

Market consultation document

In preparation of the proposed tender
'Radar sensors Wadden Sea and Wijk bij Duurstede'

Colophon

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1. Introduction

1.1 Motivation

The objective of this market consultation is to explore the possibilities for the future tender for the replacement of radar systems in two areas of application: the Wadden Sea and the channel connecting Amsterdam with the river Rhine (Amsterdam-Rijnkanaal).

Rijkswaterstaat (RWS) is part of the Dutch Ministry of Infrastructure and Water Management and responsible for the design, construction, management and maintenance of the main infrastructure facilities in the Netherlands. RWS values the opinions of market parties highly important and wants to involve them early and actively before the proposed call for tenders starts. Early market approach is one of the instruments for making optimal use of the knowledge, skills and creativity of the market. For example, together we analyze the task facing RWS and look for the most suitable solution (fit for the future).

On the Wadden islands and along the Amsterdam-Rijnkanaal there are several radar systems which are used for vessel traffic management purposes. The radar systems on the Wadden islands are being used to monitor marine traffic on the Wadden Sea and on the North Sea. The radar systems along the Amsterdam Rijnkanaal are used by the traffic management post in Wijk bij Duurstede. These traffic management posts safeguard and manage shipping traffic in the Wadden area and on the Amsterdam-Rijnkanaal. The radar data from the radar systems on the Wadden islands of Terschelling and Schiermonnikoog is also shared with the Dutch coast guard for executing Search and Rescue (SAR) and law enforcement activities.



The goal of this project is the purchase of several radar systems to replace the current systems which are end-of-life. The expectation is that there will be no functional/software changes to the vessel traffic management systems. The tender for this project will most likely be published in the second half of 2023.

1.2 Aim of the market consultation

RWS has published this Market Consultation Document on TenderNed with the aim of reaching as many market parties as possible, to interest and encourage them to help seek solutions.

With this Market Consultation, RWS aims:

- to gather insight into the feasibility of the project and the conditions under which the tender can be executed;
- to gather input for the purchasing/tender strategy and the contract documents;
- to involve the market in an early stadium of the project in order to make sure our demand aligns with the current market situation;
- to identify which parties are interested and able to take part in the tender;
- to see what the possibilities are with regards to sustainability.

RWS wishes to emphasise that this market consultation is not part of the tendering procedure and that no rights may be derived from this document.

Any insights gained from the market consultation will be used by RWS (wherever relevant) in preparing the tendering procedure and the tendering documents. RWS reserves the right to not (fully) make use of these insights

1.3 Target group of the Market consultation

The primary target group of this Market Consultation is those market parties that have experience with or knowledge of manufacturing and/or supplying radar systems.

1.4 Main outline of the Market Consultation

There are two parts to the market consultation. The first part is a written question-and-answer (Q&A) session. In the second part, RWS will invite participants to verbally explain in-depth questions.

Any interested market party that believes that it can contribute to the market survey, is requested to submit answers to the questions in this market survey in writing (see Chapter 4). In response to the reactions submitted, RWS has the option of inviting the parties to a one-on-one session to provide an additional explanation to their responses.

Chapter 3 describes the method and strategy of the Market Consultation in detail.

1.5 About RWS

RWS is the implementing organization that manages and develops the national infrastructure networks in a sustainable manner on behalf of the Minister and State Secretary for Infrastructure and Water Management (I&W).

RWS is working on the smooth functioning and safe flow of traffic, on a safe, clean and user-oriented national waterway system, and on protecting our country from flooding. To achieve this, RWS manages the national roads network (5,695 km), the national navigable waterways network (1,686 km canals, rivers and 6,165 km of waterways in open water), as well as the national waterway system (65,250 km²).

The RWS Central Information Services (RWS CIV) is one of the national organisational units of RWS. RWS CIV takes care of the collection, management and supply of data, as well as ICT management and development.

More information about RWS and RWS CIV is available on the website www.rijkswaterstaat.nl.

