

Invitation to Tender

For the purpose of the
open European tender

for the

Acquisition of an Absolute Quantum Gravimeter



**Quantum
Delta NL**

Version : 1.0

Date : October 15, 2025

Table of contents

Part I – Invitation to Tender (ITT)	5
1. Introduction	5
2. Contracting Authority	5
3. Object of the Contract	5
4. No combining of contracts and no distinction in lots	6
5. Contract Type	6
6. Procedure	6
6.1 Procurement Procedure	6
6.2 Timeline of the Tender	6
6.3 Submission Language and Format	7
6.4 Contact details	7
6.5 Submitting Tenders and opening	7
6.6 Opportunity to request clarifications on the Tender Documents	7
6.7 Award decision	8
6.8 Verification of supporting documentation	8
6.9 Complaints	8
7. Procedural Aspects, Grounds for Exclusion and Selection Criteria	9
7.1 Step 1: Assessment of the Procedural aspects	9
7.2 Step 2a: No Russian entities	9
7.3 Step 2b: Assessment of the ESPD (UEA)	9
7.4 Grounds for Exclusion (part III of ESPD (UEA))	10
7.5 Step 3: Selection Criteria (minimum levels of suitability) (part IV of the ESPD (UEA))	10
7.5.1 Minimum levels regarding financial and economic ability	10
7.5.2 Professional authorization: registration in professional or trade register	11
8. Structure of Tender Dossier	11
9. Evaluation and ranking of the valid Tenders	11
9.1 Step 4: Assessing conformity and ranking based on Award Criteria	11
9.1.1 Step 4a: Conformity with the specifications	12
9.1.2 Step 4b: the economic most advantageous Tender: best price-quality ratio	12
Part II – Annex A: Technical Specifications	16
1. Preamble	16
2. Background and Purpose	16
2.1 Context	16
2.2 Object of the Contract	16

3. Technical and Functional Requirements.....	16
3.1 Measurement Performance.....	16
3.2 Deployment and Operation.....	17
3.3 Control, Data and Diagnostics	17
3.4 Power Requirements	17
3.5 Thermal Requirements	17
3.6 Dimensions and Weight.....	17
3.7 Documentation, Training, and Maintenance.....	18
4. Project Execution.....	18
4.1 Delivery Deadline.....	18
4.2 Implementation Phases and Milestones.....	18
4.3 Meetings and Communication	18
4.4 Delivery and Installation Site.....	18
4.5 Factory Supervision	19
5. Warranty and After-Sales Service	19
5.1 Standard Warranty	19
5.1.1 Duration.....	19
5.1.2 Coverage.....	19
5.1.3 Replacement Conditions.....	19
5.1.4 Service and Support.....	19
5.1.5 Factory Returns.....	19
5.2 Optional Warranty Extension	20
5.2.1 Extension Right	20
5.2.2 Offer Requirement	20
5.2.3 Coverage of Extension	20
6. Sustainability Requirements	20
Part III – Annex B: Administrative Provisions	21
1. Object of the Contract.....	21
2. Contract Form and Procedure	21
3. Duration.....	21
4. Contractual Documents	21
5. Execution of Services.....	21
5.1 Contacts.....	21
5.2 Obligations of the Contractor	22
5.3 Packaging, Transport, and Insurance	22
5.4 Acceptance	22

6. Property and Warranty	22
7. Financial Terms	22
7.1 Price	22
7.2 Payment Schedule	22
7.3 Penalties	22
7.4 Invoicing and Payment	22
8. Miscellaneous	23
8.1 Language	23
8.2 Intellectual Property	23
8.3 Insurance	23
8.4 Subcontracting	23
8.5 Amendments	23
8.6 Termination	23
9. Dispute Resolution	23

Part I – Invitation to Tender (ITT)

1. Introduction

Quantum Delta NL (QDNL) is launching a public procurement procedure for the acquisition of 1 Absolute Quantum Gravimeter, i.e.: delivery, installation, warranty and related services.

This instrument will be delivered and commissioned in the framework of the European project EQUIP-G (HORIZON-CL4-2024-DIGITAL-EMERGING-02-101215427), which aims to deploy a network of robust, user-friendly quantum gravimeters across Europe.

The present procedure is carried out as an open EU tender, governed by the Dutch Public Procurement Act (Aanbestedingswet 2012).

