

Descriptive document

Ultra High Vacuum Scanning Probe Microscope

European tendering according to public
procedure

Performed by:	ARCNL
On behalf of:	NWO-I
Date:	27-10-2025
Status:	Final
Version:	1.0

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Definition of terms

In this document and its annexes, the following terms, if indicated with an initial capital, have the following meanings ascribed to them:

Agreement

The agreement between the Client and the Contractor for the delivery of one or more products or for the provision of a service, as described in the Descriptive Document

Annexes

Annexes form an integral part of the Descriptive Document.

Assignment

The subject of this tendering procedure as described in the Specifications.

Award Criteria

The criteria on the basis of which the best price-quality ratio is determined

Candidate

An interested party in this tendering procedure.

Client

The client, in this case ARCNL, who concludes the Agreement with the Contractor.

Contracting authority

The Foundation of Dutch Scientific Research Institutes (NWO-I), on behalf of ARCNL.

Contractor

The Tenderer with whom the Client concludes the Agreement in the context of this tendering procedure.

Combination

Partnership of businesses that submit one Tender together to provide the products and/or services that are requested in this invitation to tender. These businesses are jointly and severally liable for the performance of all obligations that ensue from the Agreement if the Assignment is awarded to the combination.

Combination Member

A person, business or organisation that forms part of a Combination.

Descriptive Document

This document, including Annexes, in which the Contracting Authority describes the Contract, the tender procedure, the Grounds for Exclusion, the Eligibility Requirements and the Award Criteria. The Descriptive Document forms part of the Specifications

Eligibility Requirements

The requirements on the basis of which the Tenderer's eligibility is tested.

ESPD

European Single Procurement Document.

A statement of the Tenderer on the financial condition, the competencies and the suitability of its business, which is used as provisional proof that the required conditions of the tendering procedure

are met. To limit the administrative burden, the Contracting Authority can request the supporting documents from the winning Tenderer(s) in the verification stage.

Factory Acceptance Test (FAT)

The acceptance test in which Tenderer will demonstrate the UHV SPM at their location, in which two representatives of the contracting authority will visit Tenderer's location for this purpose and Tenderer will demonstrate that the UHV SPM system is capable of achieving all requirements and quality criteria included in Tenderer's offer.

Grounds for Exclusion

The grounds for exclusion from participation in the tendering procedure as referred to in the ESPD. This refers to the grounds for exclusions of Sections 2.86 and 2.87 of the Public Procurement Act 2012.

Proportionality Guide

The guideline as published in the Bulletin of Acts and Decrees 2016, 32830, in which the proportionality principle as referred to in Sections 1.10(3), 1.13(3) and 1.16(3) of the Public Procurement Act 2012 is given content.

Public Procurement Act 2012

Act of 1 November 2012 containing new rules regarding invitations to tender (Public Procurement Act 2012), as published in the Bulletin of Acts and Decrees 2012, 542 and amended by act of 22 June 2016 to amend the Public Procurement Act 2012 in connection with the implementation of Public Procurement Directives 2014/23/EU, 2014/24/EU and 2014/25/EU, as published in the Bulletin of Acts and Decrees 2016, 241. Other information can be found on www.wetten.nl and www.pianoo.nl.

Purchase Conditions

The general purchase conditions of the Contracting authority which apply to the Agreement: General Government Purchasing Conditions 2018 (ARIV 2018).

Site Acceptance Test (SAT)

The acceptance test in which Tenderer will install the UHV SPM system in the Client's lab, where Tenderer will demonstrate that the UHV SPM system is capable of achieving all requirements and quality criteria.

Specifications

All information which has been made available in the tendering environment of TenderNed.

Subcontractor

A supplier/service provider engaged by the Contractor to perform part of the contract, under the responsibility of the Contractor as principal contractor. The Contractor always remains fully responsible and liable for the Contract, the Contract's performance and its results. This subcontractor is not necessarily the Third Party as referred to in the Descriptive Document

Tenderer

A Candidate that has submitted a Tender for this invitation to tender.

Tender

The tender that the Tenderer has submitted by means of the TenderNed platform on the basis of the Specifications.

Terms of Reference

Document with detailed formulation of the mandatory requirements concerning the Assignment. Tenderer must comply to all requirements in order to be eligible for awarding the contract.

Third Party

Another entity the Tenderer relies on in respect of satisfying the Eligibility Requirements. This third party is not necessarily the same as a Subcontractor.

1 Introduction

1.1 General

This Descriptive Document contains information on the European tendering of an Ultra High Vacuum Scanning Probe Microscope (UHV SPM) for ARCNL.

The Contracting Authority invites the Candidates to submit a Tender on the basis of the information in this Descriptive Document and the rest of the Specifications. Tenderers must meet the requirements in this Descriptive Document and the Annexes.

The Contracting Authority performs this European tendering by means of the electronic tendering platform of TenderNed.

1.2 General information of Contracting Authority

ARCNL performs fundamental research, focusing on the physics and chemistry involved in current and future key technologies in nanolithography, primarily for the semiconductor industry. While the academic setting and research style are geared towards establishing scientific excellence, the topics in ARCNL's research program are intimately connected with the interests of the industrial partner ASML.

ARCNL is a public-private partnership established in 2014 by the predecessor of the Foundation of Dutch Scientific Research Institutes / NWO-I (predecessor is Foundation FOM), the University of Amsterdam (UvA), the Vrije Universiteit (VU) and semiconductor equipment manufacturer ASML. In 2022 the University of Groningen (RUG) joined as associate partner. The institute is located at Amsterdam Science Park. The Foundation of Dutch Scientific Research Institutes (NWO-I) is the legal representative of the partnership.

