwing Openbaar Vervoer*) and the Energy Agenda are also related. Reinventing Public Transport works for the whole of Noord-Brabant on a transition from classic public transport to new concepts. The Energy Agenda aims to stimulate electric transport in the region. MobilitymoveZ.NL is supported by the Dutch Smart Mobility Embassy in order to achieve alignment between test sites in the Netherlands. In addition, the initiating public authorities are participating in a range of European projects, forging active links where possible in order to maximize investment returns. For example, they cooperate closely with (future) projects such as C-the Difference, C-ITS Corridor and InterCor, Socrates, Concordia (EU CEF) and 5Groningen (5G Telecom project in the Northern Netherlands).

MobilitymoveZ.NL is *the* environment for testing new concepts in a concrete manner before they are rolled out on a commercial basis. It is important to ascertain what works and what does not, what the costs/revenues ratio looks like, where the division of roles between public and private parties requires adjustment, and to know what other conditions are required. Ambitions are high at MobilitymoveZ.NL, but its scale is still relatively small, making the uncertainties manageable. Successful concepts tested on a small scale can be scaled up within the SmartwayZ.NL program and in the rest of the Netherlands and Europe.

2. Why the Netherlands and Brabant?

2.1. Where in Brabant?

The Ministry of Infrastructure and the Environment and the Province of Noord-Brabant have chosen to invest in this development together. MobilitymoveZ.NL was financed by and arose within the Optimizing Use program – the place where new forms of transport and mobility are tested on a small scale, but roll-out then takes place under the auspices of SmartwayZ.NL *and* outside it. The Ministry of Infrastructure and the Environment and the Province of Noord-Brabant are the initiating partners, together with Rijkswaterstaat (division Southern Netherlands) and the municipalities of Helmond, Tilburg and Eindhoven. The Brabant city partners Breda and 's-Hertogenbosch intend to join in the near future. In due course, other public authorities, road managers or organizations within and outside the area of SmartwayZ.NL will also be joining. Talks about this range from exploratory to very advanced. This is how MobilitymoveZ.NL responds to the call from the Administrative Agreement "*Beweging in Brabant (2015-2019)*" for: "*(...) collectively testing, daring to experiment and taking risks, including in the area of smart mobility*. *We view Brabant as a single, large, living laboratory: a testing and development environment where reinvention and innovation are the standard. Brabant as a creative testing ground for the rest of the Netherlands, Europe and the world.*"

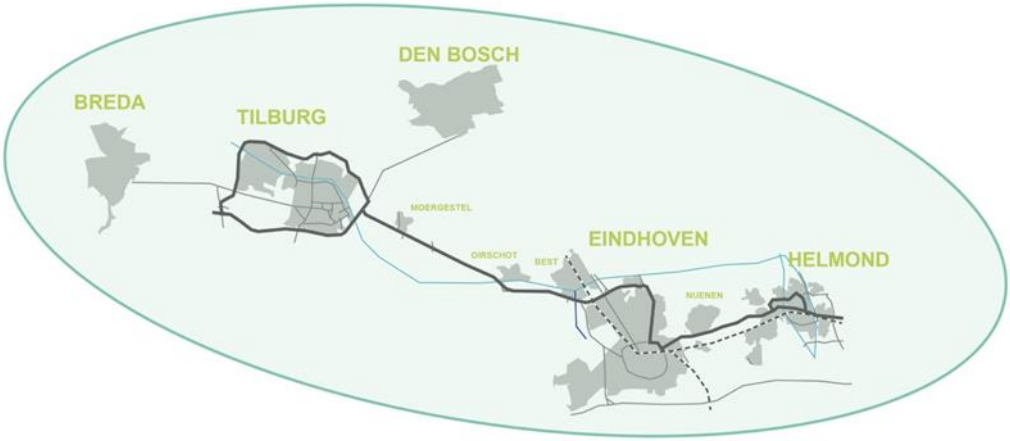


Figure 2.1: geographic scope at inception of MobilitymoveZ.NL

2.2. Why a pre-deployment environment in Brabant?

There are various reasons for market participants to choose Brabant:

- cities and periphery: Brabant (and specifically the Tilburg, Eindhoven and Helmond region) has cities with around 100,000 to 225,000 residents and a periphery with small centers in a rural setting;
- strongly focused on cars: in Brabant, people are traditionally car-oriented and less inclined to use the bicycle and public transport. This is reflected in the layout of the infrastructure in Brabant's cities. Daily commuting takes place between residential areas and work locations, particularly from the region to the cities and between the cities. The lower demand for public transport outside the cities results in less supply; there is a growing financial problem in this respect. If no innovations are made, this may lead to poor transportation in the urban districts and the rural area;
- key (through) flows of goods: The southern parts of the Netherlands includes key logistics hotspots in the Netherlands. Venlo and Tilburg top both Dutch and European lists in the field of logistics. Aside from there being numerous logistics companies and facilities in the hubs, there is a major flow of through transport of goods from Rotterdam heading to the hinterland (the Ruhr Area in Germany and southern Europe). The region features logistic hubs and hotspots at the cities. We also see deliveries of goods in the cities becoming more complex and involving larger volumes (e.g. because of e-commerce);

