

Descriptive document

Plasma Enhanced Atomic Layer Deposition System

European tendering according to public procedure

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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. Agreement in this Descriptive document is synonymous with Contract.

Annexes

The 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 AMOLF, who concludes the Agreement with the Contractor.

Contract

See Agreement above.

Contracting authority

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

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 separately 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 organization 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.

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.

Product

A Plasma Enhanced Atomic Layer Deposition system that complies the schedule of requirements.

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: ARIV-2018

Schedule of requirements

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

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.

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.

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1 Introduction

1.1 General

This Descriptive Document contains information on the European Tender for a Plasma Enhanced Atomic Layer Deposition system, further referred to as “the Product”.

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

AMOLF's mission is to initiate and conduct leading fundamental research into the physics of complex forms of matter, and to create new functional materials, in collaboration with academia and industry. AMOLF is one of the academic research institutes of the Netherlands Organization of Scientific Research (NWO).

AMOLF houses the NanoLab Amsterdam, which is a cleanroom facility for nanofabrication and nanocharacterization, servicing academic and industrial researchers in their nanotechnology needs. It operates as a user facility and hosts a range of equipment that is installed and maintained by support personnel.

1.3 Reason and purpose of the invitation to tender

The Plasma Enhanced Atomic Layer Deposition (PE-ALD) system will expand the capabilities of thin film deposition in the AMOLF NanoLab Amsterdam. PE-ALD is an energy-enhanced method for the synthesis of highly conformal, ultra-thin films with angstrom-level resolution in which a plasma is employed during one step of the cyclic deposition process. The use of plasma species as reactants results in high reactivity with the deposition surface which allows for more freedom in processing conditions and for a wider range of material properties compared with the conventional thermally driven ALD method. It has become the standard industrial technique for depositing very thin and highly conformal metallic, nitride or oxide layers due to its precise thickness control and self-limiting process cycles. The deposition is significantly more conformal than (plasma enhanced) chemical vapor deposition and physical vapor deposition techniques. Such control and material verity enables diffusion barrier layers, surface passivation, high-k dielectric layers and optical and mechanical strain engineering at material interfaces. These materials play key roles in optical waveguides, surface passivation layers, antireflection coatings, corrosion barriers, electric contact isolation (for perovskite/IBC tandem cells), surface charge modulation (for nanowire electronics) and optical resonators. The deposited materials should therefore be of high optical, mechanical, and electronic quality, and their properties should be tuneable through controlling deposition conditions. The system will be used in a research cleanroom by a wide range of users. The system will be employed towards different application fields (photonics, electronics, photovoltaics, biophysics, etc.).

2 The Assignment

2.1 Scope

Manufacturing the Product

The Product will be operated in an ISO 6/7 clean room environment. It must deposit very thin and highly conformal oxide, nitride or metallic layers with angstrom-level precision.

The Product should coat layers with high uniformity and structures with high aspect ratios. It should be possible to tune the optical properties, density and stress in the films by adjusting deposition parameters. The Product should be capable of depositing the following materials: Al₂O₃, TiO₂, ZnO, In₂O₃, SnO₂, NiO_x, SiO₂ and HfO₂, with the option to easily switch to different materials, such as nitrides like AlN and TiN and metallic layers like Pt and Ru.

The Product needs to be integrated as a through-the-wall-solution with operational capability on both sides. Due to limited available space in the cleanroom and adjacent technical room space, the Product should be compact, and it should be placed with the load-lock chamber opening in the cleanroom and the processing chamber placed in the adjacent room (see floorplan in Annex 5).

As the Product will be used by a large number of users with different levels of expertise, software and operational procedures should be intuitive and clear.

Delivery

The Product must be delivered at DDP Incoterms at Science Park 104, 1098 XG Amsterdam in The Netherlands.

Commissioning and conducting SAT

The contractor shall install and commission the Product within the NanoLab and conduct a Site Acceptance Test of the Product in the presence of functionaries of AMOLF.

Supply of documentation and training

The Product should be accompanied by a comprehensive user manual and a description of the default processes.

Warranty and support

The offer should include a warranty period of 1 year, during which all parts, labour and travel costs are included, as well as an additional maintenance contract for 4 years after the initial warranty. This maintenance contract must include sufficient preventive maintenance visits to keep the tool running in an optimal state during this period, as well as covering all necessary parts, personnel, and travel costs associated with it. The cost for this warranty and maintenance package should be included in the total price. The yearly cost for a maintenance contract, excluding VAT, should be separately specified.

2.2 Clustering, merging, and division of lots

2.2.1 Clustering

The assignment cannot be divided in independently executable part, nor will the Product be used outside the AMOLF organization.