ARCNL combines the best of two worlds. Being a research institute, ARCNL operates in the middle of the academic field. ARCNL shares its scientific output in peer-reviewed journals and at conferences. At the same time, the research questions are inspired by challenges from the semiconductor industry. Driven by Moore's law, lithography technology developed and produced by ASML touches frequently on fundamental limits. Consequently, ARCNL researchers often find themselves working with extreme scientific challenges. ARCNL not only contributes to future technological developments but is also in the position to shorten the time between invention and possible application.

1.3 Reason and purpose of the invitation to tender

The Contracting Authority's objective is to enter into an Agreement for the supply of an Ultra High Vacuum Scanning Probe Microscope. The purpose of this tender is to conclude an agreement with one Tenderer for the performance of the Assignment as defined and specified in the Tender Documents. The Contract will be awarded to the Tenderer with the most economically advantageous Tender. The most economically advantageous Tender will be determined on the basis of the best price-quality ratio.

Subscription to part or parts of the Assignment is not possible.

2 The Assignment

2.1 Description

2.1.1 *Within the scope of the Assignment*

The Contracting Authority intends to have the Scanning Probe Microscope operational no later than one (1) year after signing the contract. Given the complexity of such a microscope, the aim is not to develop an instrument (or have one developed) but to link up with a proven concept that matches the requested functionalities.

The Assignment involves the following work:

- Assembly of the microscope on Contractor's premises in accordance with Programme of Requirements and Tender;
- Aftercare phase after delivery at ARCNL;
- Other possible items for delivering the microscope in working order.

2.1.2 *Outside the scope of the Assignment*

The following work activities are related to the Assignment, but do not form part of the scope of the contract:

- Maintenance of the delivered product.

2.2 Clustering, merging and division of lots

2.2.1 *Clustering*

Assignments have not been clustered, because the various components of the Assignment fulfil one economic and technical function.

There is no unnecessary merger of assignments, but only one single contract – namely: the delivery of an Ultra High Vacuum Scanning Probe Microscope.

2.2.2 *Division of lots*

The Assignment has not been divided into lots as this was not found to be suitable. The reasons for this are the same as the Contracting Authority's reasons for combining the various public contracts into the Contract. The different components of the Scanning Probe Microscope must be interoperable, which makes it hard to divide the Assignment into lots. Indeed, if the (amalgamated) Assignment were to be divided into several lots by the Contracting Authority, the benefits of amalgamation would be nullified.

2.3 Magnitude of the Assignment

The indicative value of the Assignment is €495.000,- excluding VAT.

With this estimation, the Contracting Authority is trying to give the most accurate picture possible of the scope of the Contract. No rights can be derived from the estimation.

The maximum price for the Assignment is €530.000,- excluding VAT.

By submitting an offer, Tenderers commit to this maximum price and declare to meet all the requirements and agree to the terms and conditions set out in this Descriptive Document, including annexes, on the penalty of exclusion.

2.4 Variants

A variant is a tender that is not in accordance with the contract documents. The Contracting Authority has considered the option of allowing Tenderers to propose variants. Submitting variants to this Assignment is not allowed.

2.5 Changing the Contract

With a view to political, economic, budgetary, administrative or organisational circumstances within the Central Government and the related shrinkage or growth of the Contracting Authority, or the positions and duties of the Contracting Authority within the Central Government, it is possible that the Assignment changes. In that case, the Client is entitled to implement non-essential changes.

2.6 Form of contract, contractual conditions and term

The draft Agreement has been attached as Annex 2 to the Tendering Environment. The General Government Terms and Conditions for Purchase 2018 (ARIV-2018) (Annex 1) apply to the Contract. The general conditions of the Contractor or any other general conditions will not apply and are explicitly rejected.

Further to the contract conditions, questions may be asked or proposed text may be submitted. The proposed text only serves to improve the Agreement and may not affect the essence of the Agreement. When answering the questions, the Contracting Authority will indicate whether the proposed texts are accepted and processed in the Agreement. The Contracting Authority is free in its choice of accepting the proposed text. A non-explicit rejection does not equal an acceptance.

The procedure and the final deadline for asking questions or submitting proposed text is described in paragraph 3.2.1. Any modifications to the draft Agreement and/or deviations from the Purchase Conditions will be made known in the Question & Answer module. The documents are binding from this moment. When submitting a tender, the Tenderer must unconditionally and without reservations conform to the draft Agreement and the Purchase Conditions.

Reservations or other conditions in the Tender, in any way whatsoever, are not allowed and will lead to exclusion from participation in the invitation to tender.

2.6.1 Payment terms

The Contracting Authority has provided a payment structure in the draft agreement. In order to use this payment structure, the Tenderer shall provide a bank guarantee for the payment made before delivery of the system.

3 Tendering procedure

3.1 Introduction; communication; schedule

3.1.1 Legal framework

This invitation to tender takes place with due observance of and in accordance with the Public Procurement Act 2012.

The public procedure is used for this tender. The criterion for awarding the contract is: the best price-quality ratio, using the method of awarding on value. The surplus offered based on the fulfilment of quality criteria (Annex D) is expressed in a fictitious value in euros. This value is then deducted from the offered registration price. The downwardly adjusted registration price forms the comparison price. The Tenderer with the lowest comparison price is eligible for award of the Contract.

3.1.2 Notice

The notice of this Assignment is published on the TenderNed website on the date as indicated in paragraph 3.1.5.

3.1.3 Contact details

During the tendering procedure the procurement officer of ARCNL is your sole point of contact. It is not allowed to seek contact with employees or other representatives of the Client for information regarding this tendering procedure.

Contact details	
Contact name:	Freek Zijlstra
Job Title:	Procurement Advisor
Email address:	f.zijlstra@nwo-i.nl

The Tenderer also appoints a contact person. This contact person must have full power of decision and authorisation to act in the context of the tendering procedure on behalf of the Tenderer. The Tenderer is responsible for the correct registration of the details of its contact.