This Invitation to Tender has been published on www.tenderned.nl and in the Supplement of the Official Journal of the European Union.

The Contracting Authority invites Tenderers to submit a Tender. Submissions must be based on the information in this Invitation to Tender and the rest of the Specifications. Tenderers (also: Candidates) must meet the requirements set.

2. Contracting Authority

Quantum Delta NL (QDNL)
Elektronicaweg 10
2628 XG Delft
The Netherlands

3. Object of the Contract

The object of this Tender is the supply, installation, commissioning, and warranty of 1 Absolute Quantum Gravimeter (the instrument), in accordance with the requirements set in:

- Annex A – Technical Specifications
- Annex B – Administrative Provisions

Please note: the final delivery date of the instrument is: March 16th, 2026. Delivery must take place in Paris, France, at the following site:

LNE
Bâtiment Maxwell
ZA de Trappes Elancourt
27 avenue Roger Hennequin
78 197 Trappes Cedex

4. No combining of contracts and no distinction in lots

This Tender concerns solely the supply, installation, commissioning and warranty of **1** Absolute Quantum Gravimeter, including services directly related to this specific instrument. For the same reason, no distinction has been made between lots within the Contract.

5. Contract Type

- **Type:** Fixed price (lump sum) for the delivery, installation, commissioning and warranty of the instrument, except services / after sales that exceed the (extended) warranty.
- **Legal framework:** This Invitation to Tender takes place with due observance of and in accordance with the Public Procurement Act 2012 (Aanbestedingswet 2012).
- **General conditions:** GENERAL GOVERNMENT PURCHASING CONDITIONS 2018 (ARIV 2018), available via PIANOo: [ariv 2018-engels-mei2018.pdf](#) (clickable).

6. Procedure

6.1 Procurement Procedure

This is a European Tender in accordance with the open procedure. This means that all economic operators who meet the requirements (i.e. procedural rules, exclusion grounds, selection criteria (setting the minimum levels of suitability) and the specifications that can be found in Annex A and B) may submit a Tender. For more information on the tendering procedure, please read Annex G: Rules of the tendering procedure.

6.2 Timeline of the Tender

Activity	Final date + time (C.E.T.)
Invitation to Tender	15 October 2025
Final submission deadline for questions round 1	28 October 2025: EOD*
Publication questions and answers round 1	5 November 2025
Final submission deadline for questions round 2	7 November 2025 EOD*
Publication questions and answers round 2	14 November 2025
Closing date Tenders	24 November 2025 12:00 C.E.T.
Award decision	28 November 2025
Standstill period	29 November -18 December 2025: EOD*
Contract	19 December 2025
Final delivery date	16 March 2026

*End of day

Please note: Tenders that are submitted after the closing date will not be accepted.

6.3 Submission Language and Format

Tenders must be submitted in English in electronic format (PDF). The entire Tender process will be conducted digitally via TenderNed. This means, among other things, that:

- a. All tender documents can be found on TenderNed.
- b. Clarification questions shall be submitted in writing via TenderNed.
- c. Tenders must be submitted via TenderNed in a digital safe.
- d. All further correspondence will also partake via TenderNed.

In case Tenderers experience any technical difficulties or have questions about the operation of TenderNed, they can contact the TenderNed service desk.

After the award decision, the Contracting Authority will request Verification Documents from the winning Tenderer. These must also be submitted in TenderNed.

6.4 Contact details

During the tendering procedure, Hidde van de Weg, or his replacement Armaan Jangbahadoer Sing is your sole point of contact. It is not allowed to seek contact with employees and representatives of the Contracting Authority, other than the persons mentioned here, for information on this Invitation to Tender. All communication needs to be addressed via TenderNed. If this is not possible due to technical reasons, then Tenderers are permitted to communicate via ea@pro10.nl.

6.5 Submitting Tenders and opening

The Tender must be submitted and received by the Contracting Authority no later than the date and time indicated in TenderNed. The date and time are strict deadlines. After closure of the term for submitting Tenders, it is (technically) no longer possible to submit Tenders. Tenders that are submitted too late can and will not be accepted.

The Contracting Authority will open the Tenders as soon as possible after the closing date and time. Tenderers cannot be present at the opening of the Tenders, as this is a procedural formality.

