



Ministerie van Infrastructuur
en Waterstaat

Project:

Delivery of Microbarometers for upgrades and expansion of
the KNMI monitoring network

Descriptive document European Public Procurement Procedure	
Type of Procedure	Open procedure in accordance with the Dutch Public Procurement Act of 2012.
Supplier	Royal Netherlands Meteorological Institute (KNMI)
Contracting Authority	State of the Netherlands, Ministry of Infrastructure and Water Management
Version:	V.1.0
Status	Final
Date	09-09-2025

TABLE OF CONTENTS

1	THE ASSIGNMENT	5
1.1	Description and scope of the assignment	5
1.1.1	Introduction	5
1.1.2	Contracting Authority and Supplier	6
1.1.3	Duration and scope of the agreement	6
1.1.4	Revision clause	6
1.2	Lots.....	7
1.3	Draft agreement and terms and conditions of the agreement	7
1.4	Functional and/or technical specifications	7
1.4.1	Brand names	8
1.6	Sustainability and Corporate Social Responsibility	8
1.6.1	Environmental, climate and circularity criteria	8
1.7	Provisions regarding taxation, environmental protection, labour protection, and terms and conditions of employment	8
2	REQUIREMENTS FOR THE TENDERER.....	9
2.1	One Proposal registration – independently or as a partnership.....	9
2.1.1	Independent Proposal	9
2.1.2	Partnership	9
2.2	Subcontracting.....	9
2.2.1	Drawing upon resources of third parties	9
2.2.2	Other subcontractors	10
2.3	Mandatory grounds for exclusion	10
2.3.1	General.....	10
2.4	Optional grounds for exclusion	11
2.5	Eligibility Requirements	11
2.5.1	Professional authority.....	12
2.5.2	Financial and economic capacity	12
2.5.3	Technical and professional competence - reference projects	12
2.6	Exclusion or rejection of a Tenderer	13
3	THE ASSESMENT OF THE PROPOSAL	14
3.1	Requirements	14
3.2	Award criterion	14

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

3.2.1	15
3.2.2 Sub-award criterion Quality	15
3.3 Variations	16
3.4 Documents to be submitted	16
4 PROCEDURAL PROVISIONS	18
4.1 Notice, Tender and submission period	18
4.2 Communication	18
4.3 Language	19
4.4 Information, questions and objections	19
4.4.1 Questions and objections	19
4.5 Assessment of Tenderer and his Proposal	20
4.6 Evaluation committee	20
4.7 Notification of agreement award decision	21
4.8 Suspension / discontinuing Tender	21
4.9 Reimbursement of costs	21
4.10 Confidentiality	21
5. LEGAL PROTECTION	22
5.1 Complaints desk / Commission of Tender Experts	22
5.2 Preliminary relief proceedings	22
ABBREVIATIONS AND GLOSSARY	23

APPENDICES:

Appendix 1:	Draft agreement
Appendix 2:	General terms and conditions (ARIV 2018)
Appendix 3:	Schedule of Requirements
Appendix 4:	NOT APPLICABLE
Appendix 5:	European Single Procurement Document
Appendix 6:	Model Reference projects
Appendix 7:	NOT APPLICABLE
Appendix 8:	Pricing sheet

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

DISCLAIMER:

This Tender procedure will require foreign businesses to create an account to issue a Proposal via TenderNed. Instructions on how to register your business are found at:

<https://www.tenderned.nl/cms/en/english/tenderned-dutch-governments-online-tendering-system>

1 THE ASSIGNMENT

The Contracting Authority hereby invites Tenderer to issue a proposal for the procurement of the delivery of analogue and digital microbarometers to support the Royal Netherlands Meteorological Institute (KNMI) infrasound monitoring network.

The procedure used is the open procedure under the Public Procurement Act of 2012.

The procedure is fully electronic via the online Tender Platform TenderNed. Further information on using TenderNed can be found [here](#).

1.1 Description and scope of the assignment

1.1.1 Introduction

Since the 1990s, the Seismology and Acoustics Department (RDSA) has operated an acoustic network for the continuous 24/7 monitoring of low-frequency vibrations in the atmosphere. This primarily concerns inaudible low-frequency sound, also known as infrasound. Measuring infrasound is important for distinguishing atmospheric vibrations (such as those caused by explosions or jets breaking the sound barrier) from seismic events like earthquakes.

Microbarometers are used to measure low-frequency sound. These are highly sensitive barometers capable of detecting air pressure fluctuations caused by low-frequency sound. A microbarometer is part of a measurement setup. At KNMI, microbarometers are set-up in two configurations:

- **Array setup:** The sensor is placed outdoors on a concrete slab and covered with a metal windscreen to reduce wind noise. Air pressure variations flow through small holes in the housing of the sensor to the sensitive element of the sensor.
- **Data cabinet setup:** A single sensor is placed in the base compartment of a data cabinet, alongside seismic equipment. Air pressure variations reach the sensor through a tube.

An “array setup” consists of multiple sensors, typically located within 10 to 100 meters of each other. This setup allows for more reliable detection of low-frequency sound and enables the measurement of sound direction. The combination of multiple array observations allows for localization of the sound source.

Over the years, RDSA’s microbarometer network has grown to approximately 50 sensors distributed across various Dutch provinces. This Dutch network includes three array setups near the towns of De Bilt, Cabauw and Enschede as well as several data cabinet setups. The existing permanent measurement sites use analogue sensors, which convert pressure fluctuations into electrical signals. These analogue sensors are connected to data loggers that digitize the analog signals and transmit the resulting digital data streams to KNMI.

Additionally, digital sensors are used for measurement campaigns. A digital sensor is essentially an analogue sensor with a built-in data logger.