3.1.4 Communication

All communication on this invitation to tender will be in writing via the mail box of TenderNed. The Tenderer cannot rely on information that is provided in another manner. Messages sent by the Tenderer in another manner will not be handled by the Contracting Authority.

The Tenderer is advised to set up one or more BCC recipients in the Tendering Environment, so that messages in the context of this invitation to tender are not only sent to one contact person.

3.1.5 Planning

The table below contains the planning of this tender. The contracting authority reserves the right to make changes to this planning if necessary.

Activity	Due date or period
Publication of documents regarding tendering procedure	28-10-2025
Submission of questions/remarks	11-11-2025 12:00 GMT at the latest
Publications of Information notice	25-11-2025
Submitting your Tender	15-01-2025 12:00 GMT at the latest
Provisional award decision	04-02-2026
End of objection period	25-02-2026

3.2 Provision of information

3.2.1 Opportunity to ask questions on the invitation to tender

Any questions on the content and the process of this invitation to tender can be asked in writing using the Question & Answer module on TenderNed. The final date for submitting questions are indicated in paragraph 3.1.5.

The Contracting Authority will make all questions, their answers and any flaws or contradictions that are determined known to the Candidates via the Question & Answer module in the Tendering Environment.

The Candidate is requested – insofar that is possible – to not use organisation names, product names and other names related to your organisation when asking questions. The Contracting Authority publishes the questions asked, without stating the name of the questioner and reserves the right to modify questions with that purpose in mind. The Contracting Authority does not guarantee anonymity, for example because the questioner's identity can be derived from necessary technical questions. The Contracting Authority can paraphrase or summarise questions, for example if they contain inappropriate language or in case of needlessly repetitive questions.

3.2.2 Individual record

The Candidate can request that certain information of the question or the answer are not included in the Question & Answer module, as publication could harm the Candidate's economic interests. The Candidate must give proper reasons for why its economic interests could be harmed. In that case, the Contracting Authority:

1. cannot publish and answer the question, or
2. can publish the question and/or the answer if, after a request from the Contracting Authority, the Candidate decides to grant its permission to include the information in the Question & Answer module, or
3. can provide the answer only to the Candidate involved. The Contracting Authority will only use this third option if:
 - a. the answer cannot distort competition, and
 - b. the answer does not relate to prices, and
 - c. the answer does not lead to a change of the object of the invitation to tender.

If this third option is used, this will be stated in the record of the tendering procedure.

3.3 Submitting Tenders and opening

3.3.1 Closing date for submitting Tenders

The Tender must be submitted and received by the Contracting Authority by no later than the date and time indicated in paragraph 3.1.5. Documents are submitted via TenderNed.

Please note:

- It is recommended to only submit the Tender until after any questions have been answered and/or changes to documents have been implemented as stated in the Information notice.
- The date and time are strict deadlines. After closure of the time for submitting Tenders, it is (technically) no longer possible to submit Tenders. **Tenders that are submitted too late can therefore not be accepted.** The risk of submitting a late Tender is entirely for the account of the Tenderer.
- In view of the above statement, it is not advised to wait until the last moment for submitting the Tender.

3.3.2 Opening of the Tenders

The Contracting Authority will open the Tenders as soon as possible after the expiry of the closing date and time.

3.4 Assessment of the Tenders

The Tenderer and its Tender are assessed in four steps:

- Step 1 Assessment of the format requirements;
- Step 2 Assessment of the ESPD (Grounds for Exclusion and Eligibility Requirements). The references are part of the Eligibility Requirements;
- Step 3 Assessment of conformity with the requirements in the Specifications and assessment of the Award Criteria (the award stage);
- Step 4 Final assessment.

These four steps are described in chapter 6 (step 1 and 2) and chapter 7 (step 3 and 4) of this Descriptive Document.

3.5 Award

3.5.1 Notification of the award decision and objection

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.

All Tenderers can request additional information from the Contracting Authority.

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 provisional award decision, the Contracting Authority is not allowed to award the Assignment and to enter into an Agreement with the winning Tenderer. If preliminary relief proceedings are instituted within the aforementioned term, also referred to as the standstill period, which must be evidenced by sending a copy of the writ of summons, the Contracting Authority will not award the Assignment until a judgment has been given in the preliminary relief proceedings. The aforementioned 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 Assignment.

This does not mean that the Tenderer's offer is accepted automatically after expiry of the standstill period. The Contracting Authority will accept the Tenderer's offer after the verification stage (see section below) by means of mutually signing the Agreement.

3.5.2 Verification of supporting documents

In the verification stage, during the standstill period, the Contracting Authority *can* request supporting documents to verify the information the Tenderer has provided in the context of this tendering procedure. In order to limit the administrative burden, it was decided that the Contracting Authority may in first instance only ask the ESPD from the Tenderers instead of all supporting documents. The supporting documents that fall under the ESPD, with the exception of the references, can in principle only be requested from Tenderers that are eligible for the Assignment on the basis of the assessment. The supporting documents requested must be provided within the term set by the Contracting Authority of ten working days. If it turns out that the Tenderer cannot provide supporting documents or has given incorrect information, this will lead to exclusion from participation in the tendering procedure.

3.6 Acceptance procedure

Only after successfully completing acceptance tests the final award and conclusion of the Agreement will be made.

Tenderer with the best price quality ratio, as described in Chapter 7, will be granted the Assignment. Acceptance of the UHV SPM system will take place in two steps. The first step is a Factory Acceptance Test (FAT) in which Tenderer will demonstrate the UHV SPM at their location.

