

System of Systems Enhanced Small Unit (SESU) Broad Agency Announcement (BAA) HR001119S0025

Questions and Answers

- 1. Are examples of the baseball cards provided with the BAA and are a few of them expected with proposal submissions?**

The example baseball cards shown on Proposer's Day were provided with the classified addendum. Baseball cards are not required in proposals.

- 2. Will proposer's day charts be made available with the addendum? What about the Army Multi-Domain Operations document?**

DARPA provided Proposer's Day charts for those briefings that were available to be released along with the classified addendum. For the remaining briefings that were not available, presenter contact information was provided.

- 3. How much (Technology Area) TA-2 development and integration is allowed for TA-1 performers, or are they expected to bring fully integrated systems?**

See BAA, Classified Addendum, I.A.7.a, page 14. The TA-1 performer should focus on integration. The TA-1 performer should not propose development of new sensors and effectors.

- 4. Is TA-2 more focused on development of the sensors/effectors themselves or purely on integration w/an existing platform?**

TA-2 performers should focus on sensor/effector development and support integration led by the TA-1 performers.

- 5. Can TA-1 bid sensor/effector integration of existing sensors/effectors into existing platforms?**

Yes.

- 6. What is the venue for Government collaboration?**

See BAA, Classified Addendum, I.B.4, page 23, and I.C.4, page 27. If proposers are including a Government Unmanned Aerial or Ground Vehicle (UxV)/sensor/effector capability in their proposal, proposers should include that cost in their proposal. If a proposal using a Government capability is awarded, DARPA will fund the Government entity separately.

- 7. What current Government systems are proposed for TA-1 and TA-2?**

There are no proposed systems for TA-1 or TA-2. The Government identified some available capabilities for industry to consider incorporating into their proposals.

- 8. Where does the Command and Control (C2) software reside in System of Systems Enhanced Small Unit (SESU)? Is it separate from the payload? Does the TA-1 team determine this?**

The TA-1 proposers should determine this.

9. How autonomous should we expect UxV platforms to be on their own? Are these existing, fielded U.S. assets or research-level platforms?

The TA-1 proposers should determine this. The Government anticipates UxVs have basic autonomy packages (e.g., waypoint navigation).

10. Is it anticipated that unclassified responses to the SESU program will be accepted?

See BAA Part II, section IV.2.b.2. Classified Submissions, page 17. All proposals shall be classified at the collateral SECRET level or above.

11. Page 22 of the unclassified BAA states “Proposers may submit hard copies of their proposal.” and describes submission requirements for this case. Can you clarify the submission requirement for proposers electing not to submit hard copies of the proposal?

See BAA Part IV, B.3.a. Proposal Submission, page 23; Part IV.B. Content and Form of Application Submission, page 10; and Part IV.B.2. Classified Submissions. Each volume should be submitted as a single searchable Adobe PDF file. All proposals shall be classified at the collateral SECRET or above.

12. What are the Government’s desires or restrictions on data rights for deliveries into this system? For example, SBIR, GPR, open, commercial.

See BAA, Classified Addendum, pages 21 and 24 for the information requested by the Government pertaining to data rights for the SESU program.

13. What does the Government mean when it uses the word swarms? Our assumption is that this includes any of a wide range of configurations; is this correct?

The BAA does not define swarms and does not require the use of swarms. However, for purposes of discussion, a swarm may be assumed to be 2 or more UxVs collaborating.

14. What is the plan for the number of awards in phase 1 and 2 for TA1 and TA2?

See BAA Part I: Overview Information, page 4. Multiple awards are anticipated.

15. Is foreign participation by a U.S. Ally allowed as a component technology development that would be used in TA2, segmented so they would not participate in Classified program data?

See BAA Part II, section III.A.1.c.1, page 8 for requirements pertaining to non-U.S. organizations and/or individuals participation.

16. How should subawardees submit their unsanitized cost volumes to the government?

See BAA Part II, section IV.B.1.c. Subawardee Proposals, page 16 for Subawardee Proposal requirements.

17. Can you clarify whether TA-2 proposals must include a definitive UxV platform as the host(s)? I.e. would a proposal without platform definition or testing costs be compliant to the BAA? We understood platform development is out of scope, however, it seems a commercial off-the-shelf (COTS)/Government off-the-shelf (GOTS) platform has to be defined in terms of inclusion of capabilities for modeling and simulation (M&S), constraint on payload design, and to enable airborne Phase 2 prototype testing.

