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Procurement Department

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De Zaaie, Eindhoven

www.tue.nl

Request for Proposal (RFP)

European tender

“Dielectric Etcher”

For

Eindhoven University of Technology



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Reader's guide

The purpose of this Request for Proposal is to provide interested market parties all the information they require to be able to participate in this tender. This Request for Proposal also aims to provide insight into the minimum requirements and conditions for entering into and performing the Agreement, the objectives of the Contracting Authority and the planning of the progress of this tender.

Section 1 of this Request for Proposal looks at the background of this tender and gives a general description.

Section 2 provides a brief description of the Tendering Procedure to be followed.

Section 3 sets out the procedural and administrative conditions of this tender. These conditions apply during the entire Tendering Process unless they are departed from in a later tender document.

Section 4 describes the grounds for exclusion and minimum requirements the Contracting Authority will apply.

Section 5 describes the award criteria the Contracting Authority will apply when assessing the Proposals.

Section 6 describes the technical specifications of the Contract.

The following **Annexes** are attached to this Request for Proposal (and are described in more detail in this document):

- Annex 1: Glossary;**
- Annex 2: European single procurement document;**
- Annex 3: (DRAFT) Agreement, including annexes;**
- Annex 4: Reference (Experience);**
- Annex 5: Price Form;**
- Annex 6: Minimum Requirements;**
- Annex 7: Award Criteria AC2 Wishes;**
- Annex 8: Declaration of Agreement Tendering Documents.**

The Glossary contains the overview of some terms that are capitalized in this Request for Proposal.

1 BACKGROUND TO THE TENDER

1.1 Introduction

The purpose of this Request for Proposal is to provide interested market parties all the information they require to be able to participate in this tender. This Request for Proposal also aims to provide insight into the minimum requirements and conditions for entering into and performing the Agreement, the objectives of the Contracting Authority and the planning of the progress of this tender.

This Request for Proposal contains a number of **Annexes**, which are described in more detail in this document.

1.2 Contracting Authority

Eindhoven University of Technology (TU/e) is a young university, founded in 1956 by industry, local government and academia. Today, their spirit of collaboration is still at the heart of the university community. We foster an open culture where everyone feels free to exchange ideas and take initiatives.

Our mission – what we do

TU/e leads the change for a better world by educating responsible engineers, by empowering academics and professionals, by advancing global scientific knowledge, and by driving impactful, sustainable innovation in the Brainport ecosystem and beyond.

Our vision – how we do it

By 2030, TU/e is a key driver of innovation ecosystems, European competitiveness and resilience, and sustainability transitions.

TU/e engages with its partners in innovation ecosystems that create global impact. As a leading example of a 4th generation university, the university propels sustainability transitions with talent, groundbreaking science and valorization initiatives, based on our CORE values. TU/e educates responsible engineers who are able to lead the change through our focused and intertwined research and education programs. By engaging in both curiosity- and mission-driven research, TU/e advances groundbreaking knowledge on a global level. Together with partners, TU/e creates technological system solutions for sustainability transitions. TU/e empowers talent across the university's ecosystem: ranging from students and staff to starting entrepreneurs. TU/e offers clear and diverse career prospects for academics and professionals by providing recognition, career development opportunities, and skill-building initiatives. Together, our students and staff create a dynamic and engaging environment by collaborating within and outside the TU/e community. TU/e is home to a trust-based community that fosters collaboration, personal interaction, agility, well-being, and diverse points of view.

Our values – how we act

TU/e's CORE values are our moral compass and form the basis for all our policies, decisions, and actions. Our CORE values are: Curious, Open, Respectful and Responsible.

These values are reflected within our campus and wherever possible it is our mission to strengthen them. The campus is therefore much more than a university campus, it is a place where innovation, working, living and recreation coincide.

TU/e currently has approximately 13.800 students and 5.600 employees.



More information is available on the university's website: www.tue.nl.

1.3 PIXEurope

PIXEurope is the fifth Pilot Line initiative launched through the European Chips Joint Undertaking, established under the European Chips Act, to accelerate the development of photonic integrated circuit (PIC) technology – a critical enabler for high-speed computing, communications, quantum information systems, and beyond. It will be Europe's first fully integrated, distributed Pilot Line connecting the entire PIC value chain from design and fabrication to integration, packaging, and testing – across multiple coordinated European sites within a unified and standardised framework. The ICP dielectric etcher will be purchased as a part of PIXEurope.

1.4 The Contract

The ICP dielectric etcher is required for dry etching of dielectrics (SiN and SiO₂) used as hard mask layers for waveguide definition. Accurate processing of such dielectric films, which is an intermediate step between DUV lithography (via existing tool) and semiconductor waveguide etching is critical for InP integrated circuits. This newly commissioned ICP etcher will be key to define dielectric patterns with high etching selectivity and high verticality, suitable for high-quality optical waveguides with well controlled optical confinement and minimized sidewall roughness. The tool will be instrumental for fabrication of waveguide components across multiple bands, both for monolithic and hybrid integration.

2 BRIEF DESCRIPTION OF THE TENDERING PROCEDURE

2.1 Tendering Procedure

The European tender takes place in accordance with a public procedure as set out in the (amended) Public Procurement Act 2012 (Bulletin of Acts and Decrees 2016, 241). In connection with the Contract intended to be awarded, the Contracting Authority has sent the announcement of the European tender for the Contract for publication on www.tenderned.nl and (via that site) in the Supplement of the Official Journal of the European Union. With the sending of the announcement, the Tendering Procedure has formally started.