While microbarometers have traditionally been designed to measure primarily in the infrasound frequency band, some newer generation microbarometers allow for the measurement of higher frequencies, up to 100 Hz and even beyond. There is growing societal demand for this type of measurements, i.e. measurements of low-frequency noise (LFN), for example from large industrial equipment such as compressors.

In January 2021, an agreement was signed with Hyperion Technology Group, Ltd. for the supply of microbarometers for the period 2021–2023. Under this agreement, Hyperion delivered 20 analog

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

sensors between April 2021 and September 2023. These sensors have been used to upgrade existing measurement sites as well as for the expansion of the network. On a separate contract, three digital microbarometers have been purchased in 2022.

1.1.2 Contracting Authority and Supplier

The contracting authority is the State of the Netherlands, Ministry of Infrastructure and Water Management. The Tender will be carried out on behalf of the Royal Netherlands Meteorological Institute (KNMI) by the Ministry of Infrastructure and Water Management.

1.1.3 Duration and scope of the agreement

RDSA anticipates a need for both analogue and digital sensors. The contracting authority intends to enter into an agreement for a period of ten years, for the delivery of microbarometers. The analogue sensors will be used with separate data loggers, while the digital sensors have integrated data loggers. KNMI has the intention to purchase at least 51 analogue and 6 digital sensors.

Additional orders may be placed depending on the work to be carried out and available project budget. Based on current estimates, the total number of sensors to be purchased could reach 95 (80 analogue and 15 digital).

The total estimated agreement value for these 95 sensors is €700,000 (excluding VAT).

Past experiences indicate that project-related measurement requests can surge unexpectedly. Proactively anticipating to such demand is preferred, given the relatively long lead times associated with procurement processes. Therefore, the Agreement will include options: the purchase of the 51 analogue and 6 digital sensors is guaranteed, with an option to purchase additional units within a 10-year period. The price for these additional units will remain the same, except for indexation.

KNMI anticipates placing orders with a frequency of two (2) to three (3) times per year, each consisting of approximately eight (8) to ten (10) microbarometers. The actual order volume will be established post-agreement signing, through mutual agreement between KNMI and the supplier.

The aforementioned figures, besides the guaranteed amounts, are an indication. No rights can be derived from them.

1.1.4 Revision clause

During the term of the Agreement, the Supplier reserves the right to change the agreement as follows:

- Given that this is a multi-year agreement, the Supplier is allowed to apply annual price indexations, starting at the first of January 2027. The appropriate price index will be determined in mutual consultation with the Supplier, in view of the possibility that Tenderers from different continents may participate in this Tender. Regardless of the index chosen, the year 2026 shall be considered as base year (100).
-
- Scope changes may occur under specific conditions, such as:
 - the Supplier does not meet the technical criteria as outlined in the requirements, and/or;
 - the minimum order volume has been fulfilled, but subsequent or related projects do not proceed as initially anticipated.
- This also applies to an updated version of the requested microbarometer being produced during the duration of the agreement and production of the in this Tender offered unit being discontinued. Pricing must remain similar, with exemptions being made for the previously stated indexations.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

In above standing cases, rights can only be derived from the guaranteed minimum scope of the agreement. No rights can be derived regarding the execution of optional microbarometers beyond this minimum.

1.2 Lots

The Tender will not be divided into lots.

The agreement concerns the delivery of a single homogenous product: microbarometers. For this specific agreement, it is therefore not possible to divide it into lots. Different suppliers provide different bandwidths in the accuracy of measurement. To ensure the collected data is as uniform as possible, the choice has been made to contract a single Supplier for the entirety of the requested amount of units for the entire agreement duration.

1.3 Draft agreement and terms and conditions of the agreement

The assignment shall be carried out in accordance with the draft agreement as attached to this Descriptive document in Appendix 1. Only the General government purchasing conditions 2018 (ARIV 2018) shall apply to the agreement as the applicable general terms and conditions. See Appendix 2.

The applicability of the Tenderer's and third parties' general terms and conditions of delivery is explicitly excluded.

The Ministry of Infrastructure and Water Management reserves the right, in the event of early termination of the Agreement, to award the agreement to the next-ranked (2nd place) Tenderer, provided that this Tenderer is willing to uphold its original bid. This provision may only be exercised within a reasonable period following the conclusion of the agreement, which the Ministry considers to be twelve (12) months.

1.4 Functional and/or technical specifications

The functional and/or technical requirements for the performance of the assignment are described in the Schedule of Requirements (Appendix 3) to this Descriptive document.

By submitting a Proposal, the Tenderer irrevocably accepts all requirements, terms and conditions stipulated in this Descriptive Document and all Appendixes associated with this Descriptive Document.

Tenderer must ensure that there can be no misunderstandings regarding the Tender in relation to the price quoted.

Throughout the entire term of the Agreement, Tenderer must continuously comply with the Schedule of Requirements, the technical specifications, and all other applicable requirements, terms and conditions.

Tenderer must submit an additional document with his Proposal, that includes the technical specifications. This document must specify not only that Tenderer meets the requirements (and wishes) of the Schedule of Requirements, but particularly how Tenderer meets them. This technical specification will be attached to the agreement to be concluded.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

1.4.1 Brand names

If a specific brand or quality mark is mentioned in the Schedule of Requirements, this is only intended to be an example. In that case, the Contracting Authority refers to that brand, or equivalent, as a quality mark.

1.6 Sustainability and Corporate Social Responsibility

The central government fosters Corporate Social Responsibility. This is a business concept in which the human and environmental factors are included in business decisions and in the assessment of business results in addition to the profit factor. This Tender includes requirements and criteria in terms of climate, environment and, circularity.