- good mobile communication network: there is a good mobile network in Brabant and the rest of the Netherlands. Smartphone use in the Netherlands stands at well over 90%, with 4G subscriptions having an increasingly large market share and nationwide coverage. Being connected at any time, at any place, in a way that is customized to individual needs, has become a basic requirement: a life without digital connectivity with family, friends, employer, banks, shops, public facilities, taxes and hospitality venues is now unthinkable or even impossible;

- collaborating on innovation: there is a sound consultation structure in place between the various public authorities in Brabant. Existing consultation between local, regional and national levels enables efficient liaison / decision-making where testing new mobility concepts in Brabant's cities and periphery is concerned. In addition, innovation is high on the administrative agenda;

- top location for innovation: highly educated people / knowledge workers live and work in this area. There are also large student populations in the cities studying relevant disciplines. The region includes various knowledge institutions such as the TU/Eindhoven and TNO, as well as the Automotive Campus and automotive industry suppliers. Furthermore, the Traffic Innovation Centre (*Innovatiecentrale*) is located on the Automotive Campus in Helmond. This Centre is an experimental and development area within the South Netherlands traffic centre (Verkeerscentrale Zuid-Nederland). Finally, a great deal of experience has been gained through the execution of various C-ITS projects such as Freilot, Compass4D, Brabant in-car and Shockwave Traffic Jams A58;

- end users identified: currently, in Brabant 13 communities with employers and employees have been identified that can supply a large group of end users for the mobility concepts. More than half of these communities fall directly within the field of application of MobilitymoveZ.NL. Information about these communities is included in Annex 2. The acceptance of new concepts has been gauged using a representative market survey of 2900 people. The mobility consumer is classified into four market segments. Among the conclusions drawn are that 59% of users in the southern parts of the Netherlands are positive about cooperative and autonomous driving and that 39% of them are open to concepts such as MaaS. In the SmartwayZ.NL program, all users are recruited via this classification;

- electric transport: in Noord-Brabant 17.354 (PH)Ev's are registered. Most of the inhabitants expects that electric transport will break through within five years. The province of Noord-Brabant will facilitate this growth;

- technical facilities available: relevant data flows and data distribution facilities have been set up through earlier projects and through the Talking Traffic Partnership. In addition, traffic lights have been enabled with external communication facilities (LTE-telecom and DSRC/IEEE 802.11p) and sections of motorway have also been provided (or are shortly to be provided) with advanced communication facilities where there is a specific need in order to support new mobility concepts.

It is now time to take the next steps. The initiating partners believe in a strategy in which the developments in C-ITS come together with developments in connected & autonomous driving, MaaS, car sharing, ride hailing and electric driving and other mobility concepts: new solutions that are developed and applied in public-private partnership and co-investments.

We believe in experimenting, developing and practicing in the real world, with real people, in order to find out hands-on what works and what does not, needs to be adjusted and/or enhanced and to learn how we can improve and develop further. MobilitymoveZ.NL facilitates and creates the preconditions for accumulating experience together with partners in a controlled and manageable setting, with targeted, effective government support.

As stated, it is possible that other regions will join during the course of the project, which will expand both the number of participants in MobilitymoveZ.NL and its geographic scope. It is also possible that new government policy will be formulated and that legislation and regulations will be amended where

necessary to enable far-reaching experiments and applications. This could make MobilitymoveZ.NL interesting for a broad set of public and private parties during the course of the project. Where relevant and necessary, such modifications to scope will result in an additional notice on TenderNed and the TED, providing new parties with the opportunity to join as well.

3. What is MobilitymoveZ.NL?

Perhaps the key characteristic of MobilitymoveZ.NL is the opportunity it offers to take services in the pre-deployment phase and continue to develop them in real life, among the rest of the traffic, in a large area with regular users and/or test users. This chapter provides further information about what MobilitymoveZ.NL offers to make this possible.

3.1. What does MobilitymoveZ.NL offer?

MobilitymoveZ.NL aims to encourage and support OEMs, IT companies, telecom companies, intermediaries and customer groups to achieve their own goals and ambitions. We do so in an open environment and with companies whose roadmaps align with those of the public authorities, exploring partnerships and seeking mutual gains. The partners can gain experience with other links in the new mobility chain. They learn about the value that can be created in this way, and what dependencies and opportunities can arise in the private value chain. Also, they find out how society and end-users react to the new concepts.