This Tendering Procedure is executed on the TenderNed platform. All documents are made available digitally via TenderNed. All texts and files in the TenderNed form an integral part of this Request for Proposal. Should there be differences between the provisions in TenderNed and the provisions in this Request for Proposal, the provisions in this Request for Proposal prevail, unless otherwise indicated.

2.2 Schedule

The draft tender planning to be applied is included in TenderNed under the tab 'Schedule' No rights can be derived from this planning by Tenderers.

If the planning below deviates from the planning in TenderNed, the Schedule in TenderNed prevails.

Activity	Date/period
Dispatch Request for Proposal	October 12 th , 2026.
Last date for raising questions for the Memorandum of Information	November 02 th , 2026.
Dispatch Memorandum of Information	November 09 th , 2026.
Submission of Proposal	November 25 th , 2026, before 2.00 PM Central European Timezone (CET).
Verification and Provisional award	November/December 2026.
Final award – twenty - (20 days) after provisional award)	December 2026.

2.3 Assessment procedure

The assessment procedure starts after the last date and time on which the Proposals must have been submitted. The assessment procedure consists of:

- Test on procedural/administrative requirements and completeness;
- Test on grounds for exclusion eligibility criteria and minimum requirements;
- Assessment on Award Criteria.

The Contracting Authority intends, on the conditions as included in this Request for Proposal, to award a Contract to the Tenderer with the Best Price-Quality ratio.

If after application of the award criteria, the Proposals of two or more Tenderers are assessed as being the best (calculated on 2 decimal points), it will be decided by drawing lots in whose favour the awarding decision comes down.

During the entire Tendering Process and contract period Tenderers must satisfy all grounds for exclusion, eligibility requirements and minimum requirements.

3 PROCEDURAL AND ADMINISTRATIVE CONDITIONS

This chapter sets out the procedural and administrative conditions of this tender. These conditions apply during the entire Tendering Process unless they are departed from in a later tender document

3.1 Content of the Proposal

The Proposal must be complete. This means that all requested documentary evidence and other information must have been included.

The Tender Forms must be filled in and signed in the requested manner. It is not permitted to add to and/or change the fixed text of the Tender Forms, unless express permission has been granted to this end by the Contracting Authority or it can be indisputably deduced otherwise from the Tender Form.

3.2 Applicability of conditions for this Tendering Procedure

Every Tenderer is expected to have taken notice of the conditions and other content of the Tendering Documents. By submitting a Proposal, the Tenderer declares its unconditional acceptance of the contents and applicability of the Tendering Documents. The Memoranda of Information still to be published form an integral part of these Tendering Documents. If Tenderers act in contravention of, or fail to comply with the Tendering Documents, this may lead to exclusion from (further) participation in this Tendering Procedure.

3.3 Proactive attitude/forfeiture of rights

This Request for Proposal and all accompanying **Annexes** have been prepared with care. Should a Tenderer nevertheless come across contradictions and/or defects, the Tenderer must notify the Contracting Authority of this in Writing in a timely manner via the contact person referred to in TenderNed. If subsequently it becomes apparent that this Request for Proposal contains contradictions and/or defects which have not been reported to the Contracting Authority, these are at the risk of the Tenderer.

(Potential) Tenderers must take a proactive approach during this tendering process. This means that they must notify any lack of clarity and defects in advance so that this Request for Proposal can be amended where necessary. If a (potential) Tenderer fails to report any objections, lack of clarity or defects immediately after publication of this Request for Proposal, but in any case before the end of the term applicable for submission of questions to the Contracting Authority, the (potential) Tenderer forfeits its right to object to such at a later stage.

3.4 Stopping the Tendering Procedure/non-award

The Contracting Authority is free to stop this Tendering Procedure at any time or not award the Contract. The Contracting Authority also reserves the right not to award (parts of) the Contract or to proceed to a provisional award of the Contract.

If the Contracting Authority decides not to award the Contract, it will notify the Tenderers as soon as possible stating the reasons for this. In that case, the Tenderers cannot claim payment of any costs incurred in the context of this Tendering Procedure. No right to any follow-up contracts can be derived from the contract award.

3.5 Confidentiality and intellectual property rights

By participating in this Tendering Procedure, the Tenderer undertakes to keep all information it receives from the Contracting Authority in the context of this Tendering Procedure confidential insofar as this information has not been made public by the Contracting Authority and not to provide this to third parties. Such information may only be shared with employees and, insofar as applicable, with subcontractors involved in the procedure.

The Contracting Authority shall not disclose confidential information it receives from a Tenderer in the context of this Tendering Procedure to other Tenderers without the permission of the first named Tenderer, with the exception of legal obligations of the Contracting Authority. A Tenderer must always indicate which information it considers to be confidential. By submitting a proposal, the Tenderer declares that the Contracting Authority is permitted to disclose the name of the Tenderer.

The Contracting Authority is not obliged to publish internal (tendering) documents, such as results of evaluations, tender comparisons, as well as advice relating to qualification and awarding, to Tenderers.

By participating in the Tendering Procedure, any intellectual property rights of the Tenderers do not transfer to the Contracting Authority unless otherwise determined. Intellectual property relating to the Tendering Documents are and remain the property of the Contracting Authority.

3.6 Information exchange

The Contracting Authority guarantees the equal treatment of all Tenderers during the Tendering Procedure. The Contracting Authority does not provide information that can favour one or more Tenderers over others.

Change in Tendering Documents

During this Tendering Procedure, the Contracting Authority can make additions or changes to the Request for Proposal if new insights or developments require this. These changes will be notified to the Tenderers in Writing in one or several Memoranda of Information.

