



Ministerie van Infrastructuur
en Waterstaat

Road Monitor (ROMO) Market Consultation

Credits

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1 Introduction

1.1 Rationale

This Market Consultation is in preparation of the proposed tender "(ROMO) information for asset management and de-icing." The Ministry of Infrastructure and Water Management (*hereinafter I&W*) attaches great importance to the opinion of market participants and would like to have them actively involved at an early stage before the proposed tendering procedure commences. I&W is therefore inviting market participants to take part in this Market Consultation.

1.2 Background

"Modern cars produce, collect, and share ever increasing quantities of data. At present, European manufacturers provide about 37% of new cars with pre-installed Internet connection. Over this Internet connection, data from the car is transmitted to cloud servers, from which the car is also able to retrieve data. It is expected that by 2023, almost all newly sold cars in the European Union will be connected to the Internet. The growing amount of vehicle data that cars produce and share creates opportunities for many parties; the possibilities include product improvements by car manufacturers, maintenance and repair, and consumer (driver) products and services that are innovative in terms of infotainment, mobility, and beyond. In addition, the exchange of data provides great opportunities in terms of traffic management, traffic information, and incident management, with positive effects on traffic flow, safety, and car traffic emissions¹."

The Ministry of Infrastructure and Water Management [hereinafter: I&W], SmartwayZ.NL, and Rijkswaterstaat have gained experience with this technology over the past year, albeit on a limited scale. Thanks to the successful trials, this development is expected to be a success and will therefore be upscaled nationwide.

ROMO (Road Monitor) involves the use of factory-installed sensors in modern vehicles as a standard feature that can provide new insights into issues that are of importance to road managers, such as asset management and de-icing.

1.3 Policy

In the letter to the House of Representatives "*Smart Mobility in beweging*" ("Smart Mobility in Motion"), I&W contextually outlines the development of and the underlying idea behind this contract;

"The potential of smart mobility has proven itself to be up to these social challenges and has thus long ceased to be a mere hype or thing of the future: road users are better able to anticipate unsafe traffic situations because more information is available to them; emergency services can arrive on site more quickly and with fewer risks involved because they have priority at smart traffic lights; and road managers can target the salting of roadways and road maintenance because they have a better idea of the condition of the asphalt."

¹ Study on the exchange of vehicle data and interfaces, I&W 27 January 2020

Industry also provides an increasing amount of data and information, creating opportunities in terms of governmental processes and new earning models for the private sector. Our approach will allow the Ministry, together with its public partners, to distinguish between public duties and opportunities for market participants. We will upscale nationwide those pilots and projects that prove to be successful at the local level. This is currently being done with a service that provides road managers with information about the condition of the road surface. This service acquires information from smart vehicles. Next year, this service will be available throughout the entire Dutch road network."

1.4

Scope

Asset management by road operators currently involves periodic measurements carried out with the help of complex and costly equipment. A nationwide network of (332) weather stations situated along motorways and provincial roads is used for purposes of winter management (de-icing). Technological developments, such as vehicle sensor data, in particular, also provide us with new ways to measure, among other things, the condition of the road surface.

It should be emphasised that this market consultation is not about the procurement of data, but about the procurement of insight/information that can tell road operators something about the condition of the roads, bridges/tunnels, and other related matters. It should be noted, however, that there will be a need to know how these insights are collected and processed in order to gain trust in this new flow of information. The insights will also be tested by comparing them to the more traditional observation methods.

I&W expects that information from 'new' data sources, such as vehicle data (PVD, FCD), drones, satellites, etc., can provide much added value in addition to the information that road managers currently glean from measurement systems such as the Slippery Conditions Warning System (*Gladheidmeldsysteem*, or GMS), LCMS (Laser Crack Measurement System) and visual inspections. By working closely with the bidder, I&W aims to test, in a process with an expected lifespan of 2 years, whether the expected added value can realistically be achieved and fits in with the operational processes of the road operators.

We believe that the added value can help us achieve the following objectives:

- More frequent and complete overview of road surface conditions;
- Prevention of dangerous traffic situations;
- Acting more quickly when hazardous traffic situations arise;
- Preventing traffic disruption for road users with more systematic Management and Maintenance;
- Better predicting potential traffic flow disruptions.

The bidder will be expected to provide a service that can:

1. Provide road managers with targeted applications/information in the service of the operational processes;
2. Provide coverage for roughly the entire road network;
3. Display the information within a user-friendly application;
4. Fulfil the ambition to spend time with road operators and help them understand how this information is accumulated in order to gain confidence

in the observations without infringing upon the bidders' Intellectual Property (IP);

5. Develop (or co-develop) an API (Application Programming Interface) for the link to the road managers' systems.

In order to gain a clear view of the current state of the market, this market consultation is not directed toward any specific application. The only requirement is that it must be relevant to the operational processes of the road manager. Examples of this include (but are not limited to) the asphalt quality as measured by vehicle sensors, the contrast value of road markings, frequent, dangerous situations due to road design, etc.