As collaborating authorities, where necessary, we offer exemptions from regulations if it concerns an innovation we are looking for. Together with companies that share our ambition, we try to find the best way to apply these new concepts efficiently on the roads in and around the cities. We do so in a way that the government can also account for, specifically by providing a regulatory framework evolving in parallel, aimed at innovation. Where necessary, we facilitate the installation and availability of facilities, including, for example, advanced mobile communication infrastructure, DSRC facilities, usable and easily accessible relevant data (both regional and national), traffic management measures, and roadside infrastructure to support the mobility concepts if and where necessary. We also ensure that a financing framework is in place, initially to facilitate the pre-deployment of mobility concepts where that proves necessary. We make arrangements aimed at achieving returns on the mutual efforts and investments and to keep the risk profile manageable.

The offer is presented schematically in the figure below:

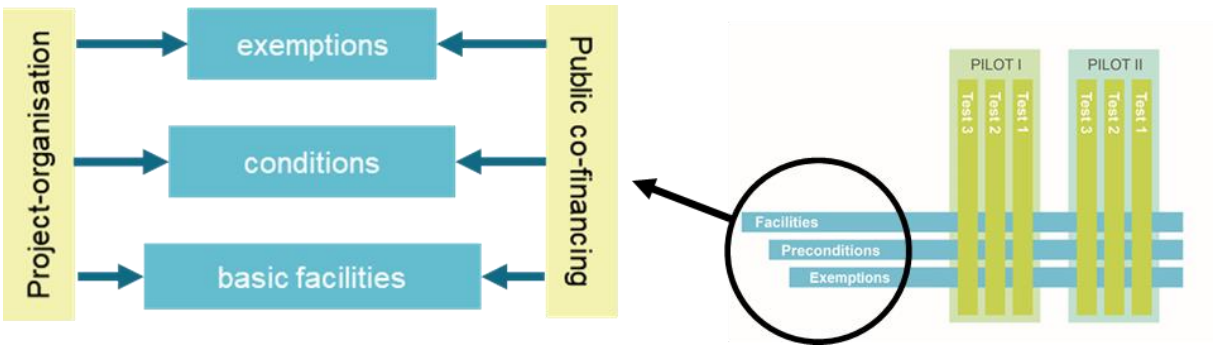


Figure 3.1: Offer from MobilitymoveZ.NL

3.1.1. Basic facilities

There are various basic facilities available in Brabant and specifically in the MobilitymoveZ.NL region (the area encompassing the cities of Tilburg, Eindhoven and Helmond):

- geographic:
    - cities with around 100,000 to 225,000 residents and a periphery with small centers;

- road network with a combination of motorways, provincial roads and municipal roads;
- user groups: insight into socio-economic data and characteristics of various user groups;
- a set of 13 communities with employers and employees, more than half being located in the area of application of MobilitymoveZ.NL (see Annex 2 to this document).

- technical:
  - intelligent traffic lights (iVRI's) that communicate with their surroundings and whose operation is fully SPaT and MAP;
  - large quantities of available traffic and transport data from various sources: current and reliable traffic-related data that can be used at low cost (NDW), SPaT and MAP data (TLEX) and Parking data (static and dynamic via the Marketplace for Mobility Data);
  - six standardized use cases from Talking Traffic, available for use from December 2017 onwards (commercially deployed through several private enterprises);
  - 4G LTE cellular communication network with additional investments in LTE-V and 5G;
  - a DSRC IEEE 802.11p communication network on sections of motorway and city roads.

MobilitymoveZ.NL can provide additional technical facilities if desired, which will be tailored to the actual needs of interested companies, as these become evident from discussions following this prior information notice. Examples include additional iVRI's, additional WiFi-p beacons, access to data, and next steps in telecom LTE-V and 5G facilities, etc.

3.1.2. Additional preconditions

If it turns out that additional preconditions should be provided, this can be discussed. Examples are modifying markings on city roads, making certain car parks accessible, making additional specific public data types available, etc.

3.1.3. Exemptions

MobilitymoveZ.NL facilitates the process of exemptions being granted in relation to existing regulations, which exemptions are required to enable testing of the mobility concepts. On the one hand, this applies to the use of the public road with level 4 self-driving cars. On the other, it entails the possibility for experimentation under existing regulations for the testing of MaaS-related services (scheduling, reservations, bookings and payment). The conditions under which this is possible will be detailed in consultation with the Dutch RWD (Rijks Dienst voor het Wegverkeer, the Netherlands Vehicle Authority), road managers, contracting authorities and other relevant institutions. These institutions have been lined up and organized by the project organization. MobilitymoveZ.NL offers a coordinating and facilitating role; it will function as a single service desk for the underlying/participating authorities for regulations, co-financing and the satisfactory handling of administrative decision making.