Insofar as this Request for Proposal does not provide for particular situations, the Contracting Authority decides.

Request for information

All (potential) Tenderers have the opportunity to ask questions. Questions and/or comments can be submitted only via the “Questions and Response” module in TenderNed. Questions must be submitted no later than on the date(s) and time(s) shown in the planning.

Memoranda of Information

The (anonymised) questions submitted will be included, with answers, in the Memoranda of Information. The Contracting Authority can also provide extra information by means of a Memorandum of Information. Memoranda of Information will be published on TenderNed.

The Contracting Authority shall provide the last Memorandum of Information at the latest ten (10) Days before the final date for submitting a Proposal.

The content of the Tendering Documents will, with due observance of that included in the Memoranda of Information, become definitive after publication of the last Memorandum of Information. The memoranda of Information shall prevail over the text of this Request for Proposal, whereby a Memorandum of Information of a later date shall prevail over a Memorandum of Information of an earlier date. Full acceptance of the Tendering Documents is a strict requirement for submitting the Proposal.

All verbal information provided by or on behalf of the Contracting Authority has no legal validity whatsoever unless this information has been confirmed in Writing in an Memorandum of Information.

3.7 Proposal submission process

3.7.1 *Only submitting a Proposal once*

A Tenderer may only submit one Proposal, independently, as the main contractor with subcontractor(s) or as a Consortium of several other parties. If failing to comply with the above, only the first submitted Proposal will be considered.

It is only permitted to submit a Proposal from several different businesses within the same group if both the Tenderers and the holding or parent company can demonstrate that the Tenderers operate fully independently from each other and made the proposal independently. A group includes: a legal person together with its subsidiaries in the meaning of section 2.24(a) and 2.24(b) Dutch Civil Code.

3.7.2 *Independently or in form of collaboration*

Tenderers may submit a Proposal to this Tendering Procedure independently or in collaboration with other businesses. The following forms of Tenderers can be distinguished:

- Independent Tenderer;
- Collaborative arrangement of businesses as one Tenderer (Consortium);
- Tenderer is the main contractor and will use one or several subcontractors.

3.7.3 *Independent Tenderer*

In the event of a Proposal by an independent Tenderer, the Tenderer states to be able to perform the Contract completely independently (without having to make use of the capacity of third parties). The Tenderer must independently satisfy all the set requirements and submit the requested information.

3.7.4 *Consortium*

In the event of a Proposal by a collaborative arrangement of Economic Operators (Consortium), each business participating in the collaborative arrangement (Consortium Member) must independently submit the “Uniform European Single Procurement Document” and a copy of the Registration in the national professional/commercial register with the Proposal including all the requested relevant statements/Annexes.

Under part II A ‘Information concerning the economic operator’ of the Uniform European Single Procurement Document it must be stated which businesses are taking part in the Consortium and the role of the business within the Consortium (whereby in any event the lead manager of the Consortium is listed). When putting forward a collaborative arrangement as being the Tenderer, each Consortium member accepts joint and several liability for the performance of the Contract.

Consortium members must independently satisfy the grounds for exclusion. The Consortium must jointly satisfy the minimum requirements and selection criteria (eligibility requirements).

In its Proposal, the Tenderer must clearly state which activities will be carried out by which member or members of the Consortium.

3.7.5 *Main contract / Subcontracting*

In the event of a Proposal by a Tenderer who can independently satisfy the set requirements/criteria but nevertheless, as the main contractor, wishes to engage subcontractors for the performance of the Contract, all the same requirements as for an independent Tenderer apply. The Tenderer must state that it wishes to use subcontractors in part II D ‘Information concerning subcontractors on whose capacity the economic operator does not rely’ of the Uniform European Single Procurement Document. The Tenderer must also indicate which parts of the Contract it intends to subcontract to third parties and which subcontractors it proposes.

In the event of a Proposal by a Tenderer who cannot independently satisfy the set requirements/criteria and, as main contractor, but can only satisfy the set requirements/criteria by using subcontractors or third parties, the Tenderer must indicate in the Uniform European Single Procurement Document for which requirements it relies on a third party/parties (stating the third party/parties on which it relies - see Part II C ‘Information about reliance on the capacities of other entities’ - of the Uniform European Single Procurement Document).

Both the main contractor and subcontractor(s) may not be subject to exclusion grounds. The main contractor and subcontractor(s) must jointly satisfy the minimum requirements and selection criteria (eligibility requirements).

The relevant subcontractor/third party must independently submit the “Uniform European Single Procurement Document” with the Proposal submission including the requested relevant declarations/Annexes. A Tenderer must also add a declaration showing that it actually has access to the resources of this third party/parties (subcontractors) required for the Contract. The engagement of subcontractors by the main contractor does not affect the liability of the main contractor towards the Contracting Authority.

3.8 *Change of capacity/other changes*

After submitting a Proposal, it is in principle not permitted to make changes to the composition of a Consortium and/or the deployment of the subcontractors/third parties put forward in the Proposal.

The Tenderer must notify the Contracting Authority immediately and in full about any changes in its legal form, share capital, capacity, use of subcontractor or other changes which may be important for the Contracting Authority to be able to assess its eligibility for performing the Contract or may be relevant to the Contracting Authority in any other way.

Changes are only permitted with the prior written approval of the Contracting Authority and on the basis of compelling reason(s) which the Tenderer must make plausible. The Contracting Authority may attach conditions to its approval of such changes.

