



Air-Launched Loiter Munition (ALM) Assessment Event (AE) Q&A Telecon

- 1. Is there interest in demonstrating new effective sensor technology? If yes, is there an opportunity to make a connection with a platform that is participating?**

We are looking for the full system solution. Payloads on the topic of loiter munition – this can mean the sensor/the seeker on board. Additionally, you could be referring to the warhead itself. We are interested in new sensor technology. Please include that as part of the full system/platform.

Please use [this link](#) if you are interested in collaborating with other companies on this effort. This link is also available on the event webpage: <https://events.sofwerx.org/loiter>.

- 2. Are there specific 1760 Umbilical characteristics you're looking for such as High-Speed data transfer, transceiver capability, reconfigurable 1760 umbilical etc.?**

As a general statement, an interface that is using MIL-STD-1760/1553 using Universal Armament Interface (UAI) would be great. A lot of our aircrafts use that interface. We're not necessarily looking for high-speed data transfer over the 1760, it's standard 1553 comms like you see with the vast majority of existing 1760 stores. We are also not looking to re-pipe or rewire the aircraft.

- 3. Can you provide TPOC contact information for CLT integration?**

CLT specific questions are welcome, please utilize the same SOFWERX POC and process outline at the bottom of the webpage to address questions. If Government Furnished Information (GFI) or Property (GFP) is required, that may be negotiated prior to Phase 5 contract award.

- 4. Can PEO-FW provide a list of the test aircraft being considered for the Assessment Event?**

We are currently considering the Cougar/Caravan aircrafts. Reference the ALM White Papers and see what resources industry can come with, to execute the demo, potentially cheaper and faster.

- 5. What is the required NDAA status to fund this effort?**

FY24 funds are planned to support this effort. SOFWERX and USSOCOM PEO-FW will begin financial discussion with the vendors selected to participate in the Assessment Event.

- 6. Will SOFWERX/components provide munitions and fusing options or connect us to viable partners with those capabilities?**

No. Refer to question 1 answer regarding a different subsystem.

- 7. If we were selected for an AFRL loitering munition D2P2 SBIR, could we use SOFWERX investment to accelerate and upgrade performance options from that baseline?**

D2P2 SBIR is different from what we are discussing here.

- 8. Will this AE consider attritable loitering munitions?**

Yes.

- 9. How long before the test does the customer provide the helicopter or utility aircraft? Will that include support staff/crew?**

TBD. Additional information will be provided at the Assessment Event. The government will determine how the test will be resource. In your White Paper response be clear on what resources you are providing and what help you need from the government.

- 10. Can you list the Technology Focus Areas?**

Next Gen Effects / Precision Strike and Next Gen ISR

- 11. Does USSOCOM have a definition of Acoustically Undetectable or Visually Undetectable?**

No quantitative specifics of this metric at this point. I would say visually undetectable to the naked eye. As far as acoustically undetectable, something that a human could not detect in a rural environment.

- 12. What is the expected ejection orientation for worst case and nominal launch speed for a CLT launch?**





Worst case is probably a side injection from what we've seen from other CLT munition launches. It could be aft launched, a vertically down launch, or some angle in between. However, it appears like the side launch is the most challenging / worst case.

13. Are there specific threshold and Objective requirements with jamming and spoofing measurable threats defined in a CDD?

A draft CDD is available, but it's not something that will be shared. Assuming you're referring to GPS or C2 jamming/spoofing – no specific threshold and objective requirements on those items would share at this time.

The capability should be resilient in those environments, whether it's through Controlled Reception Pattern Antenna (CRPA), different ways to access GPS, or alternatives to GPS navigation, having a solution or a plan for when GPS and C2 are contested, like how your autopilot performs in that situation are all things that we are interested in. So, no specific threshold and objectives but that trade space is something of interest.

14. We have multiple propulsion systems as modular units that can be integrated, but for initial fielding is fuel bladders from CLT units a non-starter?