3.1.4. Public co-financing

Public investment will become available to facilitate real life pre-deployment. An initial sum of (5) five million euros has been earmarked for enhanced connectivity & data transfer. Based on concrete project proposals, detailed arrangements will be made regarding such matters as public co-financing and the installation of the requisite facilities. As more parties start to participate and the reach increases, the financial support can be increased. In addition, extra public co-financing is possible if the perspective on deployment is clear and related to underlying programs, such as SmartwayZ.NL, Reinventing Public Transport and the Energy Agenda.

3.1.5. Project organization

MobilitymoveZ.NL has a well-organized project team with access to underlying authorities tasked with easing the burden of the market participants:

- a compact, mandated project team, backed by a broad organization of public road managers;
- service desk role: the principal will act as one service desk for legislation and regulations, financing and progress in administrative decision making;
- administrative commitment in the province of North Brabant and from the Ministry of Infrastructure & the Environment (*Subgroup Netwerkprogramma BrabantStad* ("BrabantStad Network Program Steering Group") and SmartwayZ.NL program council). Innovation features high on the political/administrative agenda;
- commitment from Triple Helix partners to, among other things, the BrabantStad network and SmartwayZ.NL program;
- involvement of RDW (the Netherlands Vehicle Authority) in MMZ to speed up applying for exemptions (regulatory framework evolving in parallel, aimed at innovation);
- national public-private partnership in Talking Traffic;
- Traffic Innovation Centre (*Innovatiecentrale*): an experimental and development area within the South Netherlands traffic centre;
- Brabant Development Agency ("BOM"). BOM aims for the sustainable strengthening of the economy of North Brabant. They do so by investing in companies, by attracting foreign companies and by forming collaborative partnerships.

3.1.6. Balanced agreements

The participating government authorities are aware of the need to reach uniform agreements on a great many subjects. The arrangements serve the reciprocal protection of the efforts and investments made.

As far as they are usable and applicable, the set of agreements that were made in the Talking Traffic Partnership will be used. These include, in any event, agreements on the following subjects:

- safety & security;
- data usage;
- privacy;
- application of international standards.

Companies wishing to participate in MobilitymoveZ.NL are cordially invited to join the Talking Traffic Partnership. This obviously depends on the wishes of individual companies, and the extent to which they themselves invest and can further the objectives of the Talking Traffic Partnership.

3.2. For whom is MobilitymoveZ.NL intended?

3.2.1. Target groups on the suppliers' side

The invitations will be aimed at suppliers that are able to quickly initiate substantial developments in the area of autonomy level 4 and higher in, particularly, urban environments. They will preferably also be able to deliver this as part of a broader mobility service in the near future. We particularly have in mind (R&D and innovation departments of) car manufacturers (OEMs). Additionally, we have in mind providers of MaaS services, 1st-tier suppliers, IT companies with a focus on and capabilities for traffic and mobility, lease companies, car rental companies and car importers and/or insurers. These parties,

or combinations of these parties, are expected to play a role in realizing the mobility concepts that are to be tested. They are also expected to be best capable of making operational a fleet of vehicles with the intended level of autonomy. In doing so, they can gain user experience and continue development on that basis.

Regarding the offering additional facilities, such as specific telecom features, we are thinking of participation by suppliers of network services and the telecom operators in the Netherlands. For Wifi-p services, it seems logical to rely on the suppliers of roadside units and/or vehicle equipment. For all transfer of data, we invite data providers and/or platformhosts (vehicle sensor data, location data, tracking & tracing). In relation to electric transport, we invite parties that offer (ICT) services related to smart loading of local energy and combining (booking and paying) of E-parking including loading.

3.2.2. Target groups on the purchasers' side

New mobility concepts are expected to focus on the urban traveler for the last kilometers to the destination. Early adoption focuses on specific areas / corridors / roads/ lanes in (highly) urban areas. Large employers in urban areas, which are in a position to have large groups of employees use the offered mobility concepts in real practical situations, can be the supplier of end-users.

With regard to the mobility concepts aimed at the transport of goods, we aim for the involvement of shippers and transport companies. These companies must be willing to also deploy the concepts in their daily production environments and be able to link them to their existing processes.

One of the challenge at MobilitymoveZ.NL is to make clear the value of the mobility concept for the end-user (who is the end-user, what is the value of the concept to the end-user, how is that value determined, and what reference situation is that value compared to).

3.2.3. Target groups on the public side

With the help of MobilitymoveZ.NL, public road managers want to learn what consequences the implementation of innovative mobility concepts has for them. They want to know what it means for the organization and the set-up of the public space. Also, they want to get a better picture of their future role as road manager and traffic manager. This provides valuable input for the future investment strategy, strategic personnel management, etc.

3.2.4. For whom is MobilitymoveZ.NL not intended?

In order to be able to maintain sufficient pace and focus and manage realistic expectations (partly in relation to the transaction cost), we like to provide clarity regarding the parties that we are expressly **not** looking for in the context of this invitation:

- general advisory and consultancy agencies;
- project management agencies;
- knowledge and advisory agencies in traffic, transport and mobility;
- IT companies with no experience in or knowledge of traffic, transport and/or mobility;
- start-ups that were set up less than one (1) year ago.