3.9 Proposal submission

The Proposal must be submitted digitally via TenderNed. Submission of the Proposal by post, fax, email or otherwise than set out above, is not permitted. The Tenderer ensures that declarations, Annexes and other parts of the Proposal are uploaded to the correct location in TenderNed. The digital documents must be submitted in a generally accessible format (preferably an open standard).

All documents and declarations to be signed must be signed by a representative of the company who is authorised to do so. This is demonstrated by the submission of an extract from the Chamber of Commerce, possibly supplemented with a valid power of attorney, showing explicitly that the person and/or persons who have signed the documents are authorised to represent the Tenderer.

The Tenderer is responsible for the timely and complete submission of its Proposal. Therefore the Tenderer bears the risk of any delays which may occur in the submission of its Proposal such as computer or internet failures. The Proposal of the Tenderer becomes the property of the Contracting Authority.

Opening of Proposals

The digital safe will be opened as soon as possible after release of the digital safe. A public tender hearing will not take place.

Questions for Tenderers

The Contracting Authority is free to request Tenderers to explain, clarify or supplement their Proposal within a period to be determined by the Contracting Authority.

3.10 Conditions, validity and term of validity

The Proposal must be irrevocable and unconditional. Proposals that are not irrevocable and/or have conditions attached in any way (referring to their own general terms and conditions for example) may be invalid and will not be considered. All general conditions on the part of the Tenderer (such as delivery terms and conditions or payment terms) are expressly rejected.

The term of validity is in any event ninety (90) Days from the last date for the submission of the Proposals. If preliminary relief proceedings are pending against the award decision, the term of validity ends eight (8) Days from the day on which judgement was given in the preliminary relief proceedings.

3.11 Verification

The Contracting Authority can invite the Tenderer who might be eligible for a provisional award to a verification consultation in which the Tenderer must demonstrate how he complies with (specific) parts of the Request for Proposal. Prior to the verification, the Contracting Authority may put forward questions or parts which Tenderer must answer.

If the Tenderer cannot demonstrate that he meets all requirements and/or wishes, the Contracting Authority reserves the right to exclude the Tenderer from further participation in this Tendering Procedure.

3.12 Award decision - Objection clause

The Contracting Authority shall notify all Tenderers in Writing as soon as possible and simultaneously on the award decision.

If a Tenderer disagrees with the award decision notification, the Tenderer, on penalty of the complaint being declared inadmissible and the forfeiture of rights, must have within a period of twenty (20) Days from the date of the sending of the award decision notification, by serving a summons, commenced preliminary relief proceedings against the aforementioned award decision of the Contracting Authority with the (preliminary relief judge) at the District Court of East Brabant.

If preliminary relief proceedings have been commenced within this term of twenty (20) Days, there shall not be a final award of the Contract before a ruling has been given in the preliminary relief proceedings unless a compelling interest commands the immediate awarding. If no preliminary relief proceedings are filed within twenty (20) Days of the dispatch of the award decision notification, the stakeholders can no longer file further objections to the decision and have forfeited their rights in this respect. In that case, the Contracting Authority is therefore free to implement the decision made.

The Contracting Authority is entitled to terminate the Agreement with the favoured party/parties with immediate effect if it follows from a ruling from a court that the award decision is unlawful or that the Agreement is invalid or that, for whatever reason, the Contract must be brought again to the market. The favoured party/parties cannot derive any rights towards the Contracting Authority from such termination decision for reimbursement of tendering costs, loss of reference, loss of profit or other loss.

The Contracting Authority reserves the right to take a decision and make arrangements in cases the Tender documents do not provide.

3.13 Complaints

It is possible that dissatisfaction will arise between contracting authorities and businesses during the Tendering Procedure with regard to the actions of parties in the Tendering Procedure. This could lead to a complaint. In such a case, the Contracting Authority will handle the complaint in accordance with the 'Complaints Settlement in Tendering', dated 7 March 2013. These rules can be found on:

Klachtafhandeling bij aanbesteden | Rijksoverheid.nl

If a stakeholder has a complaint regarding this Tendering Procedure, the following actions are possible.

Complaints can be notified by email to the complaints information point of the Contracting Authority via email address: Tenders.complaintsreportingpoint@tue.nl. A complaint will be dealt with as soon as possible.

If the complainant disagrees with the decision issued by the Contracting Authority on the complaint submitted, the complainant may submit the complaint to the Tendering Experts Committee set up by the Minister of Economic Affairs. If a complaint concerning this Tendering Procedure is submitted to the Tendering Experts Committee, the complainant is requested to send a copy to the contact person of the Contracting Authority referred on TenderNed.

3.14 Other

Language

All information exchange relating to the Tendering Procedure takes place in English. Documents to be submitted by Tenderers must be drawn up in English. If particular documents to be submitted are not available in English, the Contracting Authority will decide whether the submission of the document in another language will suffice (whether or not furnished with a translation into English). A Tenderer wishing to submit a document in a different language than English must submit a request to this end before submission of the Proposal to the Contracting Authority via the message module of TenderNed.

Costs

The Contracting Authority does not reimburse costs incurred in the preparation and issue of a Proposal, including any further information to be provided. The Tenderer bears the risk of any costs and/or damage that (may) arise because the contract is not awarded or this Tendering Procedure is (temporarily/permanently) discontinued.

Variations

Variations are not permitted.

Applicable law and disputes

This Tendering Procedure is governed by Dutch law. Subject to the provisions in this Request for Proposal any dispute between the parties involved in this Tendering procedure in relation to this tender shall in the first instance be heard by the (interim relief judge) of the District Court of East Brabant.

