

DARPA-PS-26-127: Perrseus

Questions and Answers

Version 2

July 28, 2026

Q1. As a university sub-award to a company Prime, does this fee range affect university budgeting that usually takes a ~52% indirect cost (i.e., can the usual ~52% indirect cost still be used in university budgets)?

A1. The solicitation's fee limitations and a university's negotiated indirect cost rate are unrelated. Academic institutions may continue to apply their federally negotiated indirect cost rate to the appropriate direct cost bases in their sub-award budgets, subject to any standard limitations outlined in the solicitation. The fee range restriction outlined in the solicitation applies to fee/profit earned above actual costs.

Q2. Which institutions are eligible to prime?

A2. Companies and universities are eligible to prime. FFRDCs, UARCs, and National Labs can only perform as subcontractors.

Q3. One of the milestones requires a process that is compatible with atomic source integration. Is this required if we do not require an atomic sensor for measurement of pressure? Requiring atomic source integration may limit the available processes.

A3. Atomic source integration is required. The intent of the program is the development of processes that are compatible with MEMs, photonics, and quantum sensors. It is imperative that any process developed be compatible with future quantum sensors, and the atomic source integration is intended to force that compatibility.

Q4. Does only vacuum need to be maintained for 3 years or also the atomic source?

A4. Both the vacuum integrity and the atomic source's operational performance must be maintained for a continuous operational lifetime of 3 years

Q5. What wavelength is required for the single-mode photonic interconnects?

A5. The wavelength should be compatible with cooling and readout of the integrated atomic source.

Q6. What is included in the 5 mL volume?

A6. The 5 mL volume encompasses the physics package of the  $\mu$ UHV system. Examples of components that are not included are lasers, power supplies, etc. If magnetic coils or similar components are needed, that is included in the 5 mL volume. However, if external components

are being used for the measurement of pressure, then they must be connected to the  $\mu$ UHV through the interconnects.

Q7. Is there a threshold or specific definition of what is manufacturable?

A7. No. There is no specific threshold for manufacturable. Examples are given in the solicitation. DARPA is looking for comprehensive solutions that cover short-term and long-term manufacturing needs. In the short term, there are no methods for generation of any quantity of high-performance sensors based on a  $\mu$ UHV package. In the long term, any manufacturable process must be able to scale to meet the demands of the Government and commercial markets.

Q8. Are we required to use a cold atom or ion sensor as part of our pressure sensing method?

A8. If proposing a method of pressure sensing that does not require the use of cold atoms or ions, proposers must demonstrate that the selected pressure sensing methodologies are able to operate and output reliable measurements well below a pressure of  $10^{-10}$  mbar to ensure that our measurement of progress is never limited by the pressure sensor itself.

Q9. Are there any power restrictions for driving the device?

A9. There are no defined power requirements other than compatibility with the  $\mu$ UHV package. Proposers need to ensure that power delivered to the device must be consistent with the use of the interconnects, and the interconnects should be able to handle all the required optical and electrical power.

Q10. Is partial pressure an acceptable measurement?

A10. This program is interested in absolute pressure measurement within a package.

Q11. What is a single mode photonic interconnect?

A11. A single mode interconnect allows only a single spatial mode to propagate into the package. A window allows multiple spatial modes and would not be considered an interconnect.

Q12. There are multiple "SAMPLE\_OT\_P" model agreements posted on SAM.gov for this solicitation (e.g., Streamlined Fixed, Traditional Cost-Share, Expenditure Based, etc.). Which model should we use?

A12. The "SAMPLE\_OT\_P" documents were uploaded to the SAM.gov posting due to a system error and are not applicable to this solicitation. For this program, offerors must refer exclusively to DARPA-26-127\_Perrseus\_Attachment\_J\_Model\_OT\_Prototype.docx as the sole authorized model agreement. Please disregard all other generic "SAMPLE\_OT\_P" documents.

Q13. Would a high-level description of the proposed architecture, objectives, and anticipated capabilities be considered CUI? Would manufacturing recipes, process travelers, integration tolerances, or other implementation details identified be CUI?

A13. Per the Perseus CUI Guide (Attachment L), a high-level description of the proposed architecture, objectives, and anticipated capabilities is not considered Controlled Technical Information (CTI), but it would be considered Controlled Unclassified Information (CUI) if it contains proprietary business information that requires protection. The manufacturing recipes, process travelers, integration tolerances, and other implementation details for integrated devices developed under the program are considered CTI, which is a category of CUI, as explicitly defined in the guide.

Q14. Can a group/company be a subcontractor for multiple different performers if the work being done is distinct for each proposal?

A14. Yes, a research group/company can be a proposed subcontractor in the abstract/proposal for multiple different prime contractors, and, if selected for contract negotiation, could be funded on both efforts. The research group/company would need to ensure (1) that the work being done on each project is distinct and they are not being paid multiple times for the same work, and (2) the prime contractors are satisfied with any proposed plan to firewall the work/information to ensure proprietary/protected information does not spill over to the other team.

Q15. Can manufacturing/fabrication partners be brought in during Phase 2, or do they need to be a part of the team for the entire program?

A15. Proposers are expected to identify their full proposed team, including Phase 2 manufacturing and fabrication partners, in their initial proposal submission so the Government can holistically evaluate the team's capabilities. Proposers may structure their team such that certain partners have a phased period of performance limited strictly to Phase 2. While post-award additions or substitutions of subcontractors are contractually permissible to address unforeseen technical gaps, they require formal justification and prior approval from the Contracting Officer. Proposers should not rely on adding critical, foreseeable team members post-award as a substitute for comprehensive upfront teaming.

Q16. Can capital equipment be proposed for this effort?

A16. Yes, but the purchase of capital equipment is treated as an exception and requires significant justification. The proposal must demonstrate that the equipment is essential for the proposed effort, necessary to overcome gaps in commercially available tooling, and is not simply an incremental upgrade. Given the exceptional nature of this cost, proposers are to detail any planned capital equipment purchases in their abstract submission to receive early feedback from the Government.

Q17. Will any further information be provided regarding the specific definition of what high-volume manufacturing means?

A17. The information provided in the PS and the FAQ regarding the high-volume manufacturing requirement should be sufficient for comprehensive and holistic responses in the abstract and proposal. No further information will be provided.

Q18. Are there specific requirements for the performance of the pressure sensor for the month 12 milestone?

A18. No, there are no specific performance or range requirements for the pressure sensor at the month 12 milestone. As stated in the solicitation, the purpose of this milestone is to de-risk and demonstrate the underlying methodology and concept of operation for the proposed pressure sensor(s). This ensures the measurement approach is validated before being used for process development throughout the program. It is incumbent upon the performer to justify how their demonstration sufficiently de-risks this methodology.