Two representatives of the Contracting Authority will visit Tenderer's location for this purpose (at Contracting Authority's cost). During the visit, Tenderer will demonstrate that the UHV SPM system is capable of achieving all requirements and quality criteria included in Tenderer's offer. The second step is a Site Acceptance Test (SAT) in which Tenderer will install the UHV SPM system in the ARCNL lab, where Tenderer will again demonstrate that the UHV SPM system is capable of achieving all requirements and quality criteria.

3.7 Complaints procedure for the invitation to tender

In the context of the tendering procedure, there may be discontent between the Contracting Authority and the interested parties regarding how the parties act or acted during the procedure. This may lead to a complaint.

An interested party that has a complaint about the Contracting Authority can submit this in writing via the mailbox of TenderNed. Complaints submitted in any other way will not be handled.

In order to safeguard the independence and objectivity of the complaint handling, complaints will be handled by an employee or lawyer of the Contracting Authority who is not directly involved in the invitation to tender.

Submitting a complaint will not stop the tendering procedure. The Contracting Authority is free to decide 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.

4 Options to submit a tender

4.1 Submitting a tender independently or in Combination

Companies can submit a tender independently, so as an individual company, or in combination with one or more companies. A Combination applies as one Tenderer. If a company submits a tender both independently and as a member of a Combination, the Contracting Authority will only assess the Combination's Tender. The independent Tender will then be excluded from the invitation to tender.

If a tender is submitted as Combination, the following conditions apply:

- Each member of the Combination must separately indicate that the Grounds for Exclusion that have been declared applicable, as referred to in Sections 2.86 and 2.87 of the Public Procurement Act 2012, do not apply to it. To this end, each of the Combination members must separately fill in and sign the *ESPD*;
- Each member of the Combination must be registered in the Dutch professional or trade register or a foreign equivalent thereof, in accordance with the laws of the country of establishment;
- The Combination members must jointly comply with the Eligibility Requirements (see step 2 in 6.2);
- Members of the Combination accept joint and several liability for complying with all the obligations ensuing from the Agreement if the Assignment is awarded to the Combination;
- The Combination appoints one of the members of the Combination as sole point of contact for the tendering procedure and responsible authorised representative (main contractor) for the Combination;
- Each member of the Combination must indicate in part II, section A of the *ESPD* that there is a partnership and for which Eligibility Requirements its company is relied on.

Please note – The legally valid signature of the Tender by all members of the Combination must be traceable to the extracts from the Chamber of Commerce or registrations in the professional or trade register of the country of establishment (see section 5.5).

4.2 Deployment of Subcontractors

In performing the Contract, companies can have the work performed by one or more Subcontractors. If the Contractor uses Subcontractors in the performance of the Contract, the following conditions apply:

- Using or changing a Subcontractor can only take place after a written request for this purpose is made by the Contractor and after approval is given by the Contracting Authority;
- The Tenderer declares that it, as the main contractor, always remains fully responsible and liable for the performance of the Assignment and its results;
- The Tenderer will act as sole point of contact and main contractor for this invitation to tender and any Assignment ensuing from this.

4.3 Reliance on Third Parties in respect of the Eligibility Requirements

A Tenderer – both a company and a Combination – that does not comply with the Eligibility Requirements in whole or in part itself as included in section 6.2 step 2, may rely on:

- the financial and economic ability of Third Parties and/or;
- the technical competence or professional competence of Third Parties.

This concerns the Eligibility Requirements in respect of financial and economic ability, technical competence and/or professional competence. The conditions to be able to rely on a Third Party are:

- The Tenderer must show upon request that it can actually use the means of the relevant Third Party necessary for the performance of the Agreement;

- Each Third Party on which the Tenderer relies must provide a separate ESPD with the information requested in Part II (sections A and B) and Part III of the ESPD. Each Third Party must legally sign the *ESPD*;
- The legally valid signature of the Third Party must be traceable to the extracts from the Chamber of Commerce or registrations in the professional or trade register of the country of establishment (see section 5.5).

4.4 Reliance on financial and economic ability of the parent group

If the Tenderer relies on the financial and economic ability of the parent group of which it forms part or the holding which it comes under because the turnover is consolidated, the parent group or the holding must completely and unconditionally guarantee the performance of all obligations that ensue from the Agreement in a so-called holding statement.

To this end, the *Declaration of liability group/holding* must be legally signed by the authorised person. This declaration may not be older than six months at the time of the Tender. The extract of the Chamber of Commerce or the registration in the professional and trade register of the country or establishment of the parent company or the holding serves as evidence of the legally valid signature.

4.5 Tenderers of one group

If multiple companies of one group want to submit a tender (independently or as Combination), they must be able to demonstrate – at the request of the Contracting Authority – that:

- they have drawn up their Tender independently from the other Tenderers that form part of that group and
- they have observed strict confidentiality.

If they cannot demonstrate this unambiguously and to the Contracting Authority's satisfaction, this will lead to exclusion of further participation in the tendering procedure of all Tenderers forming part of the group in question.

5 Rules for the Tender and conditions for participating in the tendering procedure

Tenders are only accepted if they are drawn up and submitted in accordance with the rules below. This is to guarantee fair competition between Tenderers. This chapter will also discuss conditions and provisions that apply in the context of this tendering procedure.

Tenders that are submitted in a different way and Tenders of Tenderers that do not comply with the conditions are in principle invalid and will not be assessed. In that case, the Tenderer will be informed in writing, with the reasons for the rejection stated.

5.1 Composition of the Tender

Your Tender consist of the following documents.

Document
Annex A European Single Procurement Document (ESPD)
Annex B Declaration of Conformity
Annex C Price Sheet
Annex D Quality Criteria
Annex F Core Competence form(s)
Annex G Declaration of liability group or holding (<i>if applicable</i>)

Where evidence or other information is requested (within the Terms of reference for example), Tenderer adds the documentation concerned as Annexes to their Tender.