See BAA, Classified Addendum, I.C.1, page 23. TA-2 sensors and effectors should be developed independent of a specific UxV.

18. For the UxVs, is smaller better?

See BAA, Classified Addendum, I.B.2., page 18.

19. How will the funding be split between TA-1 and TA-2, and Phases 1 and 2?

The funding distribution will depend on the proposals received.

20. Can a demonstration be performed in Phase 1 for a TA-2 technology?

Yes.

21. Is low-cost modularity a priority for TA-2?

See BAA, Classified Addendum, I.B.2., page 18.

22. Will playbooks be provided? Will there be dynamic playbooks introduced?

Yes. The Government will provide scenario information to performers for the missions identified in the BAA, Classified Addendum, Table 1, page 6.

23. Define Non-development UxVs.

See BAA, Classified Addendum, I.B.1, page 17. Non-developmental means that UxV development is not a research focus of this BAA, and the UxV platforms selected should not require any funding for development. Any funding associated with UxV platforms should be focused on integration.

24. Is there a possibility of multiple TA-1 performers in Phase 2?

See BAA, Part I, Overview Information, page 4.

25. Are higher than collateral secret level proposals allowed?

Yes. See BAA, IV.B.2.b. Security Information, page 17.

26. Will One Semi-Automated Forces (OneSAF) be provided to the performers?

See BAA, Classified Addendum, Table 6, page 23, for the Government furnished equipment (GFE)/Government furnished information (GFI) that is anticipated to be provided to performers.

27. How mature, in terms of technology readiness levels (TRL), for a TA-2 idea?

Technology Readiness Levels can vary greatly for a TA-2 idea, from a novel concept to an already-existing and tested payload.

28. What is the location of the Live, Virtual, Constructive (LVC) experiments in Phase 2?

The Government anticipates participation with Army centers of excellence at Fort Leavenworth, KS and Fort Benning, GA. Other locations may include Fort Bliss, TX and Fort Irwin, CA.

29. Are we able to submit part of the proposal through classified means (mail) and another part uploaded (unclassified)?

See BAA Part II, section IV.2.b.2. Classified Submissions, page 17.

30. The solicitation states “Each volume should be submitted as single searchable Adobe PDF file.” But further in the solicitation under “Proposal Submission” it says hard copies can be submitted via mail. Can we submit printed hardcopies, or should they be searchable PDFs on a CD?

As stated in the BAA Part IV, B.3.a. Proposal Submission, page 23, proposers must submit (1) hard copy full proposal and two (2) electronic copies of the proposal on a CD-ROM.

31. We have existing IP that we would like to leverage. For TA1, does the office anticipate the delivery of all software used (not developed) under SESU?

See BAA, Classified Addendum, pages 21 and 24 for the information requested by the Government pertaining to data rights for the SESU program.

32. The table of TA-2 deliverables shows that prototype sensors and effects will be delivered at 9 months into Phase 2. The table of TA-1 GFI shows that 3rd party sensors and effects will be provided to TA-1 at 7 months into Phase 2. Can you clarify this apparent discrepancy?

The government will provide 3rd party sensors and effects to TA-1 performers at 7 months which will not necessarily be from TA-2 performers.

33. The schedule graphic indicates that there will be a down select between Phase 1 and Phase 2. How many TA-1 performers does DARPA plan to select to proceed to Phase 2?

The number of TA-1 Phase 2 performers will depend on number of proposals received, amount of funding available, and successful performance under Phase 1.

- 34. It does not appear that any question responses have been posted to this point. Is this correct or is there a location other than <https://www.darpa.mil/work-with-us/opportunities> where the question responses have been posted?**

See BAA Part IV, B.5. Other Submission Requirements, page 24. Questions and Answers will be posted to <http://www.darpa.mil/work-with-us/opportunities> after the questions due date.

- 35. For the capstone experiment, what type of location do you anticipate? E.g. urban combined arms collective training facility (CACTF) site with a mock town. Would an urban training site, such as a CACTF, be sufficient for the capstone field test?**

The location of the capstone experiment will be identified by the Army at a later date and will be consistent with the missions provided in the BAA , Classified Addendum, Table 1, page 6. An urban training site is not sufficient.

- 36. Does this submission require: 1 printed hardcopy; and 2 CDs with the full proposal on each CD? Or 1 printed copy and 1 CD? The wording in solicitation is obtuse.**

See BAA Part II, section IV.3.a. Proposal Submission, page 23. Please provide one (1) hard copy full proposal and two (2) electronic copies of the full proposal on a CD-ROM. Two (2) CD-ROMs, each with 1 electronic copy of the proposal on it is preferred.