4 GROUNDS FOR EXCLUSION, ELIGIBILITY AND MINIMUM REQUIREMENTS

This chapter describes the grounds for exclusion and minimum requirements the Contracting Authority applies.

4.1 Grounds for exclusion

The Contracting Authority wishes only to conduct business with companies whose integrity is established. The Contracting Authority may exclude all Tenderers to which one of the mandatory grounds for exclusion apply, or one of the optional grounds for exclusion which have been declared applicable by the Contracting Authority in the European Single Procurement Document (Annex), such with due observance of Section 2.87(a) and 2.88 of the (amended) 2012 Tendering Act. In order to show that such grounds for exclusion do not apply to the Tenderer or its sub-contractors, they must complete the European Single Procurement Document (**Annex 2** of this Request for Proposal) truthfully and provide it with a legally valid signature and add it to the Proposal. (Upload this **Annex 2** in TenderNed).

Documentary evidence

The Contracting Authority reserves the right to request the Tenderer to submit further documentary evidence or declarations. In connection with the application of this paragraph, the Contracting Authority can request the Tenderer to submit documentary evidence or declarations as set out in section 2.89 of the (amended) 2012 Tendering Act in order to be able to establish whether or not the Tenderer finds itself in any of the above-mentioned circumstances.

By submitting the European Single Procurement Document, the Tenderer also declares that it is able to provide the requested documentary evidence and declarations within the reasonable term indicated by the Contracting Authority. If the Tenderer fails to provide the documentary evidence and declarations within this term to the Contracting Authority, it is deemed not to be able to do so and the Proposal may be invalid. A Tenderer with an invalid Proposal will be excluded from further participation in this Tendering Procedure.

The following documentary evidence relating to Grounds for Exclusion is eligible:

- Certificate of conduct for procurement;
- Payment history report of Tax and Customs Authority;
- Commercial Register extract.

4.2 Selection criteria (eligibility requirements)

Tenderer must satisfy the prescribed selection criteria (eligibility requirements) below as a minimum. If the Tenderer does not satisfy one or several of these minimum requirements, the Proposal may be invalid and the Tenderer may not be eligible to be awarded the Contract.

4.2.1 *Professional qualifications*

Registration in the national professional/commercial register

By signing the European Single Procurement Document the Tenderer declares to satisfy the following minimum requirement:

Requirement: The Tenderer is registered in the professional register or in the commercial register in accordance with the regulations of the Member State in which it is based.

Documentary evidence: A registration in the Commercial Register of the Chamber of Commerce (or equivalent) not older than six (6) months calculated from the latest date of submission of the Proposal and must be Upload by Tenderer in TenderNed.

4.2.2 *Technical and professional competence*

For this tender the Tenderer must show his proven following competence and/or capabilities. Therefore he has to fill in Standard Form included in **Annex 4** of this Request for Proposal and Upload this **Annex 4** in TenderNed.

The required minimum competences and/or capabilities for this tender to show with the applicable reference are the following:

- To guarantee that Tenderer has credible experience in delivery and support of at least one (1) “Dielectric Etcher” comparable with the system for this tender. We request evidence for delivery and installation of an system with a similar configuration as requested here to at least one university or other research institute (provide reference) as well as in providing service for these systems in the past five (5) years.

The aforementioned ten (5) years are calculated compared to the latest date of submission of the Proposal.

4.3 Minimum requirements in respect of the Contract

A Tenderer must in any event satisfy the minimum requirements set out below to be able to submit a conformal Proposal. The following minimum requirements are set:

4.3.1 *Statement of Agreement to Tendering Documents*

The Tenderer must unconditionally agree and comply with all the requirements and conditions set out in this Request for Proposal and its Annexes, with due observance of any changes which arise from the Memoranda of Information. The Tenderer must indicate on the Declaration of Agreement Tendering Documents, see **Annex 8** of this Request for Proposal to agree to this unconditionally. Upload this **Annex 8** in TenderNed.

4.3.2 *Statement of Agreement to draft Agreement*

The draft Agreement is included in this Request for Proposal as **Annex 3**. On submission of a Proposal, the Tenderer must unconditionally agree with all provisions of the draft Agreement with due observance of any changes which arise from the Memoranda of Information.

4.4 Verification by the Contracting Authority

The Contracting Authority is authorised to verify the information provided by the Tenderers, by asking the Tenderers to provide documentary evidence or declarations for example or by making enquiries at the clients of (or other stakeholders of) the reference projects.

5 AWARD CRITERIA

5.1 General

The Contracting Authority intends to award the Contract, under the conditions as included in this Request for Proposal, to the Tenderer with, from the point of view of the Contracting Authority, the Most Economically Advantageous Proposal, on the basis of the Best Price/Quality ratio. All submitted Proposals that have satisfied the (procedural/administrative) requirements and completeness and the grounds for exclusion and minimum requirements test, are assessed on the basis of the award criteria set out below.

Award criteria	Maximum points score
AC1 Price.	30
AC2 Quality:	70
Total	100

5.2 Price (AC1)

The award criterion Price is assessed on the basis of the offered Price (as entered in the Price Form- **Annex 5** of this Request for Proposal). The purchase price of the “Dielectric Etcher” includes all costs, such as design, fabrication, delivery, installation, guarantees, maintenance and all additional costs for travelling and accommodation for tenderer, as well as all costs in order to meet the mandatory requirements (M) as mentioned in **chapter 6 of this Request for Proposal** and the additional wishes offered by the Tenderer in his Quotation.

For the assessment of this criterion, the Tenderer must add the fully completed Price Form (**Annex 5** of this Request for Proposal) to its Proposal. Therefore he has to fill in Standard Form included in **Annex 5** of this Request for Proposal and Upload this **Annex 5** in TenderNed.