Beyond the scope of the project, there will be an evaluation of the entirety thereof after 2 years, including advice and recommendations on the future use of this technology.

1.5

Organisation

Ministry of I&W (facilitator)

I&W is committed to having a safe, accessible, and liveable Netherlands. That is why the Ministry is working on robust road, rail, water, and air connections. And I&W attends to flood protection, air, water, and soil quality, and building a circular economy. The Ministry of Infrastructure and Water Management (I&W) does an enormous amount of work each and every day. Our roads and waterways, dykes and railways need to be maintained, and adjusted or expanded every now and then. Our laws and regulations require maintenance to keep up with social developments.

Rijkswaterstaat (experts)

Rijkswaterstaat is the executive organisation charged with managing and developing national networks in a sustainable manner on the instructions of the Minister and the State Secretary for Infrastructure and Water Management (I&W).

Rijkswaterstaat works to promote the safety and free flow of traffic, a safe, clean, and user-friendly national water system, and to protect our country against flooding. To that end, Rijkswaterstaat manages the national road network (5,695 km), the national waterway network (1,686 km of canals, rivers and 6,165 km of open waterways) and the national water system (65,250 km²).

The National Road Traffic Data Portal (NDW) (procurement)

It takes a lot of effort to keep the continuous flow of mobility data sound and constant. The NDW does this centrally for all road managers. Much of our traffic data is collected by authorities themselves, in the first place for their own use. But more needs to be done to get us where we need to be. The data quality needs to be monitored, the information must be stored quickly and correctly, offered in standardised form, etc. On behalf of the road managers, NDW takes care of the lion's share of those activities. Within ROMO, NDW is the link to other road managers and the main procurer.

2 The Market Consultation procedure

2.1 Procedure

This Market Consultation is structured as follows.

- 1) The Market Consultation will commence upon publication of this document on TenderNed. The questionnaire (see Chapter 4) is intended to provide NDW with an overview of relevant opportunities available on the market.
- 2) Any interested market participant that feels it has a contribution to make to the Market Consultation is requested to respond to the questions in this Market Consultation via the messaging option in TenderNed by the final date and time referred to in section 3.1.1.
- 3) Based on the submitted responses, NDW reserves the right to invite individual participants to comment on their responses verbally in private. Participants' responses should indicate whether they are receptive to this. Interviews will be held on 18 May 2021. NDW will contact these participants no later than 14 May 2021 to schedule an appointment.
- 4) NDW will analyse the responses and interviews and prepare a final report of that analysis. Information that the participants identify as confidential will not be included in the report. This report will be published with the tender documents (description/selection document).

The market consultation will conclude in June 2021.

2.1.1 Schedule

NDW will observe the following schedule:

Activity	Date
Publication of Market Consultation Document	8 April 2021
Deadline for questions about this Market Consultation Document	19 April 2021 noon
Publication of Information Memorandum	29 April 2021
Deadline for submitting completed questionnaires	11 May 2021 noon
Dates for any individual explanatory talks (optional)	18 May 2021
Analysis and completion	4 June 2021

Interested parties cannot derive any rights from the aforementioned schedule. NDW reserves the right to change the schedule. The foregoing schedule is therefore indicative, with the greatest possible care being observed to maintain the schedule.

2.1.2 Questions about the Market Consultation Document

In the interest of transparent and unambiguous communications, market participants will be given the opportunity to submit questions about any ambiguities

in the Market Consultation Document. If participants have questions about the Market Consultation Document, they can submit them via the messaging option in TenderNed up until the "Deadline for questions about the Market Consultation Document" referred to in section 3.1.1. NDW will respond to the market participants' (anonymised) questions in an information notice to be published on TenderNed.

2.1.3 *Submission of questionnaire*

Any interested market participant that feels it has a contribution to make to the Market Consultation is requested to respond to the questions in chapter 4 of this Market Consultation Document via the messaging option in TenderNed by the "Deadline for submitting completed questionnaires" referred to in section 3.1.1.

2.1.4 *Verbal comments on questionnaire*

Based on the submitted responses, NDW reserves the right to invite participants to provide verbal comment on their responses.

Participants' responses should indicate whether they are receptive to this.

NDW will contact these participants and, in consultation, schedule an appointment during the period referred to in section 3.1.1 "Dates for individual interviews (optional)."