It's not a non-starter, but it would not be desired to have to fuel a system as part of pre-flight. It's not something that we've had to do before, so that would add some logistics and additional work for the maintenance team. If it's a fuel system with a bladder that is fueled in the factory and there's no, or limited, maintenance required to that system once it's issued out to the unit, then I think something like that could work. Our intent is not to fuel the system prior to launch.

15. Will there be testing of GPS Denied capability at WSMR for any part of this effort?

Eventually, but not part of this effort. For this end item, if the system becomes a program of record, then yes, we will eventually be looking at GPS-denied capability, for sure.

16. Do you have an OV1 or similar CONOPS one should consider when proposing?

This is available at the bottom of the webpage.

17. Are there any restrictions or limitations for International companies to participate in this program?

No specific limitations.

18. Are there specific MOSA/WOSA/etc. standards that are preferred for this effort?

MOSA – Yes, look up the DOD guidance <https://www.dsp.dla.mil/Programs/MOSA/>. WOSA is something we would like to leverage. We are in communications with AFRL and will reach out to them if someone has a system that is WOSA compliant. WOSA compliant is preferred over a one-off type of system architecture.

19. What level of integration with the host platform is expected for the assessment event? What will the host platform be?

It's still TBD on what the test aircraft platform will be. If you have specific integration requirements, please state that in your white paper response. We listed some of the mill standards to make things a little easier to access. The host platform will be identified/determine after the government review the white paper responses.

20. Will warhead performance requirements be set? If not, is there guidance on target sets or other effect types like armor penetration, frag, or incendiary?

We did not set any warhead performance requirements for this phase. We're looking to see what is already available in the way of munitions, not develop a new warhead. You should have to have a good understanding of the targets that are out there right now. Armor penetration and those things, with this size, are probably going to be limited in the capability. You can get into a specific warhead with the white



paper responses. One thing to note, the phase five (5) initial demonstration an inert round. The expectation is to look at the warhead and ESAF integration design.

21. The solicitation seems to prefer already built or being built solutions. How open is SOFWERX to new concepts that are still in conceptual design?

That is correct. There are other avenues for new concepts in the conceptual design stage that can be found on the SOFWERX website: www.sofwerx.org.

22. Does this AE anticipate evaluating capabilities at all echelons? IE: Flying Squadron, JTF/SFOB/ISB, ODA/SEAL Plt/MARSOC Team

Specifically, under the SOPGM program, we support AFSOC and USSASOC. However, other units could come to us to participate; currently we are in conversations with other units.

23. Is there a specific user interface software that our tech is expected to utilize?

For the initial demonstration, we'd be looking to utilize whatever you interface with already.

Eventually, the vendors will have to integrate to SOCOM aircraft interface.

A lot of our AFSOC aircraft use the Battle Management System (BMS) that is managed by the Government. USASOC aircraft have different weapons control systems.

The user interface software will be dependent on whatever aircraft it's launched from or whatever solution the end user currently uses. There would be an integration effort after the demo. For the demo we're just looking for you to come out and demonstrate what you have.

24. What are your priorities for solutions? Capability/modularity/cost/sensor capability/warhead size.

The priority for the initial flight is to demonstration the air launched capability. Beyond that, further priorities are listed in the Assessment Criteria link. These are broken out by lifecycle development phase. No prioritization beyond that at this point.

25. Is the integration into existing platforms considered separate from this effort or must be part of the overall solution offering?

If you already have some work or a plan for integration into an existing platform, that's going to save work in follow on phases. It's not required for the Assessment Event (AE) or the initial demonstration.

26. Are you more interested in standalone launched effects, or swarms?

The focus of this assessment is taking ground-launch loiter munitions and transitioning them into air-launch capabilities. For right now we are focusing on a standalone launch effect. A later iteration would be swarm capabilities with munitions, UAS and other effects.

27. Solutions such as ATR or autonomy need to be sustained differently than hardware, can you explain how that ATR or autonomy will be integrated with Fixed Wing?