6.6 Opportunity to request clarifications on the Tender Documents

The Contracting Authority is pleased to invite Tenderers to submit clarification questions. Questions must be submitted via TenderNed. To ensure proper processing, each question must be submitted separately, with a clear reference to the section of the Tender Documents to which the question relates and without mentioning any company details. The Contracting Authority will answer questions submitted on time. The final dates for submitting questions for the first and second rounds of clarifications are indicated in the schedule above and on TenderNed.

The Contracting Authority publishes the clarifications without disclosing the name of the questioner and reserves the right to modify questions for that purpose. The Contracting

Authority does not guarantee anonymity, for example because the questioner's identity can be derived from technical questions.

6.7 Award decision

The Contracting Authority will announce the (provisional) award decision in writing as soon as possible. The Contracting Authority will notify all Tenderers of the award decision at the same time. The rejected Tenderers will receive the notification of the award decision along with the reasons for the rejection and the name of the winning Tenderer.

Pursuant to Section 2.129 of the Public Procurement Act 2012, notification of the (provisional) award decision does not entail acceptance of a Tenderer's offer. During a period of 20 calendar days after sending the notification of the award decision, the Contracting Authority is not allowed to award the Contract and to enter into an Agreement with the winning Tenderer. If preliminary relief proceedings are instituted within the term, also referred to as the standstill period, which must be evidenced by sending a copy of the writ, the Contracting Authority will not award the Contract until a judgment has been given in the preliminary relief proceedings. The term of 20 calendar days is an expiry period. If no preliminary relief proceedings have been instituted within this term, the rejected Tenderers can no longer object against the decision, and they will have forfeited their rights. In that case, the Contracting Authority will be free to definitively award the Contract.

Finally, the Contracting Authority is in no case obliged to award the Contract.

6.8 Verification of supporting documentation

In the verification stage, during the standstill period mentioned above, the Contracting Authority *can* request supporting documents to verify the information the Tenderer has provided in the context of this tendering procedure. The supporting documents requested must be provided within the term set by the Contracting Authority of five working days. If it turns out that the Tenderer cannot provide supporting documents or has given incorrect information, this may lead to exclusion from participation in the tendering procedure.

6.9 Complaints

In the context of the tendering procedure, there may be discontent between the Contracting Authority and the Tenderers regarding how the parties act or acted during the procedure. This may lead to a complaint. The Contracting Authority has set up a complaint reporting centre where interested parties can report complaints in respect of the tendering procedure. Complaints must be submitted in writing to the complaints reporting centre by sending an email to ea@pro10.nl. Submitting a complaint will not stop the tendering procedure. The Contracting Authority is free to decide whether to suspend the tendering procedure or not. In case the complaining interested party also institutes preliminary relief proceedings regarding the complaint, the handling of the complaint by the complaints reporting centre will be suspended until after judgment has been given by the court.

For more information on the complaint procedure, please read Annex G: Rules of the tendering procedure.

7. Procedural Aspects, Grounds for Exclusion and Selection Criteria

For the assessment of the Tenderers and the Tenders, Procedural Aspects, Grounds for Exclusion and Selection Criteria (minimum levels) are applied in succession to assess whether or not the Tenderer/ Tender is valid and can be ranked based on the Award Criteria. This chapter describes the manner in which it is determined whether a valid Tender has been submitted. The next chapter regards the Award Criteria.

7.1 Step 1: Assessment of the Procedural aspects

The Tenders are first checked for the format requirements. It is obligatory to meet the format requirements. The Contracting Authority reserves the right not to (further) accept Tenders that do not meet these requirements or that are incomplete or incorrect.

The Procedural Aspects are:

- The Tender must be submitted **in time** in TenderNed.
- The Tender must be complete.
- The Tender must be drawn up in English.
- By submitting the Tender or during the preparation of submitting the Tender the Tenderer did not violate any Procedural Aspect set in the Tender Documents.

7.2 Step 2a: No Russian entities

The Contracting Authority is obliged to prevent, by awarding or payment, any direct or indirect (financial) involvement in the war in Ukraine. In this regard, the Contracting Authority shall refrain from entering into an Agreement with any Tenderer subject to the European Union sanctions package, including any Consortium involving one or more economic operators falling within the scope of such sanctions. The Contracting Authority may request proof that the Contract does not involve any Russian participation or interest. The Contracting Authority may therefore ask for supplementary evidence.