1.6.1 Environmental, climate and circularity criteria

As a quality criterion Tenders are expected to include an elaboration of the sustainability measures taken in the production process of the microbarometers. This should demonstrate an environmentally conscious approach to manufacturing the microbarometers, supported by ISO 14001 certification (or an equivalent standard) and/or a process description that shows sufficient attention to sustainable production practices (see also quality criterion number 15).

Other environmental and climate or circularity criteria established by the central government have been incorporated in the Schedule of Requirements as eligibility requirement.

1.7 Provisions regarding taxation, environmental protection, labour protection, and terms and conditions of employment

Tenderer may access details about taxation, environmental regulations, labour protection, and employment terms applicable in the Netherlands by visiting <http://www.rijksoverheid.nl> (see 'Ministries').

- Ministry of Finance, with regard to taxation;
- Ministry of Economic Affairs and Climate. with regard to environmental protection;
- Ministry of Social Affairs and Employment. with regard to employment protection and working conditions.

By submitting a Proposal, Tenderers confirm compliance with Dutch tax, environmental, labour, and working condition requirements.

2 REQUIREMENTS FOR THE TENDERER

This section outlines the exclusion grounds, eligibility requirements, and selection criteria for Tenderers. Each requirement specifies which documents Tenderer must include in his Proposal.

2.1 One Proposal registration – independently or as a partnership

An organisation is permitted to submit only one (1) Proposal, either independently or as part of a consortium (including main contractor – subcontractor constructions), with such submission counting as a single Proposal.

Should an organisation submit a Proposal both on its own and jointly within a consortium, only the consortium's Proposal will be evaluated; the independent submission will be disqualified.

Each organisation or group may submit only one Proposal, unless tenderers can demonstrate that their submissions were prepared autonomously. Inability to provide evidence of independent preparation will result in the exclusion of all related Proposals.

2.1.1 Independent Proposal

Should Tenderer elect to submit a Proposal independently, kindly complete the European Single Procurement Document (ESPD) in full. Please ensure that Sections A and B of Part II, as well as Parts III, IV, and VI, are duly filled out. In the event that the Contracting Authority issues a written request, Tenderer is also required to provide all relevant supporting documentation.

2.1.2 Partnership

Tenderers are permitted to submit a Proposal as part of a consortium with other entities. In the case of joint participation, this must be explicitly indicated, specifying the respective role of each member (for example, authorised representative or task lead) within the ESPD.

Each consortium participant is required to complete and submit an individual ESPD, encompassing Sections A and B of Part II, as well as Parts III, IV, and VI, together with all supporting documentation requested by the Contracting Authority.

All consortium partners shall bear joint and several liability for the execution of the agreement.

Kindly note: Alterations to the partnership composition during the Tender procedure are strictly prohibited.

2.2 Subcontracting

2.2.1 Drawing upon resources of third parties

Should Tenderer intend to rely upon the resources of a third party—such as a holding organisation, another legal entity, or an individual—to meet the eligibility requirements, this must be appropriately indicated in the ESPD. The Tenderer must specify which eligibility criteria will be fulfilled using the third party's resources.

The nominated third party is likewise required to complete and submit an ESPD, with particular attention to Sections A and B of Part II, as well as Parts III, IV, and VI. Completion of these sections serves not only to attest to the third party's suitability for participation in the assignment, but also to confirm the absence of any exclusion grounds, as prescribed in Part III of the ESPD.

Upon request by the Contracting Authority, the main contractor (Tenderer) shall provide all requisite supporting documentation, encompassing those relating to any subcontractor (third party).

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

Kindly note: Engagement of a subcontractor does not affect the principal liability of the Tenderer, who retains overarching responsibility for the execution of the assignment as the main contractor.

2.2.2 Other subcontractors

In addition to the aforementioned third party or parties, it may be permissible for additional entities to be engaged to execute specific portions of the assignment during the term of the Agreement or other related agreements, subject to the prior approval of the Contracting Authority. Such entities shall be designated as subcontractors, and their involvement is not requisite for compliance with eligibility criteria.

Although not obligatory, Tenderers may indicate within their Proposal an intention to engage one or more subcontractors for the execution of segments of the assignment. Should this be the case, such information ought to be disclosed in Part II D of the ESPD, specifying the relevant aspects of the assignment and, if available, the identities of the proposed subcontractors.

Collaboration with a subcontractor does not affect the liability of the Tenderer, as the main contractor, for the implementation of the assignment.

2.3 Mandatory grounds for exclusion

2.3.1 General

Tenderers are required to confirm, in the ESPD, that the exclusion grounds specified in Part III (Article 2.86, Public Procurement Act) are not applicable to their organisation by duly completing sections A and B.

Should a Tenderer be selected for agreement awarding, legal supporting documentation must be provided within ten (10) working days upon request of the Contracting Authority, demonstrating that the exclusion grounds do not pertain to the Tenderer or any subcontractors.

For Dutch organisations, such documents include:

Grounds for Exclusion	Evidence
A statement from the Tax and Customs Administration (Article 2.89 (3) of the PPA)	This statement may not be older than six months, from the time of submission of Tenderer's Proposal
Statement of Good Conduct regarding Tendering (Article 2.89 (2) of the PPA)	This statement may not be older than two years, from the time of submission of Tenderer's Proposal

Kindly note: The process of applying for and obtaining these documents may entail a considerable period of time. It is strongly recommended that applications be submitted well in advance to ensure timely processing.

Supporting documents may differ from per country. The European Commission's database, [e-Certis](#) provides an overview of supporting documents used in the European member states.

Should an equivalent document not be available within the organisation's country, it is permissible instead to submit a sworn statement or written declaration issued by a competent authority.(EU) Council Regulation 2022/576 on Russian Organisations.