Of course, it is possible for the above categories of companies to make their interest known. There is, however, no realistic chance of such companies being invited to a dialogue or to submit a tender within the framework of this prior information notice, unless they act as a partner or subcontractor of the primary target group.

4. Procedure, organization and planning

4.1. Research & Development

MobilitymoveZ.NL focuses on the pre-deployment phase. In keeping with the innovative character, a strategy is chosen in which the collaboration agreements for innovative mobility concepts are made through R&D orders. This involves working in phases towards controllable large-scale field trials (phases 1,2 and 3 in the diagram below). The aim is to be able to perform testing with mobility concepts at TRL level 9 at the end of phase 4, within 4 years. How quickly a concept moves through the different phases depends on the agreements yet to be made with market participants and their possibilities and efforts.

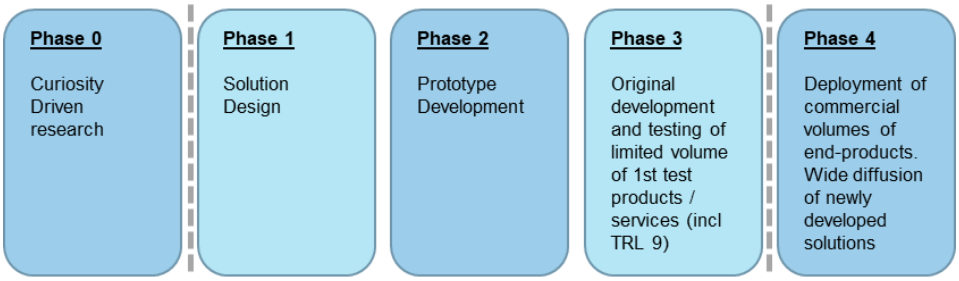


Figure 4.1: overview of a phased development process

Fundamental research falls outside the scope of MobilitymoveZ.NL. The same goes for the ultimate deployment of mature services. The intention is nevertheless for guest projects (for example, fundamental research and European projects) to use the facilities of MobilitymoveZ.NL. However, they fall outside the R&D orders, and MobilitymoveZ.NL will therefore make separate agreements with these guest projects.

Realization of basic facilities or other supporting facilities will, in principle, – depending on their nature – be awarded separately by means of the tendering procedures most suitable for those actions. They are therefore not necessarily part of an R&D assignment, unless the basic facilities or supporting facilities contain a development component.

4.2. Organization, project management and decision-making

MobilitymoveZ.NL is driven by demand. The diagram below shows how the supporting services have been organized. Consortia with mobility concepts that fit MobilitymoveZ.NL's ambitions, goals and approach are central (green blocks). Each consortium's project leader has a regular point of contact with the government (blue circles). This public project leader reports to the public project management team. The rest of the team consists of support staff who see to the provision of basic facilities, resources, exemptions, etc. In this way, they shoulder some of the burden for the consortia. At the request of the participating companies/consortia, a public coordinator can take care of coordination between the various mobility concepts. A public-private council at directors' level will be set up, meeting 1-2 times per year to discuss the progress made. Where necessary, this line can be used for interim escalation.

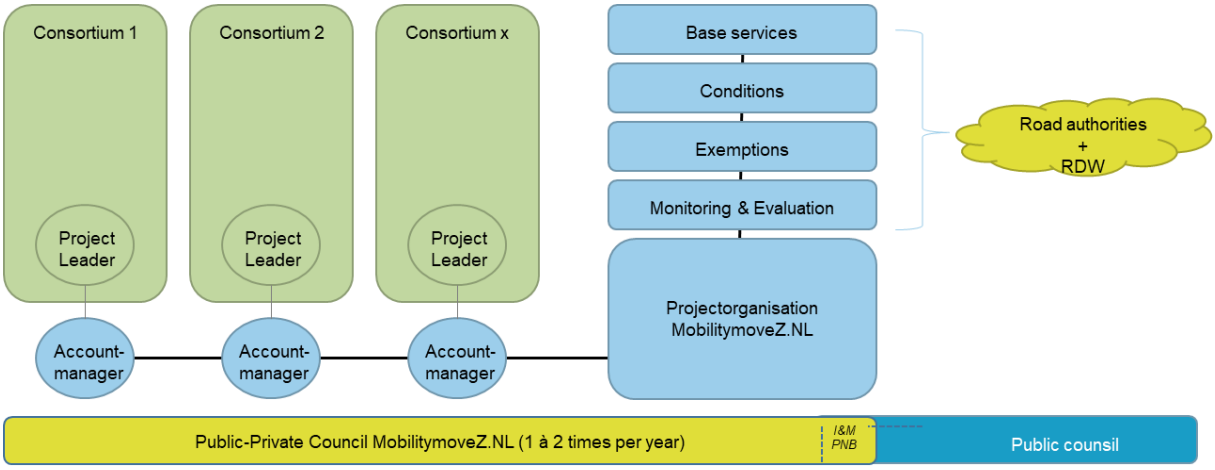


Figure 4.2: organization of MobilitymoveZ.NL

4.3. Planning

The intention is to award several R&D contracts during the coming years. Each R&D contract has its own goal, its own set of agreements and its own planning. Several topics in these agreements will be uniform (for example privacy, security, data use). Synergy will be pursued wherever this is efficient or necessary. Because new R&D orders are awarded periodically and existing consortia can decide to continue or stop after each phase, a flexible basis for entry and exit is created.