This function should be integrated into the all-up-round (AUR) when proposed to ALM, specifically. As far as adding autonomy to an existing system that's something that we would try to leverage a standard like MOSA/WOSA to integrate different hardware and software solutions down the road.

28. Will a requirement be set for the system's hazard level classification?

I assume you're talking about Hazard of Electronic Radiation to Ordnance (HERO). The systems should be HERO SAFE once it gets to a production variant. For transportation Hazard Classifications, most of our items have a class 1.1-1.4, so anything up to that level should work within the current logistics processes.

29. If we include a drone in our response with our drone agnostic munition - will this satisfy the "complete" solution submission.

The government plan to launch this capability from SOF platforms (Gunship AC130J, MQ-9, Blackhawk, Little Birds, and MQ-1s).

30. Are there validated requirements for ALM?



There are drafted requirements, that will be validated by SOCOM soon. This Assessment Event will support market research and analysis that is required to validate requirements.

31. Is there a preferred propulsion system given the limitations of electrics (range), pistons (air launch difficult), turbine (expensive, unreliable air start)?

There is no preference to the technical solution. There are challenges and pros/cons to each one of these. This is one of the trade spaces that we are looking to investigate. At this point, no preference, but I foresee one surfacing as we work through the White Papers and Assessment Event.

32. What information would be provided to the loitering munition prior to launch in a "call for fire" message or similar?

This could potentially be different from what our current munitions, that are direct-attach to a target, have a targeting solution before launch. A loiter munition will most likely be launched to a flight profile so that it can find the target.

The launch control system is going to be flexible with support of what can be provided. If the weapon solution requires waypoints, we'll be able to pass waypoints. We'll be able to provide it with any sort of transfer alignment data that it needs (GPS data, constellation, ephemeris, Almanac type data, terminal target data). Also, a complete set of data will be available with things like environmental data, platform speeds, velocities, and other.

33. Is it worth submitting if we have a high TRL LM with tube launch provisions but air launch capabilities are still on the roadmap?

Yes, you can submit a high TRL LM, that is what we are looking for. Additionally, air launch capability is on the roadmap. Our Phase 5 flight demo will probably be planned for early 2025.

34. Aside from air launch - is there anything you would be willing to give up to increase performance of, or just gain, a particular capability?

This trade space is what we are looking to investigate with our market research. That is something we are requesting in the white papers (want to know what is out there).

35. Do all solutions need to include a kinetic warhead?

For the initial flight demonstration, plan to use an inert round, but the design should include a warhead.

36. Should the drone discharge the warhead and or be recoverable? Should it also be shoulder-fired for Helo?

Ideally it could be recoverable. That is a problem we have to solve. If the munition does not reach the target. We're looking at aircraft launching these systems from a higher altitude. There are different technologies if it's going to be air-launched vs. ground-launched. We are looking for air-launched, but if the same system can be shoulder-launched that would be interesting.

37. Is there interest in having multiple different configurations in a group, or is one uniform configuration more of interest?

If the multiple configurations are getting after different capabilities, then yes, they would be of interest and for this solicitation having the different questionnaires. You can submit more than one questionnaire. That is 1 white paper response, 2 pages, and then use a different and additional questionnaire for the additional configuration.

38. Is there interest in air-launched munitions with additional non-kinetic/jamming capabilities?

Yes. Whether that is integrated into the same item or other launched effects in the swarm. The scope of our program office is not necessarily other effects. Our focus is on the munition. If there are non-kinetic effects that help get that munition on target, it is of interest.

39. Are you working with AFRL/RW or AFLCMC/EBZ to reduce technical risks on the program side for this effort? If so, how? If not, why?





We're communicating with AFRL, on WOSA. We're working with AFLCMC/EB other projects. Depending on what we see in the white papers, it'll help determine if we need support from those offices.