Attention: The maximum available budget for this tender is **€ 1.300.000,-- (excluding of VAT)**. If the price is higher than this available budget the Quotation will be laid aside.

The score on AC1 Price (P) will be calculated by means of the following formula:

$$S = (P_{lowest} / P) \times 30$$

S: score

P: price Tender **(excluding VAT)**

P_{lowest}: lowest price of all Tenders **(excluding VAT)**

Upload also in TenderNed your complete quotation with all the technical details of the instrument according to the minimum requirements as mentioned in chapter 6 of this Request for Proposal.

5.3 Quality (AC2)

The quality of the Proposal will be assessed in relation to the wishes mentioned in the overview below.

	Wish	Maximum points to gained for each Wish:
1.	<u>See for this wish number 6.2.6 in Chapter 6 of this Request for Proposal:</u> Delivery of the system must take place within 12 months from the date of order. Early delivery is preferred due to the demanding project schedule of the PIXEurope. The earlier the system can be delivered, the higher the score awarded, reflecting the importance of meeting the schedule. The delivery time will be evaluated according to the following criteria: - A delivery within 12 months from the date of order will receive a maximum of 6 points. - A delivery within 11 months from the date of order will receive a maximum of 8 points. - A delivery within 10 months from the date of order will receive a maximum of 10 points.	10
2.	<u>See for this wish number 6.8.4 in Chapter 6.8 of this Request for Proposal:</u> Selectivity of SiN with respect to mask (TOKP6111 + TARC) > 6:1. The high selectivity is crucial to etch thicker dielectrics needed for deep waveguides. So, 10 points will be given if the offered system has a selectivity > 5:1, and 15 points will be given if the offered system has selectivity > 6:1. Note: 220 nm thick mask also has a BARC layer between SiN and resist.	15
3.	<u>See for this wish number 6.8.4 in Chapter 6.8 of this Request for Proposal:</u> Selectivity of SiO₂ with respect to mask (TOKP6111 + TARC) > 5:1. The high selectivity is crucial to etch thicker dielectrics needed for deep waveguides. So, 10 points will be given if the offered system has a selectivity > 4:1, and 15 points will be given if the offered system has selectivity > 5:1. Note: 220 nm thick mask also has a BARC layer between SiO₂ and resist.	15
4.	<u>See for this wish number 6.8.7 in Chapter 6.8 of this Request for Proposal:</u> Uniformity of 3% in etch rate for a 600 nm etch depth across 4-inch wafers, with a 5 mm edge exclusion. This is mandatory, as production of Photonic Integrated Circuits comes with more stringent requirements. It is crucial to have homogeneous etch processes that can ensure better performing devices and higher yields. This wish will be judged based on the by supplier offered homogeneity. Uniformity of 3% in etch rate for a 600 nm etch depth across 4-inch wafers, with a 5 mm edge exclusion will be judged with full 15 points, where a uniformity of 5% will be judged with 10 points.	15

	A better offered homogeneity gives a higher score, and this can be proved by data on a similar tool in consideration.	
5.	See for this wish number 6.8.11 in Chapter 6.8 of this Request for Proposal: Endpoint detection system (EDS). If different types of EDS are available, the one with an endpoint/depth accuracy of $\pm 10\%$ of the target thickness will be preferred. Please describe the EDS system that will be installed in the offered tool and the accuracy of this method, and this should be proved with data.	15

5.3.1 AC2 – Quality

*The maximum points for all the Wishes that can be gained is **70 points**.*

Details regarding each wish must be added to the Quotation in TenderNed.
For the assessment of this criterion, the Tenderer must add the fully completed Award Criteria AC2 Wishes (**Annex 7** of this Request for Proposal) to its Proposal. Therefore he has to fill in Standard Form included in **Annex 7** of this Request for Proposal and Upload this **Annex 7** in TenderNed.

Please note that your proposal to each wish is not without obligations, but will be part of the Agreement.

5.4 Assessment

5.4.1 AC1 - Price

Assessment of the award criterion Price (AC1) takes place under the direction of the Procurement Department of the Contracting Authority.

5.4.2 AC2 - Quality

Assessment of the qualitative assessment criteria is undertaken by an assessment committee represented by three (3) members of the department of Electrical Engineering

5.4.3 Determination of score AC1 and AC2

The assessment committee gives for **only for wish 5** its view on the basis of expert opinion and a comparison of the Proposals received. The assessors will assess and appraise the (sub) criteria by means of a rating figure ranging from 0 to 10, whereby

Rating figure	description
0	no input
1	very bad
2	bad
3	more than insufficient
4	insufficient
5	moderate / weak
6	sufficient
7	more than sufficient
8	good
9	very good
10	excellent

Individual ratings are expressed in whole figures.

The assessors base their ratings on the overall picture for each award criterion. The parts for each criterion and the accompanying elements referred to are only listed in explanation for the benefit of the Tenderer

and cannot be viewed as further “sub-criteria”. The listed subject matters and elements are not included in order of importance and are also not exhaustive.

The individual ratings are subsequently discussed in a plenary meeting after which individual ratings can possibly still be adjusted.

The ratings allocated by the assessors to each (sub) criterion are added up and subsequently averaged. This results in an average rating for each (sub) criterion. Finally, the average rating point for each sub-criterion is multiplied with the stated weighting factor.