1.6 Policy of RWS

The emphasis of the RWS policy (Market Vision) is 'cooperation with the market'. This means RWS and its supply chain and service partners take joint responsibility for, among other things, managing and extending environmental monitoring systems,

surveillance systems, communication systems and related information systems, in a secure, sustainable and efficient manner.

Along these lines, RWS would like you to join, as a market player, in the investigation the preparation of the tender for the radar systems.

An early approach to the market is one of the tools to make optimal use of market knowledge, skills, and creativity. In this way we will jointly analyze the assignment which RWS is facing, seeking the best solutions, and establishing the most beneficial procurement process and collaboration which is the most suitable.

2. Scope

The tender for this project will cover the delivery of 18 radars. Installation and integration of the radar systems is not part of the scope of the tender.

The radar systems can be divided into three categories:

Category A	Radar systems for the Wadden islands. This entails 4 radar systems, to be placed on the lighthouses on Texel, Terschelling, Ameland and Schiermonnikoog. The radar systems will have to meet the standards for IALA Advanced capability, as defined in Chapter 2 of 'IALA Guideline G1111 'preparation of operational and technical performance requirements for VTS systems'.
	Example of category A, placed on the lighthouse of Ameland:  © Rijkswaterstaat Jeroen Mies
Category B	Radar systems for the Traffic Management post at Wijk bij Duurstede. This entails 9 radar systems, to be placed at and in the vicinity of the Amsterdam Rijnkanaal between Maarssen and Tiel. The radar systems will have to meet the standard for IALA Standard capability, as defined in Chapter 2 of 'IALA Guideline G1111 'preparation of operational and technical performance requirements for VTS systems'.
	Example of category B, located at the Traffic Management post at Wijk bij Duurstede: 

Category C	Radar systems for the Traffic Management post at Wijk bij Duurstede. This entails 5 radars, to be placed at and in the vicinity of the Amsterdam Rijnkanaal between Maarssen and Tiel. The radars have a relatively small reach and are mainly being used as gap-fillers or to monitor traffic in the direct vicinity of a lock. The current radars being used are Sperry Marine BridgeMasters. The future radars will have to have at least the same capabilities as the current radars.
	Example of the category C, at the entrance of the Irene lock: 

Questions in Chapter 4 will relate to all three categories, unless explicitly mentioned otherwise.

3. Procedure of the market consultation

3.1 Procedure

This market consultation will be executed as described within this document.

- 1) The market consultation will be launched with the publication of this document on TenderNed.
- 2) Any interested market party that considers itself able to contribute to the market consultation, is requested to reply to the questions in this market consultation. The replies should be submitted by e-mail to inkoopcentrum-iv@rws.nl to the attention of Siem Doeze Jager before the closing date and time, referred to in paragraph 3.1.1
- 3) RWS retains the option to invite parties to give face-to-face verbal additional explanations to their answers based on the submitted reactions. RWS will contact these parties and will, in consultation with these parties, plan a meeting during the period referred to in paragraph 3.1.1.
- 4) RWS will analyze the input from the written answers and the oral explanations and will publish a final report within which RWS will explain how these results have altered its original ideas and plans for this tender. The report will be published on the TenderNed website.

The market consultation is expected to conclude in the second quarter of 2023.

3.1.1 Timetable

The timetable for this Market consultation is as follows:

Activity	Date
Publication of the Market consultation document	April 17 th 2023
Deadline to pose questions about this Market Consultation Document	May 2 nd 2023
Publication of Summary of Additional Information and Changes	May 10 th 2023
Deadline for submitting completed questionnaire	May 22 nd 2023
Dates for any individual explanatory discussions	May 25 th and 26 th of May 2023
Finalisation and publication of final report	May 31 st 2023

Interested parties cannot derive any rights from the timetable.