40. Are there limits on the classification level of AI or other capabilities that could be deployed to an ALM (e.g. for ATR)?

There is not a specific limit on the level of AI classification. However, simpler levels of AI may be validated and fielded more quickly. I recommend proposing optional levels of AI or a phased approach to iterate on AI integration.

41. Do you have a specific number of munitions for testing that we should use for our proposal cost?

Recommend a single launch, one or two. Not looking for reliability numbers to be validated during the Assessment Event or the Flight Demo.

42. Does this effort relate at all to the upcoming PMUAS LE short-range efforts?

No, it doesn't relate from a Program Office perspective. There will be a lot of overlap in technology. If we can leverage some of the work being done there, that's great. This is for a loiter munition capability rather than a UAS.

43. Are the specified transit distances (20nm and 60nm) strictly endurance based, or are you looking for a data link that can maintain comms up to that distance?

This information is located in the Assessment Criteria, see link on the bottom of the webpage. The loiter munition should be able to meet the endurance requirement after transiting out to the specified range, maintaining datalink throughout transit and while executing the mission profile throughout the claimed endurance.

44. Roughly how many systems/month do you expect to be required at full-rate production?

The production quantity requirement is still in development and the AE will help shape the requirement. HQ SOCOM will validate the requirement at a later date.

45. Requirement for max launch altitude and min launch temperature?

Typical launch aircraft profile ceilings may be up around 30,000 ft MSL, with correlating standard day or cold day temperatures. Currently, this is not the requirement. However, we are looking for industry to respond with current capability of existing technology.

46. What's the price target?

\$300K(T) \$150K(O) desired

47. Does the demo solution need to be day/night capable now or can that be an upgrade after demo?

Day or night capability have not specified. Don't want to limit ourselves to either at this point.

48. Is CLT preferred over other launch methods?

Some aircraft have CLT capability only and other don't. For instant USASOAC, do not have CLTs capability, however, AFSOC does. Platforms like the AC-130J and MQ-9A, have both CLTs and 14-inch lugs capability. It depends on which aircraft you are talking about for this effort. We're looking at all options.

49. Should it be something you can land and be deployable later? Some initiation devices have timers that work for several days.

Not necessarily, there is no requirement to recover the system at this time. Most munitions in the DoD are one-way systems.

50. Thoughts on ALE-Large capabilities (group 2/3) as munitions?

This is another good example of a program with overlapping technologies and something we would like to take advantage of. If you are taking something that is a UAS, or an ALE, and then integrating a warhead, then I would say that is the work that has to be done prior to submitting. This Air-launched Loiter Munition (ALM) effort require a full solution.





51. What level of anti-tamper is of interest?

Not a specific level, but anti-tamper is definitely of interest. When the munition transition to a program of record, a full Program Protection Plan (PPP) is needed. Some elements included within the PPP are identify Critical Program Information, critical components, Cybersecurity plan, Anti-Tamper, and Supply Chain Risk Management.

52. AI Can preprogram gps date and using modern eod electronic initiators you can land and redeploy a drone that would have its event at a later date.

This is not the CONOP for this effort. Not that there wouldn't be a use case for that.

53. Is there a focus for denied GPS over land or over large body of water?

Yes, a GPS Contested Environment is something that these loiter munitions will have to operate in both environments (over land and water). This is a capability of interest, not required or plan for the initial flight demonstration.

54. To right size solution responses, do these initial projects have a not to exceed cost bogey?

Not currently. Waiting to see the notional cost in the White Paper before a determination/IGCE is formulated.

55. "20. Any Low Probability of Intercept/Detection (LPI/LPD) capabilities" - does this refer to LPI/LPD comms, or drone stealth?

All of the above, to include acoustic, visual, radar signatures, electronic signatures, thermal.

56. Are 6 units required for the flight demo as stated in the assessment criteria document?

The ROMs request is for the market research and planning purposes only. Six (6) assets are not required for the demo. However, the exact variants and quantities are to be determined.