The following planning is foreseen for the first initial invitation:

When	**What**
July 2017	Step 1: registration of interest via this prior information notice (PIN) on TED and TenderNed.
Aug-Sep 2017	Step 2: initiating R&D orders: drawing up and putting out invitations to tender
Oct- Nov 2017	Step 3: awarding R&D orders: assessing Plans of Approach and awarding orders
From Dec 2017	Start of phase 1, solution design
From Feb 2018	Start of phase 2: prototype development
From Apr 2018	Start of phase 3: testing prototypes
2x per year	Publish up-to-date scope on TED and TenderNed for the benefit of possible new candidates

Table 4.1: MobilitymoveZ.NL planning

Parties that have expressed their interest following the publication of this PIN (step 1), will (on the basis of submitted CPV codes) be asked to test whether the draft invitations are sufficiently robust to be fulfilled by private enterprise. If possible, this will be done in writing only, but if necessary it will be done in one or several physical meetings. As soon as the invitation is ready, it will normally be put out as a multiple private invitation to all market participants that, on the basis of their registrations of interest, fall within the CPV scope of the tender documents.

4.4. The procedure followed

4.4.1. Legal procedure

For this invitation, the procedure for Research & Development Orders will be used (exception pursuant to Article 2.24 of the Public Procurement Act 2012). R&D orders are, in principle, exempted from the European Procurement Directives. The Dutch “Aanbestedingswet 2012” which has implemented the European Procurement Directives stipulates this in Article 2.24(g), which is quoted:

> *[...]In derogation of Articles 2.1 to 2.6a inclusive, the provisions set by or pursuant to part 2 of this Act do not apply to public service contracts:*
>
> *g. relating to research and development, with the exception of contracts that are covered by the CPV codes referred to in Article 14, opening words, of Directive 2014/24/EU and the results of which are intended exclusively for the contracting authority for their use in the conduct of its own activities, provided that the service is wholly paid for by the contracting authority. [...]*

4.4.2. Organization of the R&D type of tendering

It is foreseen that several R&D orders will be awarded in the coming years. Each of these will have its own dynamics and associated scope. In order to realize a sufficient degree of flexibility, the following organization for this type of tender has been determined as follows:

Step 1 Registration of interest:
Based on a prior information notice with a broad CPV range, the (international) business community is requested to make its interest known in order to be eligible for one or several R&D orders as part of the MobilitymoveZ.NL project in the coming 5 years. This registration of interest creates a database of parties that are interested in participating in the MobilitymoveZ.NL project. They register by email by means of a form in which they have classified their services on the basis of the CPV table 2008 themselves. During the 5-year term, newcomers may register at any time and companies that have already registered may withdraw or adjust their registration (for instance by adding different CPV codes or cancelling CPV codes).

Step 2 dialogues based on draft invitations:
Based on the draft invitations developed by the contracting authorities within MobilitymoveZ.NL, definitive invitations are formulated – always based on a dialogue with market participants from the database (selected using the CPV codes) – and put out to the circle of candidates based on their registration of interest. These definitive invitations must then lead to suitable tenders. The dialogue process assists in fleshing out all types of functional and technical requirements and wishes, as well as in establishing collaboration between market participants and/or combinations.

Step 3 putting out definitive invitations:
The definitive invitations are put out traditionally. At such time, grounds for exclusion, knowledge and experience requirements (suitability requirements, possibly including past performance in innovation projects) and award criteria apply. These will always be focused exclusively on the individual definitive invitations.

4.4.3. Explanation of the process

The choice was made not to set suitability requirements in advance, during the registration of interest (knowledge, experience, financial strength, equipment et cetera). The reason is that MobilitymoveZ.NL wants to achieve innovation. It therefore does not want to exclude, in advance, market participants that may, by themselves or together with (future) partners, be able to offer robust propositions for which there is a need. We do however expressly refer to paragraph 3.2, which describes which types of companies do and do not belong to the target group of this invitation.

In this PIN, MobilitymoveZ.NL has therefore opted to only publish many CPV codes which, given our current insights, are considered most suitable for providing market participants with guidance as to which works, supplies and/or services MobilitymoveZ.NL expects to fall within the scope of the research and development orders that MobilitymoveZ.NL intends to award.