The fifth sanctions package enacted by the Council of the European Union prohibits Russian parties from participating in European tenders. This measure was introduced through [\(EU\) Council Regulation 2022/576](#) on 8 April 2022 and is directly applicable in all member states.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

Furthermore, there are substantial restrictions with respect to access to, or utilisation of, third-party resources involving Russian entities.

Submitting a Proposal constitutes acknowledgment and confirmation of compliance with the aforementioned Regulation.

2.4 Optional grounds for exclusion

In the ESPD, Tenderer is required to declare whether the optional exclusion grounds outlined in Part III (Article 2.87 of the Public Procurement Act) are applicable. Please indicate 'yes' or 'no' in Part III C and respond to any additional questions as necessary.

Should Tenderer be selected, Tenderer must provide supporting legal documentation within ten (10) working days to demonstrate that these exclusion grounds do not pertain to either himself or his subcontractor.

In the event that any exclusion ground is applicable, Dutch organisations are obliged to submit the corresponding supporting documents:

Grounds for Exclusion	Supporting document	Explanatory note
Bankruptcy or liquidation (Article 2.87 (1)(b) of the PPA)	Extract from the trade register	This extract may not be older than six months, from the time of submission of Tenderer's Proposal
Optional grounds for exclusion: Distortion of competition (Article 2.87 (1)(c) and (d) of the PPA)	Statement of Good Conduct regarding Tendering (also mentioned in Section 2.3)	This statement may not be older than two years, from the time of submission of Tenderer's Proposal
Optional grounds for exclusion: Payment of taxes or social security contributions (Article 2.87 (1)(j) of the PPA)	A statement from the Tax and Customs Administration (Article 2.89 (3) of the PPA) (also mentioned in Section 2.3)	This statement may not be older than six months, from the time of submission of Tenderer's Proposal
Other optional grounds for exclusion: breach of obligations based on environmental, social or labour law, ¹ conflict of interest, involvement in preparation,-and/or false statements, exerting influence on decision-making process (Article 2.87 (1)(a),(e),(f),(g),(h) and/or (i) of the PPA)	If applicable, Tenderer must submit supporting documents relating to the relevant optional grounds for exclusion. There is no prescribed format for these submissions.	

Supporting documents may differ from per country. The European Commission's database, [e-Certis](#) provides an overview of supporting documents used in the European member states.

2.5 Eligibility Requirements

The following eligibility requirements apply:

1. Professional authority;

¹Tenderer can obtain information on obligations for provisions regarding taxation, environmental protection, labour protection, and terms and conditions of employment prevailing in the Netherlands on the website <http://www.rijksoverheid.nl>

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

2. Financial and economic capacity;
3. Technical and professional competence (reference projects);
4. Quality assurance.

2.5.1 Professional authority

Tenderers are required to be registered in the appropriate professional or trade registry. Upon request by the Contracting Authority, evidence of such registration—such as an extract from the Chamber of Commerce for the Netherlands, or an equivalent document from another jurisdiction—must be submitted within ten (10) working days. This extract must not predate the Proposal submission by more than six months. In the case of a consortium, each participant is obligated to provide the necessary extract upon request.

Kindly note: only electronically submitted, digitally authenticated extracts shall be deemed legally valid; printed or scanned copies, even if certified, will not be accepted.

2.5.2 Financial and economic capacity

Tenderers must demonstrate their organisation's financial capacity to perform the assignment, as assessed under ARIV 2018 (see Appendix 2).

2.5.3 Technical and professional competence - reference projects

Tenderer should be able to demonstrate possession of the following core competencies required for successful completion of the assignment.

Experience with deliveries of microbarometers must be demonstrated through relevant reference projects. This criterion is split into analogue and digital microbarometers. The Tenderer must prove experience with deliveries that together represent:

- a. at least 30 units of the analog microbarometers, and;
- b. at least 3 units of the digital microbarometers.

Tenderers must prove core competency a and b by submitting a reference project. Each core competency requires one reference project, though the same project may cover multiple competencies. There is a maximum of two (2) reference projects allowed to be submitted by Tenderer to fulfil the aforementioned competencies.

Conditions for the submission of a reference project:

- a. In the event that the Tenderer provides a reference of an ongoing or only partially completed Agreement, solely the outcomes that have been verifiably achieved till date may be submitted as a reference. Forecasted or anticipated results will not be taken into account.
- b. Reference projects must not predate the closing date for Proposal submissions by more than three years.
- c. Submitted reference projects are required to demonstrate completion in a manner that is satisfactory, competent, timely, and consistent. The Contracting Authority reserves the right to verify this information with the designated contact person. Should a third party have participated in any reference project, this involvement must be explicitly declared in Section 4a of Appendix 6: Model Reference Projects. Furthermore, the identified third party is obliged to participate in the assignment (refer to Section 2.2.1). For reference projects executed through a consortium, a clear delineation of responsibilities and activities undertaken by each party must be provided under Section 4b of Appendix 6: Model Reference Projects. These reference projects must evidence that the Tenderer, either independently or with the support of a third party, possesses the requisite core competencies.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

- d. The reference projects must include project details such as supplier name, delivery date, scope, and volume, and should clearly indicate whether the delivery involved analogue, digital, or both types of microbarometers.

Reference projects failing to fulfil the core competency requirements and other stipulated conditions shall be deemed invalid and excluded from consideration during the assessment process.

Each reference project must be properly documented using the Model Reference Projects form (Appendix 6) and submitted together with the Proposal. By submitting such reference projects, the Tenderer grants the Contracting Authority authorisation to verify all information presented.

If verification of the reference by the Contracting Authority is not possible (for instance, due to lack of access or inadequate supporting documentation for performance and completion), such reference projects shall be omitted from the evaluation.