RWS reserves the right to alter the timetable. The above timetable is therefore indicative, taking the greatest possible care to comply with the timetable. **De timetable published on TenderNed prevails.**

3.1.2 Questions regarding the Market consultation document

Market parties have the opportunity to pose questions about unclear formulations in the Market Consultation Document with the aim of transparent and unambiguous communication. If the parties have questions about the Market Consultation Document, these can be posed via email at: inkoopcentrum-iv@rws.nl before the "Deadline for posing questions about the Market Consultation Document" mentioned in paragraph 3.1.1 RWS will respond to the (anonymised) questions from market parties in a Summary of Additional Information and Changes published on TenderNed.

3.1.3 Submitting questionnaire

Any interested market party that believes that it can contribute to the Market Consultation is requested to submit responses to the questionnaire in Chapter 4 of this Market Consultation Document in the attached Microsoft Excel reply format by email: inkoopcentrum-iv@rws.nl before the "Deadline for submitting completed questionnaire" referred to in paragraph 3.1.

3.1.5 Oral clarifications of the submitted answers

RWS would like to keep the option open – with reference to the submitted reactions – to invite parties to verbally provide additional clarifications to their answers via a digital meeting. RWS will contact these parties and will, in consultation, schedule half a day during the period as mentioned in section 3.1 "Dates for any individual explanatory discussions".

3.1.6 Finalization of the Market consultation and publication of results

Finalization of the Market Consultation will take place in the period mentioned in paragraph 3.1.1 RWS will finalize the Market Consultation by publicly disclosing a report of the Market Consultation on TenderNed. The report will include, in the opinion of the project team, the main conclusions of the Market Consultation. In connection with this report, RWS explicitly points out the following:

1. The report will be publicly disclosed. Market parties authorize RWS to use their responses and other information and/or data provided by them as input for this report.
2. The information will be included in the report anonymously. The report will, however, mention the participating market parties.
3. The report will contain the conclusions as formulated by RWS. The contents of the report will not be shared in draft with participating market parties. The report will, however, state that it is the representation of the project team and that this is not necessarily endorsed by the participating market parties.

RWS will make it clear in the tender documents how the original ideas and/or questions have been updated or interpreted following the Market Consultation and will include the main conclusions.

3.2 Confidentiality

RWS will not publicly disclose the responses submitted and the discussion reports. RWS will only show this information to employees and consultants directly involved in the Market Consultation and/or in the call for tenders, unless RWS is required to make further disclosures on grounds of statutory regulations. RWS is, however, entitled to use the information provided for the purpose of drawing up the tender documents.

RWS will not include specific references to participants nor commercially sensitive information in the tender documents.

3.3 Other provisions regarding the Market consultation

The Market Consultation does not form part of the call for tenders. In order not to place Market Consultation participants in a privileged position, RWS will publicly disclose the results of the Market Consultation in the tender documents. In addition, all information shared by RWS during the Market Consultation will form part of the tender documents.

In the call for tenders, no distinction is made between parties that have and parties who have not participated in the Market Consultation. Information in this Market Consultation may differ from information that is provided later (in the context of a call for tenders or other procurement procedure). No rights can be derived from the information provided in the context of the Market Consultation. The information is indicative and merely intended to improve the quality of the Market Consultation. If this information is contradictory to information that is provided later (in the context of a call for tenders or other procurement procedure), the latter will prevail.

RWS does not award any compensation to participants of the Market Consultation.

4. Questions

Questions regarding your interest in this tender	
A1	Are you considering participating in the tender, based on the information in this Market Consultation document? Why or why not?
A2	Which aspects of this tender make it interesting for you to participate in the tender?
A3	How could we make this tender more interesting for you?
A4	RWS is considering to split up the tender into smaller lots. Parties will be able to make an offer for one or more of these smaller lots. In your opinion, what would be the ideal composition of lots to improve your willingness and ability to submit an offer? What are your considerations for this answer?
A5	In which capacity would you expect to submit an offer: as an independent party, together with other parties or as a subcontractor?