That broad scope follows partly from the fact that, by definition, the CPV table (with codes for works, supplies and services) lags behind reality (for instance, there is no CPV code for MaaS yet). It may turn out in the near future that more CPV codes will need to be added (for example, if there is interest in participation from an entirely unexpected market based on a CPV classification that MobilitymoveZ.NL did not include in the first publication of the PIN). The PIN provides for that possibility; the published CPV codes can be supplemented at all times (supplements to PIN 1 and so forth).

Because no suitability requirements are set at the start of the process (the registration of interest), there is a realistic chance that many companies will put their names down for the registration of interest.

Following the registration of interest, MobilitymoveZ.NL foresees several dialogues, possibly followed up by further invitations. During those steps, more insight will be gained and a better assessment can be made of how to deal with, for example, the suitability requirements.

Dialogue phase
At the time when MobilitymoveZ.NL wishes to start a dialogue, there will be a draft invitation. This will be elaborated in sufficient detail for MobilitymoveZ.NL to also be able to formulate the draft suitability requirements. MobilitymoveZ.NL will put these draft suitability criteria to paper. Next, the project team itself will make a first selection of market participants that are highly likely to meet those draft suitability requirements. It will then send two mailings by email, including the draft invitation.

- The first mailing is addressed to the market participants that MobilitymoveZ.NL believes able to meet these draft suitability criteria. It contains two questions:
  a. are you interested in participating in this dialogue and will you also commit to the time required for it?;
  b. can you confirm that you meet these suitability criteria?
  The answers to these questions are then sent to MobilitymoveZ.NL by email.

- The second mailing is addressed to the market participants that MobilitymoveZ.NL believes to be unable to meet these draft suitability criteria. It informs those market participants that MobilitymoveZ.NL presently believes that they cannot meet the applicable draft suitability requirements. Addressees are requested to respond immediately if MobilitymoveZ.NL has acted erroneously in this matter. They will be asked to send an email with information showing that they do in fact meet the applicable draft suitability requirements. If, according to the assessment of the project team, that is indeed the case, the party in question will also be admitted to the dialogue.

During the dialogue, the contents and scope of the draft invitation will be optimized in collaboration with the market participants. During that process, it may turn out that the suitability criteria must be adapted. In such an event, a new mailing will be sent to all market participants registered at that time, informing them that the suitability criteria have been adapted. Registered market participants that believe they are now eligible to participate in the dialogue are requested to inform us by sending an email with information showing that they do meet the adapted draft suitability requirements. If, according to the assessment of the project team, that is indeed the case, the party in question will also be admitted to the dialogue.

The result of the dialogue phase is an invitation version 1.0, containing the definitive suitability requirements and the award criteria. It is possible that, ultimately, market participants that participated in the dialogue cannot - or at least not without forming an alliance or without subcontracting - meet the suitability criteria of the invitation version 1.0.

Nature of the dialogue
Notwithstanding the above steps and procedure, MobilitymoveZ.NL is very aware of the need to not only comply with the principles of transparency and a level playing field, but also to keep transaction cost and throughput times to a minimum. The dialogue with registered parties will therefore need to be tailored to each individual party, the aim being to have as few large-scale plenary sessions as possible

and to keep the administrative burden at both governments and companies to a minimum. This requires government and companies alike to be alert about throughput times, the burden on agendas, and the level of effort in planning.

Invitation phase
During the invitation phase, only market participants that took part in the dialogue phase will be invited. After all, they invested time and money, are co-responsible for the requirements and wishes that have been formulated, and they have committed themselves to invitation version 1.0.

Annex 1: Further elaboration of MobilitymoveZ.NL's objectives

MobilitymoveZ.NL's key objectives have been fleshed out into a set of underlying objectives. These are reflected below.

Social objectives:

The trial concepts to be implemented in the context of the MobilitymoveZ.NL project should, in the event of a wider rollout, make a positive contribution to the following social objectives;

a. offer people reliable/predictable (stable) door-to-door travel times at competitive cost for end-users and employers;
b. offer predictable, reliable and cost-effective movement of goods;
c. be demonstrably attractive to the user/purchaser of the mobility concept;
d. reduce the number of fatal accidents and accidents resulting in injury;
e. contribute to the reduction of CO2, NOx, particulate matter;
f. reduce the use of space by motor vehicles;
g. reduce the number of vehicle loss hours;
h. improve the living and business climate of the region;
i. improve social inclusion (improved mobility of physically challenged persons and vulnerable groups).
j. reduce public costs of traffic management, concessions (public transport, taxi, target group/Social Support Act transport), infrastructure, as well as increase the cost effectiveness of government finance spent on the former.