2.2.2 Division of lots

Division of lots is not an issue in this case.

2.3 Magnitude of the assignment

The total aggregate value of this Contract shall not exceed the amount of €550,000 (five hundred fifty thousand euros).

2.4 Variants

A variant is a Tender that is not in accordance with the minimal requirements outlined in Annex F. Submitting variants to this call for Tender is not allowed.

2.5 Changing the Contract

2.5.1 Non-essential changes

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

2.5.2 Optional services

The Contracting Authority takes account of the fact that the following optional services, as additional work, may be separately added to the Product in the future:

- Accessories, modifications, or extensions to the Product with which the usability and/or performance can be enhanced.

2.6 Form of contract, contractual conditions and term

The draft Agreement has been attached as Annex 3. The General Government Terms and Conditions for Purchase 2018 (ARIV-2018) 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 modifications for the draft Agreement 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 section 3.2.1. Any modifications to the draft Agreement and/or deviations from the Purchase Conditions will be made known in an Information Notice. 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.

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: awarding on value. This value is 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. See paragraph 7.2 for detailed explanation.

3.1.2 Notice

The notice of this Assignment has been published on the TenderNed website on the date as indicated in section 3.1.5.

3.1.3 Contact details

During the tendering procedure the procurement officer of the Client is the 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.

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 mailbox 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. All dates and times specified herein are in GMT (Greenwich Mean Time).

Activity	Due date or period
Publication of documents regarding tendering procedure	23-09-2024
Submittance of questions/remarks	04-10-2024 12:00 at the latest
Publications of Information notice	11-10-2024
Submission of Tenders	08-11-2024 12:00 GMT at the latest
Provisional award decision	29-11-2024
End of objection period	20-12-2024
Signing of Agreement	From 20-12-2024

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 by using Annex 1. The final date for submitting questions is indicated in section 3.1.5.

The Contracting Authority will make all questions, their answers and any flaws or contradictions that are determined known to the Candidates by publishing an Information Notice in the tendering Environment.

The Candidate is requested – insofar that is possible – to not use organization names, product names and other names related to the Candidate's organization 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 summarize 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 do so, 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 section 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 notices.
- 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, the Contracting Authority reserves the right to exclude the Tenderer from participation in the tendering procedure.

3.6 Acceptance procedure

The final award and conclusion of the Agreement will be made only after successfully completing the Site Acceptance Test of the Product, which will verify that the Product satisfies the required performance.

During the Site Acceptance Test, the process will be tested on the Product installed at AMOLF, immediately after installation of the Product. Tests will be performed by the Supplier on samples provided by AMOLF, in the presence of both AMOLF and the Contractor.

Specifically, the Site Acceptance Test will verify the specifications of two processes:

1. Plasma deposition of 20 nm AlN using trimethylaluminum (TMA) and N₂ plasma. Deposition of highly conformal layers on a partly patterned 100 mm Si wafer. Pattern consists of a 50/50 grating 2 μm and 10 μm deep. Uniformity will be measured by ellipsometry at different locations on the wafer and conformality will be tested by cleaving the wafer and doing SEM inspection. The uniformity must adhere to the minimum requirements of Annex F, requirement 2.2 and 2.4.
2. Thermal deposition of 20 nm Al₂O₃ using trimethylaluminum (TMA) and water. Deposition of highly conformal layers on a partly patterned 100 mm Si wafer. Pattern consists of a 50/50 grating 2 μm and 10 μm deep. Uniformity will be measured by ellipsometry at different locations on the wafer and conformality will be tested by cleaving the wafer and doing SEM inspection. The uniformity must adhere to the minimum requirements of Annex F, requirement 2.1 and 2.4.

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 to P.van.Tijn@amolf.nl.

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 center 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, i.e., 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 section 6.2 of this document);
- 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 authorized 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 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 authorized 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

The Tender consists of the following documents.

Document
Annex A European Single Procurement Document (ESPD)
Annex B Declaration of Conformity
Annex C Quotation of price
Annex D Core Competence form(s)
Annex E Declaration of liability group or holding (if applicable)
Annex F Schedule of Requirements (knock out)
Annex G1 Answers to the award criteria on quality – assessment
Annex G2 Answers to the award criteria on quality - verification

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 a Candidate has (technical) questions about the operation of TenderNed, they are advised to 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 needs to be signed must have a legally valid signatures of an authorized 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 authorized 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 address 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 format of Annex C.

A 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 the Tender must be 150 calendar days calculated from the submission date for Tenders as stated in section 3.5.1. This validity period takes into account the possibility that the winning Tenderer does not withstand the Site Acceptance Test of Product.