Questions regarding the contents of the project	
B1	Which information do you need from RWS in order to determine if you can fulfill the requirements?
B2	Which challenges, opportunities and/or risks do you see for this project which RWS should take into account?
B3	Which industry standards with regards to safety and quality are commonly used for comparable projects?
B4	Can you identify features of this project that are in your opinion not attainable or not feasible? (e.g. timeframes, technical features etc.)
B5	Which (technological) developments or products do you think we should take into account for this project?
B6	In your opinion, which improvements can be made in the approach described in this document in order to improve your ability to submit a good offer?
B7	RWS aims to use as much open standards as possible in order to improve interchangeability of systems. In which way can you contribute to this goal?
B8	Can you suggest a list of 5 qualitative aspects through which we can establish the distinctive characteristics of different suppliers?
B9	Do you see any risks with regard to the production of radar systems? Are there any problems with regard to (for example, but not limited to) resources, which can have a negative influence on the delivery times for the radars? In what way can we take this into account in our tender?
B10	Installation and integration of the radar systems into our Shipping Traffic Management system will be performed by a third party. Do you see any challenges or possibilities for just-in-time delivery of radars if we provide you with a detailed schedule of these activities?

Technical questions	
C1	There are several short range radar systems, i.e., category C in Section X along the Amsterdam-Rijnkanaal (Sperry Marine Bridgemaster). These radars have 6 foot antennas. The constructions on which these radars have been installed will not be adapted. It would be preferred to replace these by radar systems based on Solid State technology in order to minimize maintenance. These current radar systems have a minimum detection range of 30 m. Since the systems are located close to the waterway, reducing the minimum detection range will be beneficial. Which possibilities do you see to reduce the minimum detection range and to what extent can it be reduced?
C2	Does your radar system have provisions to minimise degradation of the quality of the maritime surface picture by the presence of large scatterers, such as high rise buildings, bridges, and wind turbines?
C3	RWS has been assigned the frequency range between 9.3 GHz and 9.5 GHz. Can your radar systems deliver the desired IALA Advanced capabilities within this frequency span?

C4	If not, can your radar systems provide the desired capabilities if we expand the frequency range from 9.2 GHz to 9.5 GHz?
C5	Do your radar systems provide plot extraction and tracking functionalities ? This question is only applicable to the IALA Standard and IALA Advanced radars.
C6	RWS would like to separate communication of radar output data and data needed for operation and maintenance purposes. Do your radar systems offer possibilities for data communication in two separate VPN environments?
C7	Do your radars support Simple Network Management Protocol (SNMP)? If so, which versions of SNMP are supported?
C8	Do your radars support the following functionalities with regards to operation? 1. The radar sends status data about whether or not the radar antenna is able to rotate; 2. The radar sends status data whether or not the radar is transmitting; 3. It is possible to configure the radar locally; 4. It is possible to configure the radar remotely.
C9	Do your radars support the following security related functions? 1. Authorization is required for accessing radar data; 2. Authorization is required for operation related activities; 3. It is possible to set requirements for passwords; 4. It is possible to prevent passwords from being re-used; 5. Automatically generated passwords have to be changed after the first use; 6. The radar creates a non-alterable log of user interaction data; 7. This log is only accessible through an administration interface; 8. Unnecessary data network services can be disabled; 9. Access to ports which are not being used by the radar can be disabled.
C10	The IALA Advanced radars will be placed on specific locations. The antennas of the IALA Advanced systems can experience heavy wind loads. Do your radars experience any limitations in performance/operation based of wind speeds? If so, please elaborate what kind of limitations.
C11	RWS places the IALA-class Advanced radars on listed buildings for which maximum load calculations have been carried out. Can you give us the following information for your IALA Advanced radars? 1. Total weight (kg) 2. Wind catching surface of the radar(m ²) 3. Windcatching surface of the undercarriage (m ²) 4. Profile of the readar antenna (is it curved or not?) 5. r/b - ratio
C12	Can your IALA Advanced radars be provided with an up-mast and/or down-mast construction?
C13	Do your radars offer the following safety related features? 1. Anchorage points; 2. Lifting eyes / lifting beam on the propulsion.
C14	RWS strives for lower energy consumption. Temperature control in an unmanned radar station (ORP) has a relatively high energy consumption. A wider temperature bandwidth within which a radar can function reduces energy consumption. Between which minimum and maximum temperatures do the radars not require temperature control?
C15	Which fire prevention measures have been or can be taken for the radar systems? The category A radar systems are placed on locations where fire provides a bigger hazard. But this question is relevant for all categories.
C16	RWS strives for radar data output in standard and accessible formats. ASTERIX is a standard that is currently used for radar data output. Which ASTERIX categories are supported by your radar systems, especially for the communication of video, plot and/or track data? Would you propose any other standard besides ASTERIX, and if so, which standards and why?
C17	Do you provide support for Search and rescue (SART) in your X-band radar systems? If so, what is the maximum distance that SART signals may be received?