7.3 Step 2b: Assessment of the ESPD (UEA)

The Tenders will be checked on the presence, the filling in and the legally valid signature of the ESPD (UEA). In the ESPD (UEA), the Tenderer declares that the Grounds for Exclusion that are applicable to this Invitation to Tender are not applicable on the Tender/Tenderer submitted. The Tenderer also declares that it meets the applicable Selection Criteria (minimum levels), technical specifications and terms and conditions of performance as described in the Tender Documents.

Please: after the award decision, the Tender of the winning Tenderer will be verified regarding the declarations in the ESPD (UEA). This is the so-called verification stage. This will concern the following documents or declarations (see Section 2.89 of the Public Procurement Act 2012):

1. An extract from the Chamber of Commerce or a registration in the professional or trade register of the country of establishment. The extract or proof of registration cannot be older than 6 months, calculated from the closing date of the Tender.
2. A certificate of conduct for procurement issued by the Ministry of Security and Justice. The certificate of conduct for procurement cannot be older than 2 years, calculated from the closing date of the Tender.
3. Performance of Tax Obligations Payment History Report, issued by the Tax and Customs Administration. The report cannot be older than 6 months, calculated from the closing date of the tender.

7.4 Grounds for Exclusion (part III of ESPD (UEA))

The Tenderer must state that none of the set Grounds for Exclusion apply by completely filling in and signing the ESPD (UEA).

If one or more Grounds for Exclusion are applicable on a Tenderer, the Tenderer will be excluded from the tendering procedure, unless a legal exception applies after the award decision, the winning Tenderer must submit further documents so that the Contracting Procurement Act (cf. par. 7.3).

7.5 Step 3: Selection Criteria (minimum levels of suitability) (part IV of the ESPD (UEA))

Selection Criteria (minimum levels) are intended to determine whether the Tenderer is suitable to perform the delivery/service requested. It concerns Tenderer's:

- Financial and economic ability
- Technical competence and/or professional competence
- Professional authorisation: registration in professional or trade register

By checking the following sections in part IV of the ESPD (UEA): 'meets the prescribed selection criteria', the Tenderer declares that it meets the set Selection Criteria (minimum levels). Only Tenders that meet the set Selection Criteria (minimum levels) continue for further assessment to step 3 of the assessment – see section. If the Tenderer does not meet one or more Selection Criteria (minimum levels), the Tender will not be assessed further, and the Tenderer will not be eligible for award of the Contract.

7.5.1 Minimum levels regarding financial and economic ability

- ✓ *Insurance:* By signing the ESPD (UEA), Tenderers declare that they have business liability (including product liability) insurance or a statement from an insurance company, showing coverage relating to business liability. The minimum coverage must be € 2.500.000 per occurrence and 5.000.000 per year.

If the criterium above is not fulfilled by a Tenderer, the Tenderer will be excluded from the tendering procedure. After the award decision, the winning Tenderer must submit further documents so that the Contracting Authority can verify the validity of the statement given.

If the Tenderer belongs to a concern/holding company and uses the economical capability of the concern/holding company in order to complete the financial criterium above, a liability statement should be enclosed, showing that the concern or holding guarantees irrevocably and unconditionally that in the event of a selected Tender it will fulfil any obligations arising from the Agreement to be concluded. The statement should be signed by an authorized signatory. The Contracting Authority reserves the right to examine the statement for correctness after the award decision is made.

7.5.2 Professional authorization: registration in professional or trade register

By signing the ESPD (UEA), Tenderers, meaning all Combination Members if applicable, declare that the company is registered in the national professional or trade register. If not, the Tender will be excluded. After the award decision is made Tenderers must submit a certified statement of trade register of the registration of the company in the national professional or trade register. This evidence of registration must not have been issued more than 6 months before the closing date.

8. Structure of Tender Dossier

This Invitation to Tender is accompanied by:

- Annex A – Technical Specifications (below)
- Annex B – Administrative Provisions (below)
- Annex C – Price form (attached separately)
- Annex D – [General Government Terms and Conditions \(ARIV-2018\) \(click\)](#)
- Annex E – Declaration of Conformity (attached separately)
- Annex F – Definitions (attached separately)
- Annex G – Rules of tendering procedure (attached separately)

9. Evaluation and ranking of the valid Tenders

This chapter describes the assessment of the Tenders based on both the Technical and Administrative specifications (cf. Annexes A and B below) and the Award Criteria (set out in this chapter). Which Tenderer has submitted the most economically advantageous Tender and is eligible for award of the Contract will be determined because of fulfilling the minimum requirements, the additional quality and the price.