2.6 Exclusion or rejection of a Tenderer

If one or more of the grounds for exclusion are applicable to a Tenderer, a consortium member or subcontractor, Tenderer shall be excluded from participation in the Tender procedure. In that case, his Proposal will be set aside.

Tenderer shall be afforded the opportunity to demonstrate that they have implemented sufficient remedial measures and adjusted their business operations in relation to the relevant ground for exclusion. The Contracting Authority will evaluate whether such measures and/or supporting documentation are satisfactory. In certain circumstances, the Contracting Authority reserves the right to waive grounds for exclusion, particularly where imposition of such exclusion would be manifestly unreasonable.

The opportunity to demonstrate reliability (also known as the proportionality test) does not apply to the 'False Statement' ground for exclusion. Under these circumstances, the Contracting Authority is entitled to set aside the Proposal immediately.

Exclusion from the Tender procedure will likewise result if specified eligibility requirements are not fulfilled. In such cases, the Proposal will be set aside and will not undergo further evaluation.

Failure to submit required supporting documents within the prescribed timeframe, or submission of incomplete documentation, may similarly result in exclusion and/or rejection of the Proposal. Section 3.6 provides a table outlining the documentation requirements and corresponding deadlines.

3 THE ASSESMENT OF THE PROPOSAL

This section outlines the methodology and criteria for assessing Proposals to identify the most economically advantageous Proposal. A distinction is made between:

1. requirements that result in a direct knock-out of the Tender. If the Proposal does not comply with the methodology and criteria;
2. award and sub-award criteria that will determine the ultimate ranking between Proposals.

3.1 Requirements

There are requirements that pertain to the content of the Proposal. They have been set out below under K1:

- K1: Tenderer complies with the Schedule of Requirements, as referred to in Appendix 3– including any rectifications that may arise from the Information Memorandum;
Compliance must be demonstrated by providing technical specifications or other documentation from which the compliance can be derived with Tenderer's Proposal-

3.2 Award criterion

The Contracting Authority awards the agreement to the Tenderer with the best price-quality ratio (BPQR), calculated as 70% price and 30% quality, since quality differences are minimal.

The market under consideration is a niche segment with specific technical requirements, which restricts differentiation based on quality to only minor variations. As a result, price will be given significant consideration in this tender.

The best price – quality ratio is determined by using the “weighted factor” method.

The Weighted Factor method assigns each criterion a certain number of points and each criterion has a certain weight.

Award criteria		
Quality		Max. points
Q1	Delivery Time	2
Q2	Warranty Period	2
Q3	Response time for malfunctions/inquiries	2
Q4	Power consumption (assessed separately for analog and digital)	2
Q5	Instrument response frequency range	3
Q6	Self-noise below the NLNM	2
Q7	Dynamic range	2
Q8	Relative seismic sensitivity	3
Q9	Variations between sensor calibrations	2
Q10	Support for variable sample rates	2
Q11	Support for MiniSEED recording	2
Q12	Support for the SeedLink protocol	2
Q13	Internal storage	1

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

Q14	Ethernet (RJ45) and/or Wi-Fi connectivity	2
Q15	Environmentally conscious production process	1
Total quality		Maximum 30 points
Price		Max. Points
P1	Price for minimum order quantity, including shipping, import/customs clearance fees and additional quantity	Maximum 70 points
Total Price		Maximum 70 points
Total number of points that can be attained		Maximum 100 points

The winning Proposal has the highest total number of points for all award criteria.

In the event that two or more Tenderers achieve identical highest scores, the agreement shall be awarded to the Proposal with the superior score on the designated price criterion. Should these scores also be equivalent, the final selection shall be determined by means of a random draw.

3.2.1 Sub-award criterion Price

The Tenderer is required to provide pricing information by duly completing the Price Sheet (Appendix 8) without any exceptions or qualifications.

Moreover, the prices submitted shall remain firm and fixed following the closing date, unless a contractually authorized price adjustment is expressly permitted (for instance, in cases where a provision for price revision has been stipulated). The scoring of the price criterion will be determined by use of the following formula:

$$\text{Score Tenderer} = (\text{Lowest Price} / \text{Price Tenderer}) \times \text{Maximum Score}$$

The Tenderer submitting the lowest total price shall receive the highest score; all other tenderers shall be awarded proportionately lower scores.

All quoted prices are deemed all-inclusive, encompassing costs related to transportation, travel, overhead, information technology, reporting, and insurance, with the sole exceptions of import/customs clearance and shipping. No additional expenses will be incurred by the Contracting Authority aside from these specified exceptions.

For further details and specific requirements regarding the sub-award criterion "Price", please refer to the Price Sheet tab, under Appendix 8.

3.2.2 Sub-award criterion Quality

Quality assessment will take place based on the Tenderer's specification on the sub-award criterion Quality as included in Appendix 3 and can lead to a *maximum number of points of 30*. See *Appendix 3 for the specified scoring per sub-award criteria*.

Digital and analogue sensors:

1. Delivery time ⁽¹⁾;
2. Warranty period;
3. Response time for malfunctions or inquiries;

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

4. Sensor has low power consumption, preferably a maximum of 1.5 Watt (analogue; digital may consume slightly more);
5. Flat instrument response over a wider frequency range;
6. Self-noise below the NLNM over a wider frequency range;
7. Dynamic range greater than 108 dB over the 0.02–4 Hz frequency range;
8. Relative seismic sensitivity lower than 1 Pa/(m/s²);
9. Variations between sensor calibrations are less than 5%;
10. Environmentally conscious production process of the microbarometers, demonstrated by ISO 14001 certification (or equivalent) and/or a process description showing sufficient attention to sustainable manufacturing.

Digital sensors:

11. Support for variable sample rates;
12. Support for MiniSEED recording;
13. Support for SeedLink protocol;
14. Internal storage is greater than 8 GB;
15. Ethernet (RJ45) and/or Wi-Fi connectivity.