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 arrangement

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

Tenderers who submit a valid Tender but who are not eligible for provisional award will take a seat in the so-called 'waiting room'. This means that if ultimately no Agreement is concluded between the Contracting Authority and the provisionally awarded Tenderer, the Contracting Authority can, if desired, enter into an Agreement with the Tenderer placed in the waiting room.

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

5.13 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.

5.14 Integrity and independence

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

- Prior to conclusion of the Agreement the Tenderer may 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.

5.15 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.

5.16 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.

5.17 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.

5.18 Contradictions, lack of clarity, and omissions 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 of TenderNed (see section 5.1).
- 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>) a 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 the supporting documents of the 28 European Member States, candidate country (Turkey) and the 3 EEA countries (Iceland, Liechtenstein and Norway) can be found. 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 he has 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 he has 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 Tenderers 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, if requested by the Client, 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 his 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 Tenderers 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 Tenderers 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 upon request by the Client.

C Technical competence and/or professional competence

The Tenderer demonstrates his technical and professional competence by submitting two reference projects that are technically equivalent to the present assignment and at comparable organizations where work is carried out in a similar manner.

The Tenderer must describe the reference projects, provide their dates of completion and contact details for the organizations for which the project was carried out.

Core competency 1: Experience with delivering, commissioning and conducting a SAT of the Product or comparable.

Core competency 2: Experience with conducting a multi-year maintenance contract for the Product or comparable.

The experience with the above core competencies must be described using Annex D, Core Competency Form. The following applies:

- You use a separate Core Competency 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 2 reference assignments may be used to describe the experience with the above core competencies. If 1 reference assignments /is sufficient to describe the requested core competencies, then this is permitted.

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 his country of residence.

If Tenderers register as a Combination, all Combination members must meet the requirement that their 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 to step 3 for further assessment – see section 7.1. If a 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 set out in Annex F 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.

7.1.2 *Assessment committee*

An assessment committee has been set up to assess the tenders. The committee will assess the tenders on the basis of the regulations in the Request for Quotation and any internal assessment protocol. The assessment process takes place in consultation with a procurement consultant appointed by the Contracting Authority, who supervises the process 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. 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 an award (sub)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 a consensus model is pursued. The final ratings of each award (sub)criterion are determined as follows:

- a) If all individual reviewers are unanimous in their rating, the final 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 final rating is based on the unweighted average of all individual ratings of reviewers.

Individual ratings will not be communicated to Tenderers.

7.2 Step 4: Awarding on value

7.2.1 *Valuation of Tenders*

The contract will be awarded according to the method of awarding on value (Euros) The score results in a fictitious deduction from the total registration price as stated in Annex C. This results in the comparison price. The tenderer with the lowest comparison price is awarded the Assignment.

Valuation framework

The table below provides an overview of the different valuation levels used by the assessors.

Valuation	Description	Percentage of maximum score
Excellent	The answer meets this criterion in terms of the question, it contributes more than optimally to the objective and offers added value on all requested aspects.	100%
Good	The answer meets this criterion in terms of the question, it contributes more than sufficiently to the objective and offers added value on the majority of requested aspects.	75%
Sufficient	The answer meets this criterion in terms of the question, it contributes sufficiently to the objective and offers added value on more than a few of the requested aspects.	50%
Mediocre	The answer narrowly meets this criterion in terms of the question, it contributes somewhat to the objective and offers added value on a limited number of the requested aspects.	25%
Insufficient	The answer does not meet this criterion in terms of the question, it contributes barely to the objective and offers added value on none or a single of the requested aspects.	5%

Assessment criteria

The further substantiation of the valuation level given by assessors follows from the assessment criteria used and the extent to which they are met:

- Complete: all aspects are addressed, and additional information is provided (if necessary);
- Correct: what has been written is verifiable, specific, realistic, acceptable and (where possible) measurable and formulated in a time-bound manner;
- Consistent: the information provided is relevant, in line with the Assignment, and not inconsistent with answers given elsewhere;
- Convincing: the elaboration convinces the Client of the knowledge and expertise regarding the requested service.

The valuation framework and assessment criteria apply to award criteria Q1 – Q5. For answering these criteria Annex G1 is to be used.

Quality criterion Q6 is handled by means of verification instead of assessment. Annex G2 elaborates on the criteria as well as verification method. The information that Tenderers provide in Annex G2 will be used for this verification.

7.2.2 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.

Description	Max. value
Q1 Lifespan	€ 50,000
Q2 Features	€ 55,000
Q3 Deposited films	€ 150,000
Q4 Software	€ 40,000
Q5 Support	€ 50,000

Q6 Surplus to minimum requirements	€ 55,000
Maximum total fictitious deduction	€ 400,000

Tenderers must achieve 60% of the total fictitious deduction of Q1-Q5 as a minimum. Tenders that fail this requirement will be excluded from further participation in this tendering procedure.