9.1 Step 4: Assessing conformity and ranking based on Award Criteria

After the Tenderers have been assessed positively in steps 1, 2 and 3 (see above, the validity of each remaining Tender will be assessed based on:

- conformity with technical and administrative specifications set out in Annex A and B.
- the Award Criteria, to be found below.

9.1.1 Step 4a: Conformity with the specifications

All specifications in the Annexes A and B are so-called knock-out requirements, unless explicitly stated otherwise. Knock-out means that Tenders that do not meet the requirements set will not be further assessed by the Contracting Authority and cannot be awarded the Contract. No points can therefore be scored on the specifications in Annexes A and B. The Tenderer conforms with the requirements set unconditionally and without reservations by filling in 'Yes' on each and every line in the Declaration of Conformity Form attached. This document needs to be signed by a legal representative.

Please note 1: Submission of a Tender implies full acceptance of the terms and conditions set out in this Invitation to Tender and its Annexes and including the Clarifications given by the Contracting Authority during the tendering phase. Tenderers must comply with these terms of conditions fully and unconditionally. If not, the Tenders will be excluded from further evaluation and thus from the tendering procedure. A Tender under different conditions is not permitted. Variants are not permitted.

Please note 2: Tenders are obliged to include all the relevant product and services information in their Tender that is needed for the Contracting Authority to be able to determine whether the instrument and related services offered comply with the specifications required. This includes an implementation plan including milestone planning, aligning with section 4 of Annex A.

9.1.2 Step 4b: the economic most advantageous Tender: best price-quality ratio

The **best price-quality ratio** is used as the award criterion for this tender. This means that both the price and the quality of the remaining Tender are evaluated in step 4b. The table below shows what Award Criteria are used and what the relative weighting is. This weighting is converted into the maximum number of points obtainable per Award Criterion. The total of the points obtained decides which Tender has the best price-quality.

Description	Max. score
1. Extended warranty	20 points per 12 months extra with a <i>maximum of 80 points</i>
2. Quality of after sales services	60 points if evaluated 'Excellent', 42 points if evaluated 'Good' 24 points if evaluated 'Sufficient' 0 points if evaluated 'Insufficient'

3. Quality of sustainability and environmental measures	30 points if evaluated 'Excellent', 21 points if evaluated 'Good' 12 points if evaluated 'Sufficient' 0 points if evaluated 'Insufficient'
4. European integration and ecosystem contribution	30 points if evaluated 'Excellent', 21 points if evaluated 'Good', 12 points if evaluated 'Sufficient' 0 points if evaluated 'Insufficient'
5. Fixed-price for timely and ready-to-use Delivery and Installation of the instrument	240
Maximum amount of points:	440

On 1. Extended warranty.

Tenderer is asked to provide the amount of extended warranty – on top of the 12 minimally required months per period of 12 months, with a maximum of 48 months in the Price Form attached. For every 12 months extended warranty: Tenderer receives 20 points, with a maximum of 80 points. **Please note: Extended** warranty shall provide identical coverage as required in section 5.1 of Annex A.

On 2. Quality of after-sales services.

Tenderer is asked to describe the organisation and added value of the after sales services. The answer will be evaluated on a 4-point scale, following the evaluation scheme below.

On 3. Quality of sustainability and environmental measures in every stage.

Tenderer is asked to describe how the ecological impact of the instrument, including logistics and related services is minimized, by at least addressing:

- Responsible waste treatment.
- Energy-efficiency.
- Recyclable materials.
- Environmentally friendly transport.
- Other measures that contribute to minimizing ecological impact.
- How measures are effectively implemented, and results are reported.
- Taken into account the entire supply chain and the influence Tender has in every stage of the production process.

The answer will be evaluated on a 4-point scale, following the evaluation scheme below.

On 4. European integration and ecosystem contribution.