- 37. For a TA2, phase 2 demo, would it be acceptable to propose using a manned surrogate platform in order to allow us to operate the sensor system locally rather than incur the complication of operating a prototype sensor over the air?**

Yes. See BAA, Classified Addendum, I.C.3, page 26 for a description of TA2 phase 2 demonstration.

- 38. Is it possible to submit a short abstract for review/comment by the SESU team to ensure our proposal objectives are aligned with the SESU vision? There is no information on this in the BAA.**

Abstracts should not be submitted. Only full proposals will be reviewed.

- 39. Does the Government anticipate that the live component of the Phase 2 demonstration will be carried out at geographic ranges that are comparable to those described as part of the notional mission in the classified BAA Addendum? Or will the demonstration ranges be curtailed in favor of focusing on C2 functionality?**

Yes. The locations of the Phase 2 experiments will identified by the Army at a later date and will be consistent with the missions provided in the BAA, Classified Addendum, Table 1, page 6.

- 40. How many operators should we assume are in each unit? I.e., we have been given a target ratio of platforms to operators, but do not have information on the number of operators within a SESU.**

See BAA, Classified Addendum, I.A.1., page 5. The UxVs should be able to be reasonably transported and operated by a platoon-size unit. The BAA does not specify the number of operators within a SESU unit. The proposers should specify the number of operators required for their technologies.

- 41. Should we expect multiple, possibly coordinating units, have been deployed?**

Yes.

- 42. Does the program expect the proposing teams to purchase the UxV platforms (possibly numbering in the 100's) in Phase 2 with program funds, or should the platforms already be available within the teams? Are surrogate platforms acceptable? Is a smaller number of platforms (subset) acceptable if the remainder are simulated in mixed-reality, or similar?**

See BAA, Classified Addendum, I.C.3, page 21. The performer should determine the number and makeup of UxVs for their demonstration, and include the cost estimate for the purchase of these UxVs in their proposal.

- 43. Please confirm that we will know and be able to model the planned GFE UxV in Phase 1.**

Yes.

- 44. In regards to the SCG Table, Element 2a. Please confirm that the existing sensors being integrated on platforms for SESU are not classified.**

Sensors and effectors may be classified. See SCG, element 3b, page 18 for guidance on this question.

- 45. In regards to the SCG Table, Elements 6a/b. It is our experience that classifying hardware at this stage in the process puts an undue financial and logistical burden on both the Government and the contractor to conduct demonstrations. Therefore, please confirm that the hardware will not be classified once our mission planning software with playbooks for tactics is installed.**

SCG, elements 6a and 6b clearly identify the hardware classification requirements.

- 46. In regards to the SCG Table, Element 8. It is our experience that classifying raw data generated during field tests and demonstrations at this point puts an undue financial and logistical burden and the contractors. Please confirm that the raw data generated during field test and demonstrations is unclassified.**

SCG, element 8 clearly identifies the test data classification requirements. The SCG does not require all raw data to be classified.

- 47. There are multiple tables and figures throughout the BAA marked secret due to aggregation, however, there is no definition as what combination of information or where the line resides in the SCG that results in the “secret” designation. Please clarify.**

See BAA, Classified Addendum, I.A.3, Table 2, pages 9-10. Aggregated information pertaining to the overall scope of the program, associated mission areas and types of sensors/effectors is classified.

- 48. Section IV. Application and Submission Information, Section 2 Summary of Proposal, Item F. requests a three-slide PowerPoint Summary and states, in part, “...succinctly indicates the concept overview, key innovations, expected impact, and other unique aspects of the proposal. The format for the summary slides is included as Appendix 1 to this BAA...” However, the sample slides in Appendix 1 address different subjects than what is requested in the instructions. The sample slides request the following information:**
- Concept – Describe how it works**
 - Contract/Proposal Specifics – Intellectual Property, Data Rights Summary and Deliverables Schedule / Cost and includes a table to be completed**
 - Question: Would you please clarify what topics are to be covered in the three-slide PowerPoint Summary?**

The Concept Slide should include the items identified in Section 2.F, “...succinctly indicates the concept overview, key innovations, expected impact, and other unique aspects of the proposal”. The Contract/Proposal Specifics and Schedule / Cost Slides are as shown in the sample slides.

