

Information Notice

Introduction

- This Information Notice forms part of the European open Tender procedure for a Lift Off Metal system published on May 18, under TNO reference number WS2654163656.
- This Information Notice provides a record of the questions submitted by the Tenderers up to and including the date of publishment of this Information Notice with the answers provided by TNO.
- If Tenderers have asked questions of similar nature, all such questions have nevertheless been included in this Information Notice and answered separately. This may result in repetition of information.
- Where a company name was mentioned in a question, it has been replaced by another word or term to anonymize the questions.
- TNO advises you to read the entire Information Notice.
- All information in the Information Notice is classified as Confidential and may only be used for the purpose of submitting a Tender for this procurement.
- The Information Notice will be made available on TenderNed through publication at www.tenderned.nl and added as a document.

The Information Notice serves to provide any additions/changes to the Tender Documents and to communicate announcements from TNO.

Where further clarification of the requirements is provided, this must be taken into account when answering Annex A04 at the time of when compiling the tender. If, for example an alternative is accepted in the Information Notice, Annex A04 will not be revised. The tenderer can answer the question for compliancy with "yes" in both cases (compliance to the original requirement or compliance to the alternative). In case a requirement no longer applies, leave the check box in Annex A04 on "select".

Nr	Subject	Question	Answer
1	Annex A04	R-2000-020: The dryer technology is not explicitly specified. Do you have any preferences or more detailed requirement?	TNO has no preference. It can be spin-dry with hot-N ₂ , Marangoni type dryers, or any other potential drying method that fits for the purpose. The condition however, is that all requirements of the Programme of Requirements are met.
2	Annex A04	Which type of resist is used? Please provide detailed information, including resist type and thickness	- Liftoff process - MaN negative resist - Resist strip process – either TOK or AZ resists 2-3 µm negative resist
3	Annex A04	Please describe the metals to be removed in more detail, including metal type, thickness, and general information about the metal stack.	Standard Liftoff process is done with multilayer stack of evaporated metals on top of 2-3 µm negative resist. Total metal stack thickness is < 400 nm. p-contact metal: deposition of Ti/Pt/Au stack (thickness 10/100/250 nm). n-contact metal: deposition of Ni/Ge/Au stack (thicknesses 30/50/250 nm).
4	Annex A04	R-2000-070: Standard US frequencies are 40, 80, and 120 kHz. Is 270 kHz required? Please note that a freely selectable frequency is not standard.	Yes, 270 kHz required.
5	Annex A04	R-2000-091: What types and quantities of chemistries are required? Please also specify the preferred container sizes.	We have shared the data sheet of DMSO in R-2000-025, o IPA and o DIW For the manual fill and drain, 20 liter jerrycans for waste and 2.5 liter bottles to refill and/or top-off chemicals will be used. See also question/answer nr.10: The idea is, to start with manual operating te fill and waste and later on to, change to automatic systems.
6	Annex A04	Is there any preferred solvent you would like to use? Please note that we do not support NMP due to health and environmental concerns.	We have shared the data sheet of DMSO in R-2000-025.

7	Annex A04	Would it be possible to conduct a demo during the project phase, prior to tool delivery, in order to prepare the process and accelerate commissioning on-site? This can be quoted as an optional item.	Requirement R-3000-005 answers your question. And, since this is a requirement, it shall be included in your offer.
8	Annex A04	R-2000-015: System configuration: Instead of offering an automated batch system for metal lift-off, our approach is based on single-wafer processing. 1. Would it be acceptable to offer a single-wafer system instead of a batch immersion system, even though the specification is written for batch processing? 2. If a single-wafer system can be offered and meets the required throughput, would it be acceptable to deviate from batch-related specification items and address them with corresponding single-wafer explanations and supporting evidence?	The batch processing of cassettes with wafers is a requirement. Section 2.2.11 of the Procurement Guide states that variants of the equipment asked or alternatives are not allowed.