Calculation example

The calculation of the points score for **Wish 5** will take place as follows;

Ratings given by individual assessors:	6.0, 7.0, and 8.0
Average rating	$21/3 = 7$
Points score	$7/10 * 15 = 10,5$
In this example the score for Wish 5 = 10,5 points	

After this, all point scores for all Wishes are added up and there follows a total points score for the Award Criterion Quality (AC2).

5.4.4 Determination of total score

Finally, the achieved points scores of the Award Criterion Price (AC1) and Quality (AC2) are added up. The Tenderer who after the point allocation achieved the highest overall total score will be considered by the Contracting Authority as the Tenderer with the Most Economically Advantageous Proposal from the point of view of the Contracting Authority.

5.4.5 Verification interview

After the tenderer with the highest overall total score is known, this tenderer will be invited for a verification interview.

Intended award

After the assessment and a successful verification interview, the Tenderers will receive notification about the intended award and the intended rejections. The Tenderer cannot derive rights from the intended award in respect of the final award.

6 TECHNICAL SPECIFICATIONS

6.1 Technical specifications

The following chapters describe the specific requirements. A list has been attached with regard to the laid down mandatory requirements in which Tenderers must confirm that Tenderers unconditionally meet the specific mandatory requirements.

Note: The Technical Specification mentioned in this chapter 6 may be amended by the Contracting Authority, as referred to in paragraph 3.6 of this Request for Proposal. Tenderers will be informed of any amendments to the Technical Specification by means of the Memorandum of Information. After the final Memorandum of Information is published, the Request for Proposal including any amendments as they stand at that moment become the final version.

The tenderer must agree and comply with this final version by answer the question with “Yes” in **Annex 6 MINIMUM REQUIREMENTS** of this Request for Proposal that it complies with the relevant requirements with comments if applicable, whereby the tenderer declares to fulfil this award requirement completely. Tenderer must add the fully completed **Annex 6 MINIMUM REQUIREMENTS** of this Request for Proposal to its Proposal and Upload this **Annex 6** in TenderNed.

Further, this chapter contains wishes marked with W. Tenderers which meet the mandatory requirements shall be evaluated based on the data provided concerning the Wishes on the degree in which they meet the Wishes compared to the other Tenderers.

6.2 General

Nr		M / W
6.2.1	24 months warranty on hardware and software starting after successful site acceptance test.	M
6.2.2	Free software updates and upgrades for a period of 5 years for the whole system.	M
6.2.3	Expected response times: 1 workday technical response by mail / call, 5 workdays service onsite, part shipment within 1 week.	M
6.2.4	Documentation should include test reports, operation and maintenance manuals written in English. Electrical drawings shall comply to IEC standards. All documents will be delivered in digital and printed form.	M
6.2.5	Power supply is according to European mainland Standards. Mains power supply is 230Vac PH-N and 400Vac Ph-Ph / 50hz.	M
6.2.6	Delivery and installation within 12 months from the order date.	M
6.2.7	Training for Process and Maintenance shall be supplied/available.	M
6.2.8	Ease of access for simple process chamber cleaning, without requiring heavy disassembly or opening the machine from the inside. No major hardware modifications should be required, while ensuring process stability.	M

6.3 System footprint and positioning in the cleanroom

Nr		M / W
6.3.1	The system must be fitted with a loadlock	M
6.3.2	The system must fit in the available cleanroom space as indicated in yellow in figure 6.3.1.	M

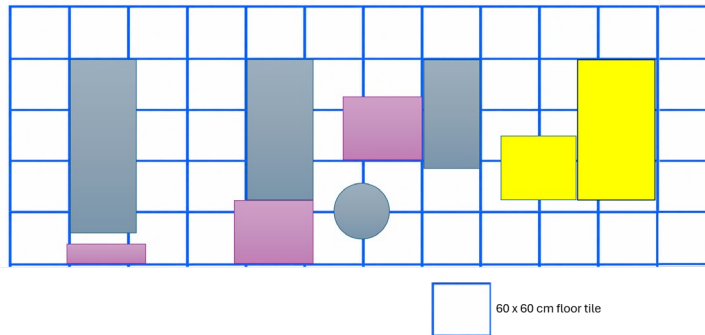


Figure 6.3.1 System positioning and footprint. The footprint of the system may not be larger than the area marked by two yellow boxes. The smaller yellow box is allocated for system computers.

6.4 Software and computer hardware

Nr		M / W
6.4.1	Latest control software with free upgrades for at least 5 years.	M
6.4.2	Continuous data logging of all interface-connected hardware.	M
6.4.3	Data logging of all connected hardware per executed run/sequence or task.	M
6.4.4	HMI/GUI software runs on version 11 or newer of MS-Windows or similar and it is compatible with updates.	M
6.4.5	Remote monitoring of the system for limited users.	M
6.4.6	Remote support from manufacturers via TeamViewer or similar.	M

6.5 Wafer Handling

Nr		M / W
6.5.1	Electrostatic chuck.	M
6.5.2	He-backside cooling.	M
6.5.3	Acceptable maximum and minimum thickness of substrate 700 μm and 500 μm respectively.	M
6.5.4	It should be possible to handle double side polished InP wafers both conducting and semi-insulating.	M

6.6 Loadlock compartement

Nr		M / W
6.6.1	The loadlock must have the capacity for a full 4" wafer cassette of 25 wafers.	M
6.6.2	Transfer pressure must be achievable < 5 minutes.	M

6.7 Gas system

Nr		M / W
6.7.1	Maximum of 8 gas lines including all gases required for tool operation	M