7.2.2.1 Q1 – Lifespan

Objective

The Contracting Authority is in search for a reliable Product with low failure rate and cost-effective maintenance characteristics.

The Contracting Authority is interested in:

- The measures that Tenderer takes in assuring the quality of build (people, process, applied components and materials); in their offer in order to maximize the technical lifespan of the Product, as expressed in the employed components and materials, etc.;
- The measures that Tenderer takes in assuring a cost-effective maintenance schedule.

Assessment

Assessment takes place on the basis of the valuation framework and assessment criteria in paragraph 7.4.1.

7.2.2.2 Q2 – Features

The Contracting Authority is interested in the following items:

Description
The aim is for the Product to be easy to use and maintain. To this end, the Contracting Authority is interested in the following: • Quick and efficient swapping of chamber and/or liners • The effort it takes to clean the chamber • Easy swapping out of precursor materials, including cleaning and/or preconditioning the precursor lines if applicable: • Pump/purge of the lines can be done automatically via the software; • Removing and replacing precursor material takes no longer than 15 minutes (excluding pump/purge steps);
The aim is to reduce running cost when the system is idle as much as possible. To this end, the Contracting Authority is interested in the following: • Power saving • Nitrogen flow to roughing pump
The aim is to have a system that can be easily enhanced after installation by retrofitting components and/or options. To this end, the Contracting Authority is interested in the capabilities of the Product in view of this.

Assessment

Assessment takes place on the basis of the valuation framework and assessment criteria in paragraph 7.4.1.

7.2.2.3 Q3 – Deposited films

The Contracting Authority is interested in the following items:

Description
The deposition of high-quality films, concerning the following items: • the generation of a remote plasma • the tunability of processes • low damage to sample and films during plasma assisted deposition • accurate control of process parameters • temperature accuracy and control
The aim is to deposit high-quality oxide films with higher breakdown voltages and lower leakage currents. The Client is interested in the following aspects of Al₂O₃; • Quality of electrical isolation through breakdown voltage. • Quality of electrical isolation through leakage current.
The aim is to deposit high quality nitride films, with high stoichiometry and low oxygen concentration. The Client is interested in the following aspects of AlN; • Quality of deposition through stoichiometry. • Quality of deposition through residual oxygen content by XPS.
The aim is to have the ability to deposit high quality metal films with a high sheet resistance. The Client is interested in the ability of conductivity through resistance measurement of deposited Pt.
The aim is to have the ability to grow conformal films. Quality should be determined by viewing cross-section of trenches (>100 nm depth, aspect ratio >5, width <5 microns) that have been covered by the ALD process. High step coverage will be considered favorably.
The aim is to have the ability to deposit with high rates (fast cycles). Speed should be determined by measuring average thickness versus total deposition time on a 100 mm wafer or bigger using a Al₂O₃ deposition.

Assessment

Assessment takes place on the basis of the valuation framework and assessment criteria in paragraph 7.4.1.

7.2.2.4 Q4 – Software

The Contracting Authority is interested in the following items:

Description
The aim is to have intuitive and well-integrated software. Tho this end, the Contracting Authority is interested in the following: • Easy loading/unloading and transfer of samples between load-lock and PE-ALD. • Flexible user management to distinguish user roles. • Easy to use process development for making and developing new processes and editing existing ones.

Assessment

Assessment takes place on the basis of the valuation framework and assessment criteria in paragraph 7.4.1.

7.2.2.5 Q5 – Support

The Contracting Authority is interested in the following items:

Description
The quality of the provided service during operation. This includes the warranty conditions, terms of the maintenance contract, and the availability and composition of the service team (e.g. number of hours/days before a service team is sent, composition of the team, procedures etc.). The tenderer should clearly indicate which services and materials are covered in the warranty and the offered maintenance during the first five years, and which are excluded. The minimal requirements to which warranty and maintenance contract should conform are specified in Annex F, requirement 9. Short response times, short travel distances and low additional costs to labor and spare parts are considered favorably.

Assessment

Assessment takes place on the basis of the valuation framework and assessment criteria in paragraph 7.4.1.

7.3 Tie

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

- a) The Contract will be awarded to the tenderer with the highest notional deduction on the award criterion Q1;
- b) If, after step a, there are two or more tenderers with an equal assessment result on the award criterion Q1, the draw will take place under notarial supervision.

7.4 Verification

As indicated in Section 3.5.2, the Client 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.