9	Annex A04	R-3000-020: Is the following payment term apply for TNO instead of 70/10? 30% upon order, subject to TNO's receipt and approval of a bank guarantee covering 30% of the total Contract Price;- 50% after Delivery and successful visual inspection at TNO Eindhoven (High Tech Campus 12). Following such inspection, and provided no material Defects are identified at that time, TNO may return the bank guarantee, without prejudice to its rights under the Contract;- 20% after successful installation and commissioning and written approval of the Site Acceptance Test (SAT), including agreed test periods, by TNO Management and Procurement.	We can accommodate you as follows: - an amount of € (30%) of the agreed price for the Goods including VAT) at order, after receipt of a bank guarantee covering 30% of the total contract amount; - an amount of € (50%) of the agreed price for the Goods including VAT) after delivery at location of TNO Eindhoven; - an amount of € (20%) of the agreed price for the Goods including VAT) after commissioning and Site Acceptance Test (SAT) including test periods, approved by TNO. The Bank guarantee and the bank who issues the Bank guarantee have to be approved by TNO (minimal A rating). TNO must have the right to draw the bank guarantee in any and all cases where Tenderer falls short in fulfilling its obligations under the Contract. The validity of the bank guarantee may not expire until approval of the SAT by TNO Management and Procurement. Provided that the documents are found to be correct, the amount invoiced shall be paid to the Supplier within 30 days.
10	Annex A04	R-2000-091: Is it correct that the chemical delivery and waste systems are 10 meters below the lift-off system? Please confirm.	The distance between the chemical delivery and waste systems and the lift-off system is four meter, but that is straight down measured. At this moment it is uncertain if positioning of the chemical delivery and waste systems straight under the lift-off system will be possible. Hence, we assume a maximum required length of length of the pipes of 10 meteres. The exact design will be discussed during the Critical Design Review fase after contract award.
11	Annex A04	R-2000-090/091: should the chemical deliver and waste system be quoted optional or not, R-2000-091 is confusing.	It has to be quoted as an option. See Annex A03-tab3-line number 17.
12	Annex A04	Is a filter fan unit (FFU) for laminar airflow required, it was not listed inside the specification.	We will answer this question in the second Information Notice (see question/answer number 17)

13	Annex C03	Please review the attached revised TNO Terms and Conditions of Purchase for Goods. Are the deletions and changes feasible?	Unilateral deletions and amendments to Annex C03 are out of the question. Section 2.3 of the Procurement Guide gives clear directions on how to ask <i>reasoned/substantiated</i> questions or propose amendments using Annex C02.
14	Annex A04	Which Material should be used for the Basic Corpus of the tools? The question is related to if the material needs to be compliant to FM4910 or not.	R-2000-085 is the leading safety requirement. Supplier can propose a solution compliant to this requirement.
15	Annex A04	R-2000-095: The filter housing will be implemented. For the filter inserts, it is industry standard that these are provided by the customer. Is this acceptable?	No, the supplier of the equipment shall provide the filter inserts.
16	Annex A04	R-2600-005: If tool is delivered after January 20th 2027 EU Machinery Regulation (EU) 2023/1230 is applicable.	That is correct, it replaces Machinery Directive 2006/42/EC.
17	Annex C02	In case of a successful bid, We would like to propose some modifications to the contract. How should we propose those changes effectively?	We offer the possibility of a second round for raising questions, for which you should again use Annex A01 to ask reasoned questions on, or propose text or amendments to, the draft contract, as included in Annex C02 and in the Purchasing Conditions for Goods TNO December 2025, Annex C03. Text proposals will serve only to improve the Contract and must not affect its essence. TNO would point out that it always reserves the right to accept or not to accept these text or amendment proposal (see paragraph 2.3). The latest day and time to submit this Annex C01 is 26-06-2026, 12:00 hours GMT. The planning for submitting the award decision will be adjusted as follows:

		<table><tr><th>No.</th><th>Action points</th><th>Date</th></tr><tr><td>1.</td><td>Closing date for submission of questions by Tenderers (second round)</td><td>25-06-2026, 12:00 hours GMT</td></tr><tr><td>2.</td><td>Issue of (final) Information Notice</td><td>03-07-2026</td></tr><tr><td>3.</td><td>Closing date and time for submission of Tenders</td><td>14-07-2026, 12:00 hours GMT</td></tr><tr><td>4.</td><td>Notification of Award Decision</td><td>04-08-2026</td></tr><tr><td>5.</td><td>Closing date for submission of supporting documents by intended beneficiary</td><td>14-08-2026</td></tr><tr><td>7.</td><td>Closing date for submission of challenges</td><td>25-08-2026</td></tr><tr><td>8.</td><td>Final award</td><td>Close after 25-08-2026</td></tr></table>	No.	Action points	Date	1.	Closing date for submission of questions by Tenderers (second round)	25-06-2026, 12:00 hours GMT	2.	Issue of (final) Information Notice	03-07-2026	3.	Closing date and time for submission of Tenders	14-07-2026, 12:00 hours GMT	4.	Notification of Award Decision	04-08-2026	5.	Closing date for submission of supporting documents by intended beneficiary	14-08-2026	7.	Closing date for submission of challenges	25-08-2026	8.	Final award	Close after 25-08-2026
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Annex C03	In case of a succesful bid, we would like to clarify a couple of points in the T&C. How should we propose those changes effectively?	See question/answer nr 17																								
Annex A04	The current Payment terms mentioned R-3000-020 and 30% of the agreed price for the Goods including VAT) after commissioning and Site Acceptance Test (SAT). Could TNO consider taking payment terms Of 30% at PO, 60% at shipment and 10% after commissioning and Site Acceptance Test (SAT)?	See question/answer nr 9.																								
Annex A04	Requirement R-3000-040 Incoterms 2020, would TNO consider DAP instead of DDP?	TNO does not accept DAP instead of DDP.																								
Annex A04	Requirement R-3000-040 refers to "Purchasing Conditions for Goods TNO 2022". IN Annex C03 + Annex C02 art. 2.2 your require PC Goods 2025, can we asume we need to use the 2025 version?	Correct, the Purchasing Conditions for Goods TNO 2025 apply.																								
Annex C02	Annex C02 (TNO Purchase Agreement) art. 2.1 refers to "Metal/Backend RTA system" met referentie WS2640003647. is this correct?	This is a mistake and Annex C02 will be corrected.																								
Annex A04	R-4000-015 (b) – critical spare parts you mention "reactor liners, susceptor, gas injection units, temperature control units". these are not typical components for a wet bench - so why are these parts mention in this RFQ?	These examples of critical parts indeed do not apply.																								
Annex A03	in Annex A03 §6.2.1 in de "(Non) Consumables"-tab, there is reference to §6.2.1 of the Procurement Guide however i can not find that reference, please confirm the correct reference.	The reference should be to section 2.2.2 of the Procurement Guide.																								

25	Pr. Guide6.1	in your file "Public tender lift off metal system" in chapter 6.1 you mention One Photo-luminescence tool (EPI)/PL mapper""- as we don't recognise this can you comment on this please?	The text here must be "Metal Lift-Off System".
26	Pr. Guide1.6	In your file the procurement guide your mention in chapter 1.6 Optional second Metal/Backend Rapid Thermal Annealing system - as we don't recognise this can you comment on this please?	The text here must be "Metal Lift-Off System".
27	Annex C03	Annex C03 PC Goods, Article 23 - unlimited Liability and Indemnification . Article 23.1 holds the supplier liable for "all damage suffered and to be suffered." Article 23.4 prohibits any limitation of liability imposed by the supplier. Article 23.2 provides for a full indemnification, including indirect damages. For a capital equipment product valued at more than €600,000 this is well beyond market standards. Typical market practice is a liability cap of 100–150% of the contract value, combined with an exclusion of indirect and consequential damages. Would TNO consider to adjust these terms?	Notwithstanding clause 23.1 of the PC Goods 2025, TNO agrees to the exclusion of consequential damages and indirect liability, provided that 'indirect liability' shall be exhaustively and exclusively defined as reputational damage, loss of profit and missed savings.

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Annex C03	Force Majeure (PC Goods, Article 22.3) – Severely Restricted Many of the mentioned events (e.g. Pandemics) are excluded from force majeure protection: In a semiconductor supply chain with lead times exceeding 10 months for critical subassemblies, such limitations are generally difficult to accept. IS TNO considering to adjust these to a more realistic list of requirements?	For clarity: A Party shall not be liable for failure to perform its obligations to the extent that such failure results directly from an exceptional event that: a) is objectively beyond that Party's reasonable control, b) could not have been prevented through reasonable precautionary measures, and c) whose effects could not have been mitigated through appropriate measures. Article 22.3 PC Goods 2025 specifies already what does not qualify as Force Majeure. TNO explicitly rejects many common operational issues as valid reasons. Situations not considered force majeure include: - Lack of personnel - Strikes - Labour disturbances or illness - Shortage of raw materials - Epidemic/pandemic - Transport issues - Late deliveries or unsuitable goods from subcontractors - Liquidity or solvency problems - Failures of subcontractors.
Annex A04	annex 04, R-2600-005/010, R-2700-005, you mention the CE directive 2006/42/EC. From 14th Januari 2027 the new CE confirmity should apply on to EU MR 2023/1230. As the expected installation date is June 2027 should we condider this new directive?	See question/answer nr 16.

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