The Tender must be complete. This means: all requested supporting documents or other information must be included. The Contracting Authority expressly reserves the right not to process incomplete Tenders any further, as a result of which the Tender will no longer be eligible for awarding of the Assignment.

5.2 Submitting the Tender

The Tender can only be submitted electronically via the TenderNed platform. If you have (technical) questions about the operation of TenderNed, please contact the Service Desk of TenderNed. The Contracting Authority is not responsible for TenderNed disruptions.

5.3 English language

All communication, documents and correspondence in the context of this invitation to tender and the possible Agreement must be held and/or drawn up in English.

5.4 Agreement with the tendering procedure

By submitting a Tender in the context of this invitation to tender, the Tenderer agrees to the requirements, conditions and provisions of this tendering procedure.

5.5 Signature of Tender

All documents and declarations which need to be signed must have a legally valid signature of an authorised representative.

The legal validity of the signature must be evidenced from the extracts of the Chamber of Commerce or registrations in the professional or trade register of the country of establishment or, in case these are missing, a different supporting document as referred to in Section 2.98 of the Public Procurement Act 2012. Where possible, documents may be signed electronically using a legally recognized method of electronic signing. If this is not possible, documents must be signed by hand and submitted as PDF document.

A signatory that is not registered as authorised representative in the professional or trade register must be given power of attorney by a person that does have representative authority.

5.6 Reservations of the Contracting Authority

The Contracting Authority reserves the right to suspend the tendering procedure in whole or in part, to discontinue it temporarily or definitively and/or to decide not to award the contract. In that case, the Candidate or the Tenderer is not entitled to a compensation of costs, of any nature whatsoever.

5.7 Compensation of costs

Tenderers are not entitled to a compensation of costs in the context of this invitation to tender.

5.8 Statement of prices, rates and costs

Prices, rates and costs must be submitted in euro, exclusive of VAT. They must be in line with market conditions, plausible and realistic – also see section 5.9 in this context.

The prices must be all-in, that is to say there is no question of it that Annex C does not fully addresses all costs that are involved execution of the Agreement. The explicit requirement here is that unforeseen costs are at the expense of the Contractor.

5.9 Manipulative Tenders

The Tenderer is not allowed to submit manipulative Tenders. In this context, this means that improper means are used to avoid the competition of the fellow Tenderers, or that the announced standard to assess the most economically advantageous tender is abused, as a result of which the assessment methodology used by the Contracting Authority is frustrated. The Tenderer is not allowed to make offers that are not in line with market conditions or plausible in accordance with objective economic standards, or that otherwise have a manipulative character. A Tender is in any case manipulative if one or more rates frustrate the formula that is used or there are negative or zero rates. It is also not allowed to change the formats of Annex C and Annex D.

The Tenderer violating this provision will be excluded from further participation in this tendering procedure.

5.10 Unconditional Tender

Tenders that are subject to conditions or reservations will be excluded from further participation in this tendering procedure.

5.11 Validity period

The validity period of your Tender must be 180 calendar days calculated from the submission date for Tenders as stated in paragraph 3.1.5. This validity period takes into account the possibility that the winning Tenderer does not withstand the acceptance test of equipment and the Contracting Authority wishes to make use of the waiting room provision and therefore the Contracting Authority effectuates the Waiting room agreement.

In case preliminary relief proceedings are instituted against the award decision, the validity period possibly needs to be extended to accommodate the follow up of a verdict (like reassessment of the Tenders).

The Tenderer will extend the term of validity at the Contracting Authority's first request. The Contracting Authority will make such a request if the course of the tendering procedure gives rise to do so.

5.12 Waiting room provision

The final award of the Assignment and with that not to dissolve the Agreement is dependent on the successful completion of the acceptance test as described in paragraph 3.6 of this Descriptive Document.

A waiting room agreement (Annex 3) can be offered to the Tenderer who ranked second in the assessment. If ultimately no Agreement is concluded between the Contracting Authority and the initially awarded Tenderer, an Agreement can be concluded with the Tenderer who finished in second place in ranking.

The Contracting Authority is not obliged to make use of the waiting room provision.

5.13 Bank guarantee and penalty clause

Tenderer will provide a bank guarantee (Annex 4) for the payment made before delivery of the system.

If during the Factory Acceptance Test (FAT) it will be determined that one or more requirements have not been met, the Contracting Authority has the right to terminate the contract immediately and advance payments shall be refunded by Tenderer. In case it will be determined that one or more quality criteria have not been met, while Tenderer has obtained quality points for those criteria, the Contracting Authority has the right to call in a penalty clause as described in paragraph 7.2.3 of the Descriptive Document.

5.14 Intellectual property

The intellectual property rights of the Specifications are vested in the Contracting Authority. Subject to exceptions laid down by law, without the Contracting Authority's written consent nothing from the Specifications may be reproduced, other than for the purpose of this tendering procedure.

5.15 Integrity and independence

In order to safeguard the integrity of the tendering procedure, the Contracting Authority uses the following guidelines:

- On submission of the Tender the Tenderer will be asked to report whether people employed by the Contracting Authority also work at the Tenderer in an ancillary position, paid or otherwise.
- If this could lead to undesired commercial conflict of interest, this could lead to the Tenderer's exclusion from the tendering procedure. In this case, the Tenderer will be informed of the decision, along with the reasons.
- If it transpires that during the term of the tendering procedure a person employed by the Contracting Authority occupies or has occupied an additional position with the Tenderer, paid or otherwise, without the Contracting Authority being informed before concluding the Agreement, the Contracting Authority is entitled to exclude the Tenderer or to terminate the Agreement immediately without notice of default.

5.16 Influencing the assessment

It is prohibited to seek contact with a member or members of the assessment committee, employees of the Contracting Authority or other persons involved in the invitation to tender for any information whatsoever. Any influence, in any way whatsoever, of employees that are involved in this invitation to tender could lead to exclusion from participation.