The Tenderer is asked to describe to what extent the proposed solutions contributes to European strategic autonomy and strengthens the European industrial and technological ecosystem. The assessment focuses on the integration of European Components and Know-how, such as software, technologies, specialized know-how that software, technologies, or specialised know-how that originate from European developers or manufacturers in the proposed equipment or system. And the assessment focusses on: Contribution to the European Ecosystem. The tenderer's contribution to collaboration within the European innovation and industrial ecosystem (including partnerships, participation in EU-funded programmes, research cooperation, knowledge exchange, or involvement in European value chains). The offer will be evaluated based on the quality and substantiation of the description provided, as well as the added value it brings to the achievement of the project objectives (e.g. EQUIP-G), and to the broader goals as defined in the relevant EU call (such as *HORIZON-CL4-2024-DIGITAL-EMERGING-02-01*).

The tenderer shall, at a minimum, provide information on:

1. The share and origin of European technology, components, and know-how in the proposed solution;
2. The tenderer's role within the European industrial, research, or innovation ecosystem;
3. Existing or planned cooperation with European partners (industry, research organisations, consortia);
4. The added value of the solution for achieving the specific project goals and EU policy objectives.

The answer will be evaluated on a 4-point scale, following the evaluation scheme below.

Evaluation scheme criteria 2., 3 and 4.

Appreciation	%Points	Explanation
Excellent	100%	The interpretation is clear, understandable, realistic and measurable. In the opinion of the assessment committee, the interpretation will lead to an excellent result. The Tenderer demonstrably adds significant value with its interpretation, in the opinion of the assessment committee.
Good	70%	The interpretation is clear, understandable, realistic and measurable. In the opinion of the assessment committee, the interpretation will lead to a good result. The interpretation demonstrably adds some value, but in the opinion of the assessment committee, no more than that.
Sufficient	40%	The response is less clear, understandable, realistic or measurable in some areas, but will, in the opinion of the assessment committee, lead to a satisfactory result. There is room for improvement and/or the added value is too limited to justify a higher rating.
Insufficient	Knock out	The interpretation is insufficiently clear and/or understandable and/or will, in the opinion of the assessment committee, lead to an insufficient result.

On 5. Fixed price for timely and ready to use Delivery of the instrument.

Tenderers are asked to offer a fixed price, based on lump sum, for the timely and ready-to-use-Delivery of the instrument in the Price Form. This price will be the basis for granting.

The prices must be all-in. This must in any case include the following costs: salary costs, overhead costs, telephone costs/online costs, costs for travel time and supporting work, costs for using equipment and software, customs, parking, travel, installation and delivery costs, logistical costs and costs for all the services and parts needed during the warranty period, included the extended warranty if offered in the Price Form. All prices and rates must be offered in euro and inclusive VAT.

The Contracting Authority points out that submitting manipulative tenders is not allowed, and that the format of the price list may not be changed.

Please note 1: In addition to the price offered in the Price Form open cost calculation must be included in the Tender. In case of any discrepancies, the information in the Price Form counts.

Please note 2: Tenderers are asked to include complete information on the conditions and prices for after sales / services options that exceed the terms and period of warranty.

For granting the points on the price-criterion the following formula will be used:

$$\text{SCORE} = 240 - ((\text{PRICE Tender} - \text{PRICE Lowest Tender}) / \text{PRICE Lowest Tender}) * 240$$

If for any reason whatsoever the Tender that obtained the highest score in ranking is cancelled or is excluded from participation, a recalculation will be made because of prices that are then considered to be the lowest highest.

Part II – Annex A: Technical Specifications

Contracting Authority: Quantum Delta NL (QDNL), Elektronikaweg 10, 2628 XG Delft, The Netherlands

Subject: Acquisition of an Absolute Quantum Gravimeter

1. Preamble

The Contractor undertakes to perform the contract in strict compliance with the contractual documents, including confidentiality, professional qualifications, and insurance requirements.

The Contractor shall be solely responsible for obtaining all required legal authorisations and professional qualifications. Any deficiency in such qualifications may result in termination by the Contracting Authority.

2. Background and Purpose

2.1 Context

As part of the European project EQUIP-G (HORIZON-CL4-2024-DIGITAL-EMERGING-02-101215427), a consortium of 20 partners across 11 EU countries will develop and deploy a network of robust and user-friendly quantum gravimeters.