2.1.5 *Completion of Market Consultation and feedback on the results*

The Market Consultation will be completed during the period referred to in section 3.1.1. The report on the Market Consultation will be published along with the tender documents on TenderNed. The report will include the most important conclusions of the Market Consultation, in the opinion of the project team. In connection with this report, NDW would like to make market participants expressly aware of the following:

1. The report will be made public. Market participants grant NDW permission to use their responses and other information and/or data provided by them as input for this report.
2. The information included in the report will be anonymised. The report will name the participating market participants.
3. The report will state the NDW's conclusions. The report (and its contents) will not be coordinated in draft with the participating market participants. The report will, however, state that the report reflects the project team's views and that this is not necessarily endorsed by the participating market participants.

2.2 **Confidentiality**

NDW will not disclose the responses submitted and the interview reports in full. NDW will only reveal this information to employees and advisors directly involved in the Market Consultation and/or in the tendering procedure, unless NDW is required to disclose further information under statutory regulations. NDW is, however, entitled to use the information provided for the preparation of the tender documents.

NDW will not include specific references to participants or commercially sensitive information in the tender documents.

2.3 **Other provisions regarding the Market Consultation**

The Market Consultation is not part of the tendering procedure. In order not to put participants in the Market Consultation at an advantage, NDW will disclose the

results of the Market Consultation in the tender documents. In addition, all information shared by NDW during the Market Consultation will be included in the tender documents.

In the tendering procedure, no distinction will be made between parties who did or did not participate in the Market Consultation.

Information in this Market Consultation may differ from information provided later (in the context of a tendering procedure or other acquisition process). No rights can be derived from the information provided in the context of the Market Consultation. The information is indicative and solely intended to improve the quality of the Market Consultation. If this information contradicts the information provided later (in the context of a tendering procedure or other acquisition process), the latter will apply.

NDW will not compensate participants in the Market Consultation.

3 Questions

Questions about interest in the contract

A1	In your opinion, how can you make a better offer by adjusting the desired service?
A2	What could be reasons for you to participate in the tendering procedure or not?

Questions about the content of the contract

B1	1) What applications/information can you provide for the operational processes of road managers? Examples are (not limited to): <i>shoving, skid resistance, road surface temperature, vegetation ingrowth, hard braking due to unsafe road design, etc.</i> 2) At what time intervals and after how much time can you provide measured values (data/information) <i>e.g. once a week / daily/ hourly, delay time 1 day / 1 hour / 1 minute</i> 3) With what precision in terms of location can you provide measured values (data/information) <i>e.g. 0.05 / 6 / 25 / 100 metres in vehicle direction and in transverse direction;</i> 4) To what extent can you indicate various quality parameters including, but not limited to, <i>standard deviation of each measured value, position on the road (which roadway, which lane, in and outside the ruts) of each vehicle or average with a standard deviation of each measured value, etc.</i> What challenges do you anticipate in the above?
B2	To what extent is it possible to adjust the analyses provided by the information if the application in practice gives cause to do so? And are the underlying data available for this?
B3	Which part of the scope (delivery, installation, management and maintenance) of the project can you deliver independently? Do you use third parties (tender in combination or as a subcontractor) for the scope you can deliver?
B4	What data sources/collection methods (e.g. sensors) form the basis for the information you will provide and do you have them at your disposal?
B5	How can the information you provide (such as API) be integrated into information chains? Should a specific interface be used for this purpose?
B6	What information can be provided by the sensors you will be reading out? How detailed is this information?
B7	What does the requested 'user-friendly way of providing information' look like? (see section 1.4)
B8	Can adjustments be made easily after the 'user-friendly way of providing information' has been realised?
B9	What relevant new developments in your product range do you expect during the term of ROMO?
B10	Would it be possible to give a demonstration (at the 2 nd market consultation) of the information you will be providing? Can you indicate how this can be structured?
B11	Could you give an indication of TCO (Total Cost of Ownership) of this service for the purpose of a realistic project estimate.
B12	Can you indicate how you access the data? If personal data are involved, what ground for processing do you apply and how is it regulated (Article 6 of the General Data Protection Regulation Act)? How do you ensure that the privacy of any data generator is protected?
B13	What are the disadvantages and risks of the current description of the desired services as described in the scope?

Questions about effective cooperation

C1	Based on experience, can you describe your ideal principal? What mindset would this ideal principal have?
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C2	Do you have any recommendations on how NDW could structure the tendering & services so as to achieve the best possible collaboration with future suppliers? Is it more likely that you would participate in this tendering procedure as a result?
C3	What is your preferred language for the documentation/correspondence? Dutch or English?
C4	Are you experienced with Tendered and/or Public Request for Quotations?

<i>In conclusion</i>	
F1	Do you have any other ideas, suggestions or comments or do you see any risks or challenges for us with regard to the proposed tendering procedure?
F2	Would you be willing to explain your answers during an interview? If so, please state your contact details for making an appointment.
F3	Could this tendering procedure result in a reduction of CO2 emissions? How can the principal encourage market participants to reduce energy consumption by means of this tendering procedure?