DARPA-PA-25-07 Amendment 1 & DARPA-PA-25-07-06
Selective Harnessing of Intrinsic Neuroplasticity Engineering (SHINE)
Frequently Asked Questions (FAQs)
as of 9/10/2026

14Q: Where can I find the briefing from the Info session?

> 14A: Please find the program overview briefing under the resources section on the program page https://www.darpa.mil/research/programs/shine

13Q: Second, for the CMMC Level 1 self-assessment requirement, may our organization submit a proposal while PIEE/SPRS registrations, and Level 1 self-assessment are in progress? [We would ensure that a current Final CMMC Level 1 status, CMMC UID, and annual affirmation are posted in SPRS before award execution.]

> 13A: Yes. Per CMMC Section B Eligibility of Award (in the solicitation): "To be eligible for award under this solicitation, the CMMC Unique Identifier (UID) associated with the prime proposer must reflect a current CMMC status (representing either Final or Conditional status) posted in the Supplier Performance Risk System (SPRS) indicating compliance at the required level above. Additionally, the proposer must have a current annual CMMC affirmation, submitted by an authorized Affirming Official, posted in SPRS. Further, as some entities may have multiple business segments, multiple CAGE codes, etc., DARPA must reasonably be able to relate the CMMC UID in SPRS to the proposing entity."

12Q: For Track B, how does DARPA intend the term "circuit" to be interpreted for the purpose of demonstrating selectivity? Usage in the field ranges from a minimal defined connection (e.g., a monosynaptic, two-neuron pathway) to multi-synaptic motifs to distributed systems. Is there a minimum level of circuit connectivity or complexity that DARPA expects?

> 12A: There is no minimal complexity required, however, justification for target choice should be provided and is necessary. As correctly identified, neuroplasticity spans from synapse level to macro scale connections. The justification will be important to discuss the purpose for this target and beneficial effect for targeting this connectivity at this specific level of complexity.

11Q: Does DARPA expect selectivity to be demonstrated in a native/innate circuit (in vivo or ex vivo), or is an engineered in vitro model that reconstitutes a defined circuit (e.g., cell-type-specific neuronal networks with functional connectivity) acceptable for demonstrating circuit- or cell-type-selective neuroplasticity in Track B, provided an in vivo maturation plan is included?

> 11A: "Preclinical in vitro models (such as cellular and organoid models) are allowed in Track B if the proposers can justify a credible pathway toward future in vivo validation" [Solicitation pg. 7]. Proposers must justify how their model will meet all program metrics and goals, including their ability to "determine if adaptive neuroplasticity can be induced

with sufficient selectivity to preferentially modify intended neural substrates while limiting off-target remodeling." [Solicitation page 2].

10Q: Does DARPA expect a functional circuit-level output (e.g., connectivity or network-activity measures) as evidence of selectivity, or are cell-type-resolved molecular/structural measures of plasticity sufficient at the Track B proof-of-concept stage?

10A: "Molecular/structural" changes may be sufficient provided the proposal justifies how the expected observed changes meet the required SHINE metrics [Section F. Metrics, Solicitation pg.6]. Page 4 of the solicitation provides additional detail on acceptable endpoints, "The methods and experimental models used to demonstrate each objective shall be appropriate to the proposed technology and biological mechanism. Quantitative endpoints may include molecular, cellular, structural, electrophysiological, imaging, functional, behavioral, or other scientifically justified measures. SHINE does not prescribe specific biomarkers or assays; however, proposers shall justify how the selected endpoints demonstrate selective induction of adaptive neuroplasticity." Proposals will be evaluated based on their rationale "delineating why the proposed approach can achieve the program goals and metrics." [Section 3 of DARPA-PA-25-07 Amendment 1].

9Q: Does the DARPA SHINE program require cost share?

9A: Please view the DARPA Program Announcement (PA) for Disruptioneering to learn more about cost share. Visit SAM.gov, solicitation number DARPA-PA-25-07 Amendment 1: https://sam.gov/opp/af580f92ade44eb997a3c47ba74888f5/view.

"Appendix A: Other Transactions (OT) Authority

OTs for prototype projects are awarded under the authority of 10 U.S.C. § 4022. This authority allows DARPA to use OTs for prototype projects directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the DoD; to the improvement of platforms, systems, components, or materials proposed to be acquired or developed by the DoD; or to the improvement of platforms, systems, components, or materials in use by the Armed Forces.

OTs for prototype projects are instruments that are generally not subject to the Federal laws and regulations governing procurement contracts. OTs are not subject to the FAR, the DFARS, or any regulations governing grants or cooperative agreements regulations. There are no proscribed clauses in an OT agreement, and the agreement terms can be negotiated between the awardee and the Government. OT awardees are also not subject to the FAR/DFARS cost accounting standards. As a result, the use of OTs should streamline the award process, making it faster than the traditional Government contracting process and more akin to a commercial contract award timeline. Once the

selections are made, the negotiation time will vary from contractor to contractor; however, DARPA expects all OT awards will be executed within 120 calendar days from the date a DO is released on https://SAM.gov/. Quick negotiations between responsive parties will enable fast awards. To ensure that DARPA achieves the Disruptioneering goal of award within 120 calendar days from the posting date of each DO, DARPA reserves the right to cease negotiations when an award is not executed by both parties (DARPA and the selected organization) on or before the deadline explicitly listed in each DO. This deadline will be no more than 120 calendar days from the posting date of the corresponding DO.