Economic objective

Mobility - for example in the form of new mobility concepts - is important to the economy of the Netherlands and North Brabant; good accessibility enhances the business climate in the region and a reduction of emission and traffic accidents reduces public costs. In addition, new mobility concepts can be exported, and these developments can create more - and different types of - jobs. This leads to the economic objective of creating a trend that in due course will lead to the establishment or expansion of businesses and the creation of new jobs.

Transition to sustainable and smart mobility

The trial concepts to be implemented in the context of the MobilitymoveZ.NL project should, in the event of a wider rollout, make a positive contribution to the following transitions:

a. transition from supply-driven to demand-driven mobility services;
b. transition from the traditional division of roles (where the government is contracting authority vis-à-vis the market), towards a collective partnership in which the government acts through frameworks and supervision and allows the business community to play to its strength.

Knowledge development

The trial concepts to be implemented in the context of the MobilitymoveZ.NL project should, in the event of a wider rollout, make a positive contribution to the development of the following fields of knowledge:

a. knowledge on how a different division of tasks, roles and responsibilities between market and governments can be shaped in the best possible way;

b. knowledge with regard to contributions to the other objectives (learn from everything we do in a general sense);

c. what is the impact of level-4 autonomous driving in urban areas on employers, employees, traffic management and traffic safety, automotive manufacturers and service providers, parking operators, required infrastructure and desired spatial planning policy.

Annex 2: Overview of communities

Currently, there are 13 communities with employers and employees in North Brabant that could provide end-users for the mobility concepts:

1. Automotive Campus Helmond;
2. High Tech Campus Eindhoven;
3. Flight Forum Eindhoven;
4. Eindhoven Centre North East;
5. Veldhoven De Run;
6. Tilburg Stappegoor;
7. Tilburg Kraaiven and Vossenberg;
8. Het Paleiskwartier ’s-Hertogenbosch;
9. Pettelaarpark ’s-Hertogenbosch;
10. Inner City of ’s-Hertogenbosch;
11. De Brand ’s-Hertogenbosch;
12. De Herven ’s-Hertogenbosch;
13. Claudius Prinsenlaan Breda.

More information (in Dutch) about these communities can be found at:
http://www.brabantmobiliteitsnetwerk.nl/1084-initiatieven-mobiliteitsnetwerk.html

SmartwayZ.NL had a representative market research carried out with approximately 2,900 respondents. Acceptance of new concepts by the respondents was measured. The mobility consumer is classified into four market segments. Among the conclusions drawn are that 59% of users in the southern parts of the Netherlands are positive about cooperative and autonomous driving and that 39% of them are open to concepts such as MaaS. In the SmartwayZ.NL program, all users are recruited via this classification. A few characteristics from the GfK market research are shown below for information purposes.

Gebruiksintentie mobiliteitsoplossing

59% (+) Automatisch en coöperatief rijden

Segment A: +
Segment B: +
Segment C: +
Segment D: ++

66% (++) Smart city driving

Segment A: ++
Segment B: +
Segment C: +
Segment D: +++

66% (++) Smart highway driving

Segment A: ++
Segment B: ++
Segment C: +
Segment D: +++

46% (±/+) Smart public transport

Segment A: -
Segment B: ±
Segment C: ++
Segment D: ±

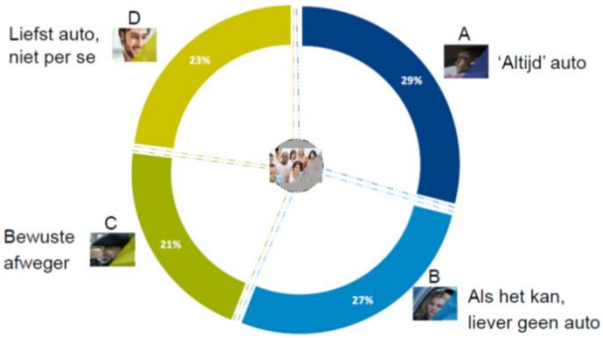
57% (+) Smart Cylcing

Segment A: -
Segment B: +
Segment C: ++
Segment D: +

35% (-/±) Mobility as a service (MaaS)

Segment A: -
Segment B: ±
Segment C: +
Segment D: ±

De 4 segmenten



Annex 3: application form MobilitymoveZ.NL

This application form has also been made available separately for convenience

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 of the contact person:		
E-mail 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 in 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],

certify that I am authorised to sign this APPLICATION FORM on behalf of the Candidate.

I further certify 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 capable to provide research and development services within the scope of the selected CPV codes:

[You can select the right CPV codes by double-clicking on the boxes which you can find on pages 2 and 3. 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 on the list!]

Full name: _____

Signature: _____
_____

City: _____

Date: _____

List of to be selected CPV Codes (Double-click on the boxes to select the relevant CPV-code(s))

Applicability	CPV code	Short Description
☐	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.

☐	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.

Retrievable from: http://www.publictendering.com/cpv-codes/list-of-the-cpv-codes/