5.17 Exclusion as a result of discontinuation of business activities or takeover

If, during the tendering procedure, a Tenderer or a Combination must discontinue the business activities relevant to this invitation to tender or the company is taken over, the Tenderer must inform the Contracting Authority immediately. In that case, the Contracting Authority reserves the right to exclude this Tenderer from participating in the procedure.

5.18 Brand names

If the Specifications mention a certain product, source, special working method, reference to a brand, patent, type, origin or production in connection with technical specifications, this is only meant as an example. In such cases, the Tenderer must read the message or reference as including the words 'or equivalent', if this is not stated in the text.

5.19 Inaccuracies in the Descriptive Document

The Specifications have been carefully drawn up. The Tenderer must inform the Contracting Authority in writing as soon as possible but no later than 14 days before the closing date for submitting the Tender, if flaws, procedural errors and/or contradictions are found.

Flaws, procedural errors and/or contradictions found after the aforementioned term, which the Tenderer did not observe earlier, are at the expense and risk of the Tenderer. In that case, the Tenderer will have lost its right in this matter.

5.20 Contradictions and lack of clarity in the Tender

If there are contradictions in the Tender, the Contracting Authority will assume the most advantageous offer or part thereof in the assessment. In that case, the Tenderer must keep the offer or that part open in full and unconditionally.

If there is a lack of clarity in a Tender, the Contracting Authority reserves the right to ask for a clarification and/or an addition. This clarification and/or addition may not entail an essential change of the Tender. If this is the case in the Contracting Authority's opinion, it will not take these clarifications and/or additions into account in the assessment.

The absence of requested information, declarations and/or document can lead to exclusion. This also applies if information and/or data have been provided that are wholly or partially incorrect or incomplete. The Contracting Authority has the right to ask Tenderers to supplement the missing data. The Contracting Authority also has the right to check the information provided by the Tenderer in respect of third parties.

6 Selection stage

For the assessment of the Tenderers (this chapter) and the Tenders (chapter 7), format requirements, Grounds for Exclusion, Eligibility Requirements and Award Criteria are used in succession. This chapter describes the format requirements, Grounds for Exclusion and Eligibility Requirements against which the Tenderer will be tested.

6.1 Step 1: Assessment of the format requirements

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 format requirements are:

- The Tender must be submitted in time within the Tendering Environment in TenderNed (see section 5.2).
- The Tender must be complete (see section 5.1).
- The Tender must be drawn up in English (see section 5.3).
- The Tender must be validly signed (see section 5.5).

6.2 Step 2: Assessment of the ESPD

After the format requirements, the Tenders will be checked on the presence, the filling in and the legally valid signature of the ESPD. In the ESPD, the Tenderer indicates that the Grounds for Exclusion that have been declared applicable, as referred to in Sections 2.86 and 2.87 of the Public Procurement Act 2012, do not apply to it. The Tenderer also applies that it meets the applicable Eligibility Requirements, technical specifications and terms and conditions of performance as described in Section 2.84 of the Public Procurement Act 2012.

In the verification stage, the Contracting Authority can check the accuracy of one or more data or information in the ESPD of the winning Tenderer(s). This can 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 six 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 two 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 six months, calculated from the closing date of the tender.

Required evidence (such as a conduct for procurement) vary by country, ranging from an officially issued certificate to a statement under oath before a notary or judge. With e-Certis (<https://ec.europa.eu/tools/ecertis/#/homePage>) Tenderer can gain insight into which means of evidence are required in a country and whether they correspond to the Dutch means of evidence. e-Certis was created and compiled on behalf of the European Commission. In e-Certis you will find the supporting documents of the 28 European Member States, candidate country (Turkey) and the 3 EEA countries (Iceland, Liechtenstein and Norway). The European Commission ensures that all data is available in all official EU languages. Non EU companies can submit a statement under oath before a notary or judge.

6.2.1 Grounds for Exclusion (part III of the ESPD)

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

6.2.2 Eligibility Requirements (part IV of the ESPD)

Eligibility Requirements are intended to determine whether the Tenderer is suitable to perform the service requested in the Specifications. The Eligibility Requirements which apply to this tendering procedure are described below.

A Financial and economic capacity

The Tenderer has sufficient financial and economic capacity to fulfil the obligations arising from any Agreement, as evidenced by either (a) the fact that they have always achieved a positive annual result in the last three financial years before the closing of the registration period for this tender (profit) or (b) although they have not achieved a positive annual result (profit) in every year, the cumulative negative results (losses) are less than the amount of equity on the balance sheet for the last financial year.

If you register as a Combination, all Combination members must meet this requirement.

Within the verification phase, the independent Tenderer or all members of the combination must submit (excerpts from) annual accounts for the last three closed financial years, which demonstrate the financial and economic capacity.

B Continuity

1 Claims

The Tenderer is not aware of any possible claims or during the period of the execution of the Agreement no investments are necessary that could place their company in such a position that its financial and economic strength or continuity could be jeopardized. By signing the ESPD, the independent tenderer or all members of the Combination declare that this is the case.

2 Auditor's report

The most recently issued auditor's report does not contain a so-called 'continuity paragraph'. For companies that are not required to have annual accounts, an assessment or composition statement must be submitted.

If you register as a Combination, all Combination members must meet the above requirements.

Within the verification phase, the independent tenderer or all members of the combination must submit the intended auditor's report or the assessment or composition statement.

3 Liability insurance

The Contractor will ensure that it is adequately insured with regard to the execution of the Assignment and will remain insured against professional and/or legal liability during the term of the Agreement.

If you register as a Combination, all Combination members must meet this requirement.