C18	What technology would you suggest for the new radar systems (magnetron, Solid state radar (SSR), hybrid) and with what rationale?
C19	Do your radar systems contain functionality to report about and/or evade intentional and unintentional sources of interference? If so, please provide some explanation?
C20	Do your radar systems contain radioactive materials?
C21	Can you provide us with a material passport for the radarsystems? (A material passport is a digital document listing all the materials that are included in the product in order to facilitate circular re-use of the product).
C22	Can you provide a CE-certificate for your radarsystems?
C23	The questions above contain questions related to (possible) demands for the radar systems. Do you see any limitations within these questions which would prevent you to offer COTS-radar systems?

Other questions	
D1	Which availability can you guarantee with regards to the reliability (for instance mean time between failures) of your radar systems?
D2	Which percentage of materials used in your radar systems can be re-used/refurbished and what percentage of materials is recyclable?
D3	Can you specify the operational up-time of the radar systems that are relevant for this proposed call to tender? Can measures be taken by RWS to further increase the up-time?
D4	Can you recommend a list of spare parts which are critical to the operation of radar systems, taking into account the impact on radar performance and delivery times?
D5	The four category A radar systems will be placed on lighthouses on the Wadden islands. The other radars will be placed on masts or other constructions in the vicinity of the Amsterdam-Rijnkanaal. Parts of the radar systems will be exposed to the elements. How does this influence the performance and lifespan of your radar systems?
D6	RWS wants to let the party responsible for installation and integration of the radar systems perform a number of tests as part of the tender. These tests serve as a final check if the radar systems are compatible with the Traffic management system and will only be performed for the radar systems that get the winning score. It is not necessary to connect to the RWS system environment. One option is to visit a location of your choice for the tests. Which possibilities do you see for this?
D7	RWS wants to perform more expanded system integration tests within the RWS system environment after the conclusion of the tender. Which possibilities do you see to perform these tests on the radar systems that will be supplied as early as possible in the project?
D8	What possibilities do you see to take into account life cycle management in this tender? Assuming that the installation and integration of the radar systems will be performed by a third party.
D9	How can we create an effective cooperation in the execution of this project? What do you need in order to provide maximum value (organization, deliberation, meetings)?
D10	In your opinion, which factors will guarantee a successful cooperation with the party which will perform the installation and integration of the radar systems?
D11	Can you provide a list with, in your opinion, the main cost drivers (in relative sizes) of the supply and testing of radar systems?
D12	Which other suggestions and/or tips do you have for RWS with regards to this tender?
D13	Which limitations do you foresee with regard to the transportation and storage of the radar systems?

D14	What possibilities and points of attention do you see with regards to knowledge transfer and troubleshooting during the installation and integration phase with the service integrator?
D15	Would you appreciate being invited by RWS to further explain your answers to the questionnaire in an conversation?