6.8 Etching of SiN & SiO₂

Nr		M / W
6.8.1	Etching depth required 0-1000 nm	M
6.8.2	Slow etch rate < 50 nm/min	M
6.8.3	Fast etch rate > 50 nm/min	M
6.8.4	Selectivity of SiN:PR ≈ 6:1, SiO ₂ :PR ≈ 5:1	W2-W3
6.8.5	Profile angle > 88 °	M
6.8.6	Directionality of etching = Anisotropic	M
6.8.7	Uniformity in etch rate for 4" wafers 3% with 5 mm edge exclusion – etch depth of 600 nm	W4
6.8.8	The acceptable wafer-to-wafer variation in etch depth is ≤3%.	M
6.8.9	No residual to be present post etching that cannot be removed by oxygen plasma	M
6.8.10	EPS functionality must have (Laser interferometry endpoint system)	M
6.8.11	Endpoint detection system (EDS). If different types of EDS are available, the one with an endpoint/depth accuracy of ±10% of the target thickness will be preferred. Please describe the EDS system that will be installed in the offered tool and the accuracy of this method, and this should be proved with data.	W5

6.9 Factory acceptance test (FAT)

During the Factory acceptance test the supplier must demonstrate at her own location at the Eindhoven University of Technology that:

1. **Wafer handling test with both Si and fragile InP wafers: 5 cycles of loading and unloading one full cassette x25 Si wafers and another cassette of x10 InP wafers.**
2. **Pump/vent load lock and process chamber.**
3. **EMO/interlock test and sequential reboot of the system.**

6.10 Site acceptance test (SAT)

During the site acceptance test at the designated test area the supplier must demonstrate at the Eindhoven University of Technology the following items. Point 2-5 must be supported by cross section SEM for a few wafers and CD-SEM metrology for all wafers. The demonstration must also be combined with EPD as and when possible.

1. Wafer handling repeatability testing of the robot: Successful > 50 cycles without reject, fails, breakage or damage to wafers.
 - 100 mm InP
 - 100 mm Silicon
2. Etching test with minimized sidewall roughness (< 3 nm) for SiN and SiO₂ on Si wafers x 10. The roughness will be verified by an existing CD-SEM system at TU/e Nanolab using standard roughness algorithms.
3. Etching test with vertical SiN and SiO₂ profile on Si wafers x 10 demonstrating a profile > = 88°
4. Etching test of SiN and SiO₂ to TOKP6111+TARC with a target selectivity >= 5:1
5. Final recipe demonstration with highest selectivity, vertical profile and minimum roughness on InP wafer to confirm the wafer handling, contact with electrostatic chuck, wafer to wafer reproducibility using InP wafer x 7

6.11 Financial aspects

Payment of the Purchase price of the Dielectric Etcher shall occur upon the attaining of the milestone given in the table below:

	Milestone	Percentage of the total of the Purchase price
1.	Upon ordering against bank guarantee.	20%
2.	After Delivery and successful installation of the System.	60%
3.	After a successfully completed Site Acceptance Test of the System.	20%

Annex 1: GLOSSARY

A list of definitions of a number of terms that are capitalised in the Request for Proposal is presented below. Defined definitions may be used both in the singular and the plural.

Tendering Documents: All documents in the Tendering Procedure provided by the Contracting Authority to the interested businesses/Tenderers.

Tendering Procedure: The procedure as set out in paragraph 2.1 of this Request for Proposal.

Annex: An **Annex** to this Request for Proposal

Campus: University site containing facilities for students and employees.

Days: Calendar Days.

Request for Proposal: Tendering document containing the conditions/provisions for the Proposal, as well as the award method of this Tendering Procedure. In addition, the Request for Proposal contains **Annexes** such as an Agreement on the basis on which a Proposal must be submitted.

Tenderer: An economic operator having submitted a Proposal.

Proposal: The offer submitted by the Tenderer for the performance of the Contract on the basis of the conditions included in the Request for Proposal.

Tender Form: The Tender Forms and other information as indicated in the **Annex** to this Request for Proposal.

TenderNed: The digital tendering platform on which this Tendering Procedure is carried out and which is used to exchange information.

Memorandum of Information: Information memorandum in which the Contracting Authority replies to anonymised questions asked by businesses and in which extra information may be provided if necessary.

Contract: A public contract as referred to in the (amended) Public Procurement Act 2012 related to the installation and delivery of the “Dielectric Etcher” for the Contracting Authority, as described in this Request for Proposal.

Contracting Authority: The Contracting Authority is Technische Universiteit Eindhoven. The abbreviation TU/e and the English translation Eindhoven University of Technology, are also used in the Tendering Documents.

Contractor: The Tenderer to whom the Contract shall be awarded.

Agreement: An agreement between the Contracting Authority and a Contractor with the aim to lay down the conditions in respect of the Contract(s) to be awarded.

Writing: Every unit consisting of words or figures that can be read, reproduced and then notified, that may contain information transferred or saved by electronic means.

European Single Procurement Document (ESPD): The standard form for the Tenderer’s Statement as referred to in section 2.84 of the (amended) Public Procurement Act 2012.

ANNEX 2: EUROPEAN SINGLE PROCUREMENT DOCUMENT.

Separate document.

ANNEX 3: (DRAFT) AGREEMENT, INCLUDING ANNEXES.

Separate document.

ANNEX 4: REFERENCE (EXPERIENCE).

Separate document.

ANNEX 5: PRICE FORM.

Separate document.

ANNEX 6: MINIMUM REQUIREMENTS.

Separate document.

ANNEX 7: AWARD CRITERIA AC2 WISHES.

Separate document.

ANNEX 8: DECLARATION OF AGREEMENT TENDERING DOCUMENTS.

Separate document.