During the verification phase, the independent tenderer or all members of the combination must submit a copy of the liability insurance policy.

C Technical competence and/or professional competence

The Contracting Authority wishes to contract a Tenderer who has demonstrable experience in providing an Ultra High Vacuum Scanning Probe Microscope as described in this Descriptive Document. By submitting at least one reference project for each core competence, that is technically equivalent to the present Assignment and at comparable organizations, the Tenderer must demonstrate that it has sufficient expertise and experience in relation to the scope of the contract - whether in Combination/Subcontracting or not - by meeting the core competencies set out below:

1. Core competence 1:

Broad experience in the development and construction of both Scanning Tunnelling Microscope and Atomic Force Microscope in ultra-high vacuum:

Demonstrated expertise in the design, construction and optimisation of these advanced measurement instruments.

2. Core competence 2:

Expertise in atomic resolution imaging:

Demonstrated competence in designing, building and optimising systems capable of imaging graphene or similar crystalline materials at atomic resolution. This implies that individual atoms and missing atoms in the crystal should be visible in the STM/AFM images, without image processing except corrections for the slope of the sample with respect to the scanner.

3. Core competence 3:

Expertise in measuring tunnelling current:

Demonstrated competence in designing, building and optimising systems that can measure tunnelling current while varying the voltage difference between tip and sample over a range of at least ± 10 volts. The tip is held at a fixed height relative to the sample during the measurement. The STS measurement shall be possible - as defined by the user - at a point, along a line or in a square plane. The system shall be able to couple measured $I(V)$ curves to a user-added lock-in amplifier.

The experience with the above core competencies must be described using Annex F Core Competence Form. The following applies:

- You use a separate Core Competence Form for each individual reference assignment;
- It is possible to use different reference assignments that have been carried out for the same principal;
- A maximum of 5 reference assignments may be used to describe the experience with the above core competencies. If 2 reference assignments or 1 reference assignment are/is sufficient to describe all the requested core competencies, then this is permitted;
- All reference project(s) must have been performed within the past 5 years (counting back from the closing date of the Tender). The reference project may have been started earlier;
- If a not yet fully completed assignment is used, only the actual results of the current assignment apply;
- For all reference projects, the Tenderer - or a third party on whose technical ability Tenderer relies in the context of the Tender - must have acted as the main contractor or, as the case may be, the ultimate responsible party for the overall contract;
- The Tenderer unreservedly agrees to the Contracting Authority contacting the specified contact persons without the Contracting Authority having to notify the Tenderer.

The description of reference assignments must be part of the Tender.

D Professional qualification

The Tenderer must be registered in the professional or trade register or a foreign variant thereof in accordance with the applicable legislation in their country of residence.

If you register as a Combination, all Combination members must meet the requirement that the company is registered in the professional or trade register or a foreign variant thereof.

Within the verification phase, the independent registrant or all members of the combination must submit proof of registration in the said register.

By checking the following sections in part IV of the ESPD: 'meets the prescribed selection criteria', the Tenderer declares that it meets the set Eligibility Requirements.

Only Tenders that meet the set of Eligibility Requirements continue on for further assessment to step 3 – see section 7.1. If the Tenderer does not meet one or more Eligibility Requirements, the Tender will not be assessed further and the Tenderer will not be eligible for award of the Contract.

7 Award stage

This chapter describes the assessment of the Tenders based on the Award Criteria. Which Tenderer has submitted the most economically advantageous tender and is eligible for award of the Assignment is determined on the basis of the requirements, the quality and the price.

7.1 Step 3: Assessing conformity and Awarding

7.1.1 *Conformity to the Terms of Reference*

The requirements relating to the Assignment are knock-out requirements. Knock-out means that Tenders that do not meet all the requirements will not be further assessed by the Contracting Authority and the Tenderer will be excluded from further participation in the procurement procedure.

If documentation is requested to verify compliance with the minimum requirements, this verification will be carried out in the same way as the assessment of responses to quality award criteria as described in section 7.1.2. In the case of awarding on value (surplus on requirements or fulfilling qualitative criteria), it is also about determining the degree of surplus offered and the corresponding fictitious deduction from the tender price. Point (c) in section 7.1.2 in this case refers to a difference of opinion among evaluators about the extent (number of discrete steps) of surplus offered, or whether evaluators are convinced that quality criteria can be fulfilled.

7.1.2 *Assessment committee*

An assessment committee has been set up to assess the tenders. The committee will assess the tender on the basis of the regulations in the Descriptive Document and any internal assessment protocol. The assessment process takes place under the responsibility of the procurement consultant on behalf of the Contracting Authority.

Individual assessment

Each tender is assessed by each member of the committee in its entirety and on its own (there is no so-called relative assessment). With regard to entirety, the Contracting Authority makes a reservation in the event that a member of the committee is insufficiently competent with regard to a (sub)award criterion to be able to arrive at a responsible assessment. However, such a situation will not lead to an assessment of the relevant part by fewer than three members of the committee.

Discussion on assessments

After the individual assessment, a plenary session will take place during which the assessment result of each individual application will be evaluated. The committee determines the final assessment result in which the consensus model is pursued. Here's how it works:

- a) If all individual ratings are unanimous in their rating, rating will be made as indicated by the reviewers;
- b) If one or more assessors have recorded a different rating, consultations will take place between the assessors, with the aim of reaching consensus. If consensus is reached, valuation will be made in accordance with this consensus;
- c) If no consensus is reached, the valuation is based on the unweighted average of all individual ratings of reviewers

7.2 Step 4: Awarding on value

The contract will be awarded according to the method of awarding on value which is expressed in a valuation in Euros as surplus is offered on some of the quality criteria as mentioned in Annex D – Quality Criteria. The total of the valuation results in a fictitious deduction from the registration price ex. VAT, which creates the comparison price. The contract will be awarded to the tenderer with the lowest comparison price.