According to 10 U.S.C. § 4022 an OT for Prototype agreement may only be awarded when one of the following conditions is met:

> *(A) There is at least one nontraditional defense contractor or nonprofit research institution participating to a significant extent in the prototype project.*
>
> *(B) All significant participants in the transaction other than the Federal Government are small businesses (including small businesses participating in a program described under Section 9 of the Small Business Act (15 U.S.C. § 638)) or nontraditional defense contractors or nonprofit research institution.*
>
> *(C) At least one-third of the total cost of the prototype project is to be paid out of funds provided by sources other than the Federal Government.*
>
> *(D) The senior procurement executive for the agency determines in writing that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract or would provide an opportunity to expand the defense supply base in a manner that would not be practical or feasible under a contract.*

As defined by 10 U.S.C. § 3014, a nontraditional defense contractor in the OT context means an entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by the DoD for the procurement or transaction, any contract or subcontract for the DoD that is subject to full coverage under the cost accounting standards prescribed pursuant to section 1502 of title 41 and the regulations implementing such section. To be considered as participating to a significant extent, the proposal should substantiate that the effort being performed by the nontraditional defense contractor is critical to the technical success of the project.

If the proposer requests award of an OT as a nontraditional defense contractor, as defined above, as a nonprofit research institution, or as a small business, as defined under Section 3 of the Small Business Act (15 U.S.C. § 632), information must be included in the price proposal to support the claim. Additionally, if the proposer requests

award of an OT agreement without the required one-third cost share, information must be included in the price proposal supporting their assertion that there is at least one nontraditional defense contractor, nonprofit research institution, or small business participating to a significant extent in the proposed prototype project or that all significant participants in the transaction other than the Federal Government are small businesses, nonprofit research institutions, or nontraditional defense contractors. Proposers must provide in their price proposal an explanation of why the proposer believes the nontraditional defense contractor is participating to a significant extent.

Nonprofit research institutions, which include nonprofit universities, are not required to provide one-third cost share to be awarded an OT for Prototype agreement under Section 4022.

If cost share is required, proposers have wide latitude in satisfying the cost share provisions. Acceptable forms of cost share include (but may not be limited to): cash contributions (application of discretionary resources) from prime proposer and/or proposed subcontractor(s); unreimbursed labor; materials and equipment; use of materials or equipment for program duration (lease value equivalent); and intellectual property with established market value. Unacceptable forms of cost share include (but may not be limited to): foregone fee; foregone general and administrative (G&A) and cost of money (COM) if using independent research and development (IR&D) funds as cost share; valuation of intellectual property with no established market value; facilities or other assets accounted for in overhead rates applied to labor; and capital assets without clear and direct contribution to the program.

Alternative management constructs such as use of spinoff entities, IR&D resources, or direct project funding may also impact how OT provisions for nontraditional entities and/or cost share can be met. Proposers are encouraged to ask questions during the proposal period to ensure adequate understanding and acceptable implementation of the OT provisions.

If proposers meet the conditions under the statutory guidance for not providing cost share, proposers may still provide cost share at their discretion or in-kind."

8Q: Are there any particular neural circuits that DARPA is especially interested in modulating or is this left open to the researchers?

8A: SHINE does not prescribe specific neural circuits for investigation. Per the solicitation, proposers are responsible for identifying the intended neural target—whether a region, cellular population, or functional circuit—and providing the scientific rationale for their selection within the proposal.

7Q: For Track B, may a proposer use temporary invasive methods during early proof-of-concept testing if the intended intervention prototype is ultimately non-invasive or minimally invasive?

7A: Proposals should align with SHINE's emphasis on non-invasive or minimally invasive targeting. Approaches requiring craniotomies or permanent implantation of depth electrodes as part of the proposed intervention are out of scope. However, temporary invasive methods used only to de-risk or validate an otherwise in-scope Track B concept may be acceptable if clearly justified and not part of the intended prototype or transition approach.

6Q: Would minimally invasive approaches that achieve neural targeting via temporary electrode placement be considered responsive to the program's objectives, or does SHINE require that targeting methods be entirely non-invasive?

6A: SHINE prioritizes non-invasive or minimally invasive targeting and does not require that all approaches be entirely non-invasive. Minimally invasive approaches may be responsive if they are clearly justified and otherwise meet the program's technical objectives and scope.

5Q: Will the Intervention Selectivity metric be evaluated against the spatial distribution of the induced neuroplastic response, the spatial distribution of the intervention itself, or both?

5A: The Intervention Selectivity metric applies to the spatial selectivity of the intervention itself within the intended neural substrate relative to appropriate off-target regions.

3Q: How can I enroll as a human research participant in this study?

3A: DARPA is a funding agency and does not directly conduct trials or enroll human research participants. Any clinical studies will be managed independently by the awarded performer institutions in accordance with their approved Institutional Review Board (IRB) protocols.

2Q: Could we build a wearable electromagnetic phased array that can electronically "write" prescribed spatiotemporal electric-field patterns into the human brain - without scalp electrodes, but still achieving cortical field strengths comparable to or greater than standard tACS?

2A: To be considered in scope, any proposed solution, including advanced physical targeting hardware, must be explicitly centered on achieving the SHINE goal of circuit-selective neuroplasticity. As noted in the Exclusion Criteria, hardware-only iteration or relying solely on physical energy to drive plasticity without a coupled biological or pharmacological mechanism is out of scope.

1Q: Will DARPA take calls to discuss SHINE program goals, approaches, questions, etc.?

1A: Thank you for your interest. DARPA SHINE Team will not be taking individual meetings with potential proposers. Please refer to the Solicitation and content within to clarify.