This initiative represents the first step toward establishing the terrestrial segment of a pan-European quantum gravimetry infrastructure, based on a shared instrument park. Instruments will undergo extensive testing prior to deployment and will contribute to EU priorities such as the Green Deal, energy management, and risk mitigation.

All measurements shall be SI-traceable under metrological supervision. Data will be managed according to FAIR principles, with the long-term goal of integration into EPOS.

2.2 Object of the Contract

The purpose of the contract is the supply, installation, commissioning, and warranty of one robust, commercial absolute quantum gravimeter based on atomic interferometry.

3. Technical and Functional Requirements

3.1 Measurement Performance

Accuracy: better than $150 \text{ nm} \cdot \text{s}^{-2}$, demonstrated in intercomparisons.

Sensitivity (Allan deviation): better than $2\,000 \text{ nm} \cdot \text{s}^{-2} \tau^{-1/2}$, reaching $10 \text{ nm} \cdot \text{s}^{-2}$ within 10^5 s .

Measurement cycle: $< 1 \text{ s}$.

Performances supported by peer-reviewed publications.

Continuous operation and data acquisition for periods longer than one year.

3.2 Deployment and Operation

Installation and start-up within 30 minutes.

Operable by technicians without specialised quantum training.

Key functions automated to minimise operator intervention.

3.3 Control, Data and Diagnostics

Operable by technician-level staff.

Control interface on a supplied laptop, accessible remotely via the internet.

Data synchronised to UTC where available.

At instrument sampling frequency, the following data must be provided:

- Raw gravity measurements.
- Instrumental corrections (verticality, systematic effects).
- Geophysical corrections (pressure, tides, atmospheric effects, Earth rotation irregularities).

Must support:

- Diagnostic data logging.
- Remote access for diagnostics by the Contractor.

3.4 Power Requirements

Power supply: 230 VAC, 50 Hz, single phase.

Power consumption in measurement mode: < 500 W.

3.5 Thermal Requirements

Operating range: 0–40 °C.

Must include internal temperature regulation.

Lasers must be fibre-coupled.

3.6 Dimensions and Weight

Transportable by two persons.

Measurement chamber separable from control unit without shutdown.

Chamber footprint: $\leq 0.2 \text{ m}^2$.

Chamber weight: $\leq 40 \text{ kg}$.

Chamber must be storable offline (no power) for several months.

3.7 Documentation, Training, and Maintenance

Contractor to provide:

- User and operation manual.
- Maintenance manual.
- Factory test report including accuracy assessment.

Contractor to provide training on delivery, covering:

- Daily operation.
- Data handling and diagnostics.
- Preventive and corrective maintenance.

4. Project Execution

4.1 Delivery Deadline

Delivery must take place no later than March 16th, 2026.

4.2 Implementation Phases and Milestones

<i>Milestone</i>	<i>Deadline</i>	<i>Deliverable</i>
Completion of vacuum chamber	T0 + 1 months	Progress meeting
First gravity measurement	T0 + 2 months	Test report
Delivery of instrument	T0 + 3 months (T1)	Factory test report
On-site testing and training	T1 + 1 month	Acceptance report & training certificate

4.3 Meetings and Communication

Kick-off meeting within 10 days of award decision.

Progress meetings at each milestone (remote or in Delft).

4.4 Delivery and Installation Site

LNE
Bâtiment Maxwell
ZA de Trappes Elancourt
27 avenue Roger Hennequin
78 197 Trappes Cedex
France

4.5 Factory Supervision

QDNL reserves the right to perform supervision at the Contractor's premises. Supervision is not equivalent to acceptance.

5. Warranty and After-Sales Service

5.1 Standard Warranty

5.1.1 Duration

Minimum 12 months from final acceptance.

If the Contractor's offer provides longer coverage, the longer term applies.

5.1.2 Coverage

Covers, without limitation:

Defective parts (full cost).

Labour for repair or replacement.

Travel and on-site intervention costs.

Expert costs incurred by QDNL for defect analysis.

5.1.3 Replacement Conditions

Replacement equipment must be identical in brand, model, and software version.

Equivalent substitutions only with prior written approval by QDNL.

Spare parts may be shipped for local replacement with Contractor's remote assistance.

5.1.4 Service and Support

24/7 access to a qualified technician or engineer. Responses are expected within 2 working days, and diagnosis solutions within 5 working days.

Timely repair or service restoration guaranteed. Repair is required within 15 working days.