7.2.1 Award criteria on quality

Below is an overview of the sub-award criteria with regard to quality as well as the maximum score in Euros. *One (1) qualitative point scored on the sub-award criteria equals a fictitious value of € 1.500.*

Quality		Max. score	Max. fictitious value
Q1	The possibility of measuring height as a function of bias, $z(V)$.	3	€ 4.500
Q2	The possibility of applying a bias pulse (of at least $\pm 10V$) in order to condition the tip. Ideally this bias pulse can be applied while the tip is removed from the measurement location, while the tip can be automatically brought back to the measurement location after the reconditioning has taken place.	8	€ 12.000
Q3	A 'non-contact' tapping mode in which minimal adhesive interaction between tip and sample takes place while high resolution (topographical) measurements can be performed as described in requirement 42.	6	€ 9.000
Q4	Calibration of the torsional stiffness of the cantilever through the thermal noise spectrum.	6	€ 9.000
Q5	Possibility of applying bias larger than $\pm 10 V$ during the measurements described in requirement 45.	11	€ 16.500
Q6	Possibility of applying bias larger than $\pm 100 V$ during the measurements described in requirement 45.	6	€ 9.000
Q7	Possibility of measuring, within an array of points, in a single measurement, adhesion, stiffness and KPFM (see requirement 48).	5	€ 7.500
Q8	KPFM measurements (see requirement 48) through frequency modulation.	4	€ 6.000
Q9	The possibility of programming measurements, for example a script within which the normal force is linearly decreased or increased during a scan line in contact mode. Another example could be to keep the tip stationary in contact for a controllable time during a line scan, before completing the stroke (slide-hold-slide, see for example https://doi.org/10.1038/nature10589). Finally, another example would be control over the contact time that is applied before the tip is retracted for an adhesion measurement.	15	€ 22.500
Q10	Possibility in the software to select a location on the sample, as seen through the microscope, and to automatically navigate the tip to this location for measurements.	11	€ 16.500
Q11	Storage of tips and samples as described in requirement 58, for a larger number of tips and samples. For each extra storage slot € 1.500 will be deducted, with a maximum of € 9.000.	6	€ 9.000
Q12	Control over the system through the pc to engage and retract the tip, to coarse position the sample and to align the laser and cantilever for cantilever based AFM.	6	€ 9.000

Q13	Delivery of the SPM system, as described in the program of requirements, in a period shorter than 12 months after purchase agreement. For every month of reduced delivery time € 4.500 will be deducted, with a maximum of € 27.000.	18	€ 27.000
Q14	Tenderer has an externally audited environmental management system, such as the ISO-14001 certificate (or equivalent).	3	€ 4.500
Q15	Ergonomical operation of the instrument: A person with a height of 1.60cm should be able to operate the setup and transfer samples/tips without additional tools/aids and in a natural posture.	2	€ 3.000
Q16	Low-noise operation: at regular operating conditions of the vacuum setup and the microscope the noise level should be below 50dB.	1	€ 1.500
Q17	Warranty period during which the supplier guarantees functioning of the equipment and solves any issues without additional cost. A minimum warranty period of one year is required. € 3.750 will be deducted for each additional year of warranty, with a maximum of € 15.000.	10	€ 15.000
Q18	Pressure interlocks that switch off devices and set voltages to zero once pressure thresholds are exceeded.	5	€ 7.500
Q19	Protection of the vacuum level in the case of power outages, for example by valves that close automatically.	2	€ 3.000
Total:		128	€ 192.000

7.2.2 Instruction

In Annex D – Quality Criteria, you indicate to what extent you can deliver more than the minimum requirement or can fulfil the quality criteria, for those requirements or quality criteria that are part of the table above.

7.2.3 Penalty clause

If during the Acceptance Test at tenderer's location it will be determined that one or more requirements (see Annex E – Program of requirements) have not been met, the Contracting Authority has the right to terminate the contract immediately and advance payments shall be refunded by Tenderer.

If during the Acceptance Test at tenderer's location it will be determined that one or more quality criteria (see Annex D – Quality Criteria) have not been fulfilled, which Tenderer indicated to fulfil in their offer and therefore scored qualitative points, the Contracting Authority has the right to call in a penalty clause in which Tenderer receives a financial penalty of €5.000 per point awarded for the criteria in question, as indicated in paragraph 7.2.1 of this Descriptive Document.

7.3 Tie

If, after evaluation, two or more tenderers end up with the same evaluation result, the following applies:

- The Contract will be awarded to the tenderer with the highest notional deduction on the award criterion Q13;
- If, after step a, there are two or more tenderers with an equal assessment result on the award criterion Q13, the Contract will be awarded to the tenderer with the highest notional deduction on the award criterion Q17;

- c) If, after step b, there are two or more tenderers with an equal assessment result on the award criterion Q17, the draw will take place under notarial supervision.

7.4 Verification

As indicated in 3.5.2, the Contracting Authority can request supporting evidence from the winning Tenderer(s) immediately after publication, in accordance with Sections 2.89, 2.91 and 2.93 of the Public Procurement Act 2012. If verification of the supporting documents shows that the potential winning Tenderer:

- does not meet the specified requirements, or
- cannot submit sufficient evidence, or
- if it transpires that it has provided incorrect information,

this Tenderer will not be eligible for award. The Contracting Authority will then withdraw the provisional award decision.

The scores of the remaining Tenderers will then be recalculated and the tendering procedure will be continued with the Tenderer that then has first place.

Based on the new assessment results, the assessment committee will issue a new award recommendation to the internal Client. If the award recommendation is followed, a new, second publication of the award decision is sent to all Tenderers and the objection period will commence again. The supporting documents can then be requested and verified from the new potential winning Tenderer.