- 49. Section IV. Application and Submission Information, Section 3: Detailed Proposal Information, Item H requests, in part, “...including formal teaming agreements which are required to execute this program.”**
- Question: Would you please allow the teaming agreements to be included in as an attachment and excluded from page count**

Proposers should follow the BAA proposal requirements as written.

- 50. Will the Electronic Order of Battle and adversary laydown information be provided for the preferred scenario/area of interest as GFI for modeling and simulation purposes?**

The Government will provide scenario information for the missions identified in BAA, Classified Addendum, Table 1, pages 6-7.

- 51. If the data listed in question 50 is being provided as GFI, what format will be used (AFSIM or other simulation format)?**

The Government anticipates providing written documentation for the scenario information.

- 52. Is there a preferred modeling/simulation format expected for Phase 1?**

See BAA, Classified Addendum, I.A.5, page 11. The Government is not prescribing a modeling and simulation format to performers.

53. Have any UxVs already been selected that would be provided for Spiral 2 as GFE?

The Government has not selected GFE UxVs at this time.

54. BAA states “Intelligence and US / Coalition Common Operating Picture (COP) is provided by external sources“. Can we assume that this intelligence is “ground truth”, or do we need to verify all external intelligence using autonomous sensor packages?

See BAA, Classified Addendum, Figure 1, page 5. Proposers may assume that this intelligence is the best available intelligence at the time.

55. Does the “approach will develop the intelligence picture of the adversary absent complete intelligence information” imply that the process to interrogate provided intelligence data and determine gaps will need to be automated in the SESU Adaptive C2 Web?

Yes. See BAA, Classified Addendum, Figure 1, page 5.

56. Can the Government clarify it’s expectations for the degree of functionality out of the Adaptive C2 Web, UxVs, sensor / effector payloads, and Heterogeneous Swarming Technologies it is expecting to see in Spiral 2 vs. Spiral 3 LVC experiments?

See BAA, Classified Addendum, I.B.1, pages 17-18 for descriptions of Spiral 2 and Spiral 3.

57. The BAA seems to imply that the UxVs and sensor / effector payloads would be represented in hardware (HW) for all LVC testing. Can the Government clarify its expectations regarding the potential to employ simulations for some of the UxVs and / or sensor / effector payloads to reduce cost and increase scale of the LVC experiments?

There are no specific guidelines in the BAA for the amount of hardware and software in LVC testing. Proposers should propose a mix of technologies within an LVC environment that can demonstrate SESU technology capabilities.

58. Can the Government clarify expectations regarding Interface Working Group participation (interval, duration, location)?

See BAA, Classified Addendum, Table 10, page 27 for travel requirements. Interface working groups could be in-person, video teleconference, or teleconference as required.

59. Can the Government clarify its expectations regarding deliverable 1.1.09 considering it occurs so early in the Phase 1 program?

See BAA, Classified Addendum, I.B.2, page 18. For this deliverable, performers should produce documentation that articulates the intended behaviors of the SESU Adaptive C2 web to support Government modeling and simulation. A format is not specified.

60. Can the Government clarify its expectations regarding hardware deliveries for Spiral 2 LVC given the short timespan from option award to HW delivery (5mo)?

The BAA, Classified Addendum, Table 5, page 22 identifies requirements for hardware delivery to support Spiral 2 LVC experimentation.

61. What group(s) of UxVs are being considered (air and ground)?

The BAA does not specify any particular group(s) of UxVs (air and ground). It is up to the proposer to identify which non-developmental platforms to include in their proposals.

62. What radio frequency (RF) frequency range is being considered?

The BAA does not specify an RF frequency range. It is up to the proposers to identify RF frequency ranges.

63. The BAA defines TA-2 as "Innovative Low-Cost Sensors and Effectors". What are the threshold and objective for low cost? Are they different for sensors and effectors?

See BAA, Classified Addendum, I.C.1, page 23.

64. Will DARPA provide guidance on adversary waveforms of interest at the beginning of the exercise?

Yes.

65. Will DARPA provide an unclassified extract of the unclassified programmatic content from the Classified Addendum (e.g., Pages 17-22)?

No.

66. Is there a location or region that proposers can use to aid in developing realistic costs for travel to test activities?

The Government anticipates participation with Army centers of excellence at Fort Leavenworth, KS and Fort Benning, GA. Other locations may include Fort Bliss, TX and Fort Irwin, CA.

67. Can the proposal include a table of contents and an acronym list as front matter, not included in the page count?

Proposers should follow the BAA proposal requirements as written.

68. Will the capstone field test be an integration test or an experiment?

Experiment.