Kindly note: (1) To ensure compliance with the stated delivery time under the quality component, a penalty clause will be included. This provision prevents bidders from gaining unfair advantage by offering unrealistic delivery times and encourages adherence to agreed timelines.

Tender is required to complete the designated Excel checklist which is to be found in the Schedule of Requirements (Appendix 3), indicating compliance with each criterion and substantiating their responses with appropriate documentation. For the initial fourteen criteria, product specifications must be submitted. With respect to the sustainable production criterion, tenderers shall provide either pertinent certificates (such as ISO 14001) or a written statement, not exceeding one A4 page, that outlines compliance in detail. All supporting materials should be submitted either as a single consolidated file or as distinctly labelled individual files; there is no restriction on the total number of documents permitted.

3.3 Variations

The submission of variations is *not* permitted. It is therefore not prohibited to deviate from the technical specifications at Tenderers own initiative.

3.4 Documents to be submitted

Tenderer is required to submit a number of documents when submitting a Proposal and after provisionally being awarded the agreement.

The table below summarises which documents must be submitted and when.

The Tenderer to whom the Contracting Authority intends to award the agreement will be asked to provide a number of documents. These documents are listed in the table below.

Kindly note: If Tenderer fails to submit the documents within ten (10) working days, after the Contracting Authority's request, or if Tenderers documents are not adequate, the Contracting Authority will still exclude or reject the Proposal and award the second ranked Tenderer.

What	When	Who
------	------	-----

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

		Independent Tenderer	Partnership	Third parties (Section 2.2.1) (Partnership/independent Tenderer must submit documents on behalf of third party)
ESPD (ESPD) Completed and signed	Proposal	X	X	X
ESPD (ESPD) completed and signed by other third parties (Section 2.2.2)	If applicable, on request			X
Model Reference projects	Proposal	X	X	
Price sheet	Proposal	X	X	
Compliance matrix / Technical specification & Quality criterion	Proposal	X	X	
Model Warranty	If applicable, on request	X	X	X
Declaration of Conduct for Tenderers (GVA in Dutch)	On request	X	X	X
Tax compliance statement	On request	X	X	X
Any supporting documents regarding other optional grounds for exclusion	If applicable, on request	X	X	X
Entry in the national professional and trade register	Proposal	X	X	X
Quality Assurance System	On request	The person(s) who will actually perform the work to implement the agreement		
Environmental Protection System	On request	The person(s) who will actually perform the work to implement the agreement		

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

4 PROCEDURAL PROVISIONS

This section outlines the applicable terms and conditions specified by the Contracting Authority for Tenderers Proposal. The process is conducted entirely electronically through TenderNed (online procurement platform). Additional details regarding its usage are available [here](#).

4.1 Notice, Tender and submission period

The Contracting Authority uses TenderNed for this Tender. Tenderers must submit their entire Proposal, including all required information and documents, via TenderNed.

The formats prescribed by the Contracting Authority must not be altered, and Tenderers Proposal is required to remain valid for a minimum of 90 days following the closing date.

The Contracting Authority aims to meet the deadlines as shown in the schedule below but reserves the right to adjust the schedule during the process. With the exception of the statutory minimum deadlines, no rights may be derived from this schedule. All times in the schedule are in Central European Time (CET).

Date	Activity
10-9-2025	Transmission of the Tender Publication via www.tenderned.nl .
22-9-2025, before 12 pm, CET	Closing date for posing questions via www.tenderned.nl
26-9-2025	Publication of the Information Memorandum via www.tenderned.nl .
15-10-2025, before 12 pm, CET	Closing date and deadline for receipt of Proposals via www.tenderned.nl .
14-11-2025	Announcement of the intention to award the agreement via TenderNed, under the conditions mentioned in Section 3.5 of the Descriptive document.
15-11-2025 until 8-12-2025	Suspensive period (expiry period)
18-11-2025	Submission of required supporting documents (see Section 3.6 of this Descriptive document)
31-12-2025	Entry into force of the Agreement

The deadline for submission of Proposals to the Contracting Authority is October 15th, 2025, as indicated in the table above. The opening of digital Proposals will be conducted through the TenderNed digital vault. Attendance at the opening session is not permitted.

Kindly note: The closing date and time are fixed. Proposals cannot be submitted after the deadline. Any delay in uploading is the responsibility of the submitter.

4.2 Communication

All communications must occur through TenderNed. The contact person is listed on TenderNed and may only be reached directly if TenderNed is unavailable:

Tim van der Zande

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

tvanderzande@sbmc.nl

In case of absence, Anouk Suijkerbuijk (suijkerbuijk.Anouk@kpmg.nl) will serve as his substitute.

Any attempts to contact the person(s) mentioned above for anything other than a disruption of TenderNed, may result in exclusion of the bid from the contacting Tenderer.

During the Tender process, communication with employees of the Contracting Authority is strictly limited to the designated contact person, unless expressly permitted in this descriptive document. Failure to comply with this requirement may result in exclusion from the procedure. Excluded is communication about current agreements.

4.3 Language

The official language for the Tender documents, the Tender procedure, and the execution of the agreement is English. All documents submitted must be in English. If any required information is contained in an official document that is not available in English, a Dutch or English translation must be provided alongside the original document.

4.4 Information, questions and objections

4.4.1 Questions and objections

Questions regarding the Tender documents, any identified inconsistencies, or objections to the Tender procedure or its components should be submitted through the questions and answers module in TenderNed by the date specified in the schedule.

Only questions and comments submitted within the specified deadline and in accordance with the required procedures will be addressed. Responses will be provided through an anonymous Information Memorandum, which will be issued no later than ten (10) calendar days before the Tender closing date.