Annual preventive and corrective maintenance during warranty.

All software updates free of charge.

5.1.5 Factory Returns

If factory repair is required, round-trip (within the Continental EU) shipping costs are borne entirely by the Contractor during the warranty period.

5.2 Optional Warranty Extension

5.2.1 Extension Right

QDNL may request an extended warranty and service contract beyond the initial 12 months.

5.2.2 Offer Requirement

Contractor shall include in its tender submission clear terms and pre-agreed pricing for extension (e.g. 12-month increments).

5.2.3 Coverage of Extension

Extended warranty shall provide identical coverage as in section 5.1.

6. Sustainability Requirements

Contractor shall comply with applicable EU and Dutch regulations on environment, health, and safety, and minimise ecological impact by:

Responsible waste treatment.

Energy-efficient equipment.

Recyclable materials.

Environmentally friendly transport.

End of Annex A – Technical Specifications

Part III – Annex B: Administrative Provisions

Contracting Authority: Quantum Delta NL (QDNL), Elektronikaweg 10, 2628 XG Delft, The Netherlands

Subject: Acquisition of an Absolute Quantum Gravimeter

1. Object of the Contract

This contract concerns the supply, installation, commissioning, and warranty of one absolute quantum gravimeter as described in Annex A – Technical Specifications.

2. Contract Form and Procedure

Type: Fixed price (lump sum) for the delivery, installation, commissioning and warranty of the instrument, except services / after sales that exceed the (extended) warranty.

Legal framework: This Invitation to Tender takes place with due observance of and in accordance with the Public Procurement Act 2012 (Aanbestedingswet 2012).

General conditions: GENERAL GOVERNMENT PURCHASING CONDITIONS 2018 (ARIV 2018), available via PIANOo: [ariv 2018-engels-mei2018.pdf](#) (clickable).

3. Duration

Effective from notification.

Remains valid until obligations are fulfilled, including warranty.

Delivery and installation no later than March 16th, 2026..

4. Contractual Documents

Precedence order:

Signed contract and financial annex.

Annex B – Administrative Provisions.

Annex A – Technical Specifications.

ARIV-2018.

Contractor's winning offer.

Written addenda or amendments.

5. Execution of Services

5.1 Contacts

Both parties designate contact persons for contract monitoring.

5.2 Obligations of the Contractor

Duty of care and information.

Result obligation regarding delivery, costs, and quality.

Confidentiality of all project-related information.

5.3 Packaging, Transport, and Insurance

Responsibility lies fully with the Contractor until acceptance.

5.4 Acceptance

Verification and acceptance by QDNL within 30 days of delivery.

If there is no response, acceptance is deemed granted.

6. Property and Warranty

Ownership transfers after payment and acceptance.

Minimum warranty: 12 months (as detailed in Annex A).

Includes spare parts, labour, travel, annual maintenance, and updates.

7. Financial Terms

7.1 Price

Fixed lump sum in euros, including VAT.

Includes packaging, transport, insurance, and all execution costs.

7.2 Payment Schedule

1. 25% – vacuum chamber (T0 + 1 months).
2. 25% – first gravity measurement (T0 + 2 months).
3. 25% – delivery of instrument (T0 + 3 months).
4. 25% – acceptance and training (T1 + 1 months).

7.3 Penalties

Delivery delay: 0.1% of contract value per day (max. 20%).

Warranty intervention delay: 0.2% per working day (max. 20%).

7.4 Invoicing and Payment

Invoices in English or Dutch.

Payment within 30 days of QDNL approval.

Statutory interest (BW 6:119a) applies to late payments.

8. Miscellaneous

8.1 Language

All documents may be in English.

8.2 Intellectual Property

QDNL holds rights to measurement results for project use. Commercial exploitation remains with the Contractor unless agreed otherwise.

8.3 Insurance

Contractor must maintain valid liability insurance.

8.4 Subcontracting

Permitted only with prior written approval by QDNL.

8.5 Amendments

Valid only by written addendum.

8.6 Termination

QDNL may terminate in cases of breach, delay, or insolvency.

9. Dispute Resolution

Dutch law applies.

Parties shall first attempt amicable settlement.

Failing settlement, disputes fall under the jurisdiction of the District Court of The Hague (Rechtbank Den Haag).

End of Annex B – Administrative Provisions