For commercial or confidential inquiries, Tenderers may request to ask a question individually. The Contracting Authority will review such requests. If approved, responses will be sent directly to the Tenderer and will not be published. If an individual response is not possible or permitted, the Tenderer will be advised to submit the question through the questions and answers module in TenderNed, and the answer will be included in the Information Memorandum.

Participants are advised to report any contradictions, ambiguities, or imperfections in the Tender Documents as soon as possible, and in any event before the final round of questions closes. A proactive approach is expected from participants to allow the Contracting Authority to address any issues effectively. Failure to report such matters in a timely manner will result in the forfeiture of the right to raise objections or complaints at a later stage. If concerns remain after review of the Information Memorandum, participants may submit a complaint to the Contracting Authority following the procedure outlined in section 5.1. Should a complaint remain unresolved, participants must initiate summary proceedings by serving a summons on the Contracting Authority at least five (5) calendar days before the Proposal submission deadline, in order to preserve their rights.

Submission of a Proposal constitutes acceptance of all terms and conditions set forth in the Tender procedure and related documents.

In cases of discrepancy between the Information Memorandum(s) and this Descriptive Document (including appendices), the most recent Information Memorandum prevails.

4.5 Assessment of Tenderer and his Proposal

Assessment of the Tenderer and the Proposal submitted by the Tenderer will take place in four (4) stages.

1. In the first stage, the Contracting Authority will assess whether one or more of the following situations emerge:
 - The Proposal has not been submitted via TenderNed or was not submitted in time;
 - The requested information and documents are not complete, subject to reservations, subject to conditions or are not, nor correctly provided;
 - The Proposal was not submitted with the correct documents or the Tenderer changed the documents provided;
 - The Proposal (the ESPD and/or if requested the Price sheet) is not signed by an authorised person;
 - This requested information was not submitted in the prescribed language.

If one or more of the aforementioned situations occur, the Proposal will be declared invalid. An invalid Proposal will not be assessed and will be set aside.

Validly signing the Tender's Declaration/ESPD requires that the individual(s) signing are registered in the trade register as authorised representatives of the organisation. When the trade register stipulates that two or more people have joint authorisation to represent the organisation, those individuals must sign any documents requiring a legal signature collectively. Any limitations on the authority to represent the organisation, as outlined in the trade register, must also be observed.

If the Tenderer has not signed the ESPD but has validly signed another document, such as the offer letter, the Proposal remains valid. The offer letter signature also serves as the ESPD signature.

2. In the second stage, the Contracting Authority assesses the grounds for exclusion and eligibility requirements as mentioned in Section 2.
3. In the third stage, the requirements will be assessed. These are listed in Section 3.1 of this Descriptive document. If Tenderer's Proposal does not meet the requirements listed in Section 3, his Proposal will be set aside.
4. Finally, in stage 4, Tenderer's Proposal will be assessed against the award criteria.

The Contracting Authority may ask Tenderer to clarify the Proposal or give the opportunity to rectify minor shortcomings in the Proposal. Tenderer will usually be given a period of up to five (5) working days to do rectify.

4.6 Evaluation committee

The evaluation committee reviews proposals according to the stated requirements and sub-award criteria, providing ratings and scores. The committee typically includes four (4) members. The Contracting Authority may adjust the number or composition of the committee as needed.

The assessment process consists of two main steps: individual verification followed by consensus-based scoring. Each Assessor receives the checklist containing the specifications submitted by the

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

Tenderer. They verify the presence and correctness of each item. If discrepancies are found, clarification questions will be sent to the Tenderer. Based on the responses, the checklist may be adjusted, which can affect the associated scores.

The scoring itself is based on predefined criteria, which outline what points are awarded, for which elements, and why. The detailed scoring framework, including the number of points per criterion, can be found in Appendix 3.

4.7 Notification of agreement award decision

All tenderers will, at the same time, receive a notification of the preliminary agreement award decision from the Contracting Authority. The message will specify the name of the selected Tenderer, the reasoning according to the award criteria, and details about the suspensive period. Notification of the agreement award decision will be distributed through TenderNed.

4.8 Suspension / discontinuing Tender

The Contracting Authority reserves the right to suspend or discontinue the Tender procedure at any time. A reason for discontinuing may, for example, be that the political support base and/or financing has ceased. Tenderer will receive a notification from the Contracting Authority about the suspension or discontinuing of the Tender procedure. In exceptional cases, there may be Tender costs reimbursement in the event of termination. The Contracting Authority will contact Tenderer if this is the case.

4.9 Reimbursement of costs

The Contracting Authority will, in principle, not reimburse any costs related to the preparation and submission of the Proposal.

4.10 Confidentiality

Information received from the Contracting Authority during the present Tender must remain confidential and not be shared with third parties, except if publicly available or required by law. Confidential details may be given to Tenderer's employees, consultants, or contractors under a confidentiality clause.

The Contracting Authority is required to treat Tenderer's Proposal as confidential, unless disclosure is mandated by law.

Confidentiality as described in this section will be preserved even if the Tender does not result in an agreement.

Personal data will be exchanged and processed during the Tender in line with GDPR.

All intellectual property rights pertaining to the Tender documents are vested in the Contracting Authority.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

5. LEGAL PROTECTION

A Tenderer may file a complaint during the Tender if they object to the agreement award decision or the procurement procedure.

5.1 Complaints desk / Commission of Tender Experts

During the Tender, Tenderer may file a complaint to the Complaints desk of the Ministry of Infrastructure and Water Management, via: klachten.inkoop@minienw.nl, with a CC to Anouk Suijkerbuijk (suijkerbuijk.Anouk@kpmg.nl). Tenderer is required to clearly identify and provide a rationale for the specific aspect of the Tender to which Tenderer's complaint pertains. Please ensure that Tenderer's complaint includes the following information:

- name and contact details of his organisation;
- name and reference of the Tender in question;
- a description of the complaint and his request (Proposal for a solution);
- any additional attachments.

The complaint will be handled as soon as possible by an independent expert at the Ministry of Infrastructure and Water Management (IenW).

Tenderers should first use the Q&A procedure to raise concerns. If the response from the Contracting Authority is unsatisfactory, a complaint may then be submitted to the Complaints desk.

If Tenderer disagrees with how his complaint is handled by the Complaints desk, Tenderer may submit it to the Committee of Tender Experts. For more details about the Committee's procedures, please visit www.commissievanaanbestedingsexperts.nl.

5.2 Preliminary relief proceedings

If there is an objection to the agreement award decision, preliminary relief proceedings must be initiated with the District Court of The Hague within 20 calendar days from the date the award decision notification is sent. Evidence of this should be provided by sending a copy of the writ of summons to the contact person for this Tender. In such cases, the Contracting Authority will postpone awarding the agreement until a judgement is rendered in the preliminary relief proceedings.

The 20-day period constitutes an expiry term. Failure to initiate preliminary relief proceedings within this timeframe results in the forfeiture of the right to contest the award decision. If no Tenderer initiates proceedings within the specified period, the Contracting Authority may proceed to enter into an agreement with the selected Tenderer(s).

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

ABBREVIATIONS AND GLOSSARY

Descriptive Document

The present document in which the Tender is described.

Contracting Authority

State of the Netherlands, Ministry of Infrastructure and Water Management;

Supplier

The Tenderer to whom the agreement is awarded after concluding the present procurement procedure (Tender).

Tender Documents

All documents in a Tender procedure introduced into the procedure by the Contracting Authority;

(Dutch) Public Procurement Act of 2012

The Act of 1 November 2012, which contains new rules on public procurement, Bulletin of Acts and Decrees 2012, 313, as last amended on 22 June 2016, Bulletin of Acts and Decrees 2016, 241 (as of 01-07-2016);

ESPD

A statement as referred to in Article 2.84 (1) of the PPA;

Tender

The present procurement procedure for the acquisition of microbarometers.

Tenderer

An organisation that participates in the present Tender and who will presumably submit a Proposal.

Proposal

A Proposal submitted by the Tenderer based on the Tender Documents as published on TenderNed;

ABBREVIATIONS

ESPD	European Single Procurement Document (ESPD as referred to in Article 2.84 (1) of the PPA).
GDPR	General Data Protection Regulation
KNMI	Royal Netherlands Meteorological Institute
PPA	Dutch Public Procurement Act of 2012
RDSA	Seismology and Acoustics Department
SoR	Schedule of requirements

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

- APPENDIX 1 DRAFT AGREEMENT

The draft agreement has been included in a separate PDF file.

- APPENDIX 2 GENERAL TERMS AND CONDITIONS

The general terms and conditions ARIV 2018 have been included in a separate PDF file.

- APPENDIX 3 SCHEDULE OF REQUIREMENTS

The Schedule of Requirements has been included in a separate PDF file.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

APPENDIX 4 NOT APPLICABLE

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

APPENDIX 5 ESPD

The European Single Procurement Document (ESPD) has been separately included in TenderNed.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

APPENDIX 6 MODEL REFERENCE PROJECTS

Reference for the purpose of Tender:

Delivery of Microbarometers for upgrades and expansion of the KNMI monitoring network

Supplier data		
1.	Name of supplier	
	Adres	
	Postcode and town/city	
	Country	
2.	Name of supplier's contact person	
	Position	
	Telephone number	
	Email address	
3.	Additional information on supplier/referee	
Agreement details		
4a.	Name of contractor reference projects <i>Please provide Tenderer's own name and/or the name(s) of the subcontractor(s) supporting Tenderer as part of this reference projects.</i>	
4b.	If applicable: Names of participants in partnership reference projects (name of partnership). <i>If the reference projects were performed in a partnership, indicate who performed which part of the reference projects.</i>	
5.	Description and reference number of the agreement. <i>Also describe the results achieved here (consider quantity, delivery times, etc.)</i>	
6.	Enter the term of the agreement here, including the start and end dates.	
Competency		

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

7.	This reference project meets the requested core or other competencies: Experience with similar deliveries of microbarometers must be demonstrated through relevant reference projects. This reference project fulfils the following core competencies: The Tenderer must prove experience with deliveries that together represent: <input type="checkbox"/> at least 30 units of the digital microbarometers. <input type="checkbox"/> at least 3 units of the analogue microbarometers.	
8.	I will demonstrate this competency with third-party support*: This reference project fulfils the following core competencies: The Tenderer must prove experience with deliveries that together represent: <input type="checkbox"/> at least 30 units of the digital microbarometers. <input type="checkbox"/> at least 3 units of the analogue microbarometers. *Please indicate as applicable for each core competency. Kindly be advised that the third parties need to supply an ESPD through the main-contractor to be added to the Proposal of said main-contractor.	
Signature Tenderer²		
9.	Thus, drawn up truthfully,	
	Name of organisation	
	Name of authorised signatory	
	Signature	
	Place and date	

² In the case of partnerships, the corresponding author of the partnership (Section 2.1.2) should sign the model reference projects on behalf of all participants of the partnership.

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

APPENDIX 7 NOT APPLICABLE

Ministry of Infrastructure and Water Management

Royal Netherlands Meteorological Institute (KNMI)

European Public Procurement Procedure: Microbarometers for upgrades and expansion of the KNMI monitoring network

APPENDIX 8 PRICE SHEET

The Price sheet has been included as a separate appendix to be completed separately.