

Mi2 Technology Demonstration Questions & Answers

Question #1: What type/size of UAS are you looking for in this demonstration?

Answer #1: The Threshold and Objective specifications for the demonstration are located in the link found in the “Request for System Performance Summaries” at the bottom of the impax.tech/mi2-tech-demo website.

Question #2: Are we able to team with a member outside of IMPAX for this effort and is there a minimum job share arrangement to ensure the IMPAX member has a certain percentage of the work?

Answer #2: You can team with any eligible person/company for the demonstration. Please note the eligibility criteria in the Notice Information section of the Special Notice. IMPAX is only providing the Government sponsor with planning and execution support for the Mi2 Technology Demonstration. IMPAX will have zero percentage of technology demonstration participant’s work.

Question #3: Should we expect to be contacted with more info related to the application submission, for example, the performance summary requirement, or are all of documents provided on the IMPAX Webpage for the initial application?

Answer #3: All of the documents you will need are available on the IMPAX Mi2 Webpage. To complete the Phase-1 Application, you will submit a system performance summary, a completed UAS Technology Questionnaire, a link to a video clip of your UAS in operation, and a link to a video clip or screenshot of your GCS user interface.

Question #4: Is there a way to have a conversation regarding the Phase 2 demonstration (e.g. is it flying every day for the 18 days, or a few flights)?

Answer #4: The current expectation is that each Phase-2 participant will operate their UAS at the Yuma Proving Ground for 5-7 days. The final schedule will be provided to each invitee with the Phase-2 invitation package.

Question #5: Can you provide more information about the potential timing of any subsequent awards?

Answer #5: The Government sponsor intends to begin negotiation for any follow-on OT awards within 90 days after the completion of the Phase-2 event.

Question #6: Can you provide more information related to the assumed adversary environment (or lack of), and expectations regarding autonomy?

Answer #6: The UAS performance goals which will be evaluated during the Mi2 Technology Demonstration are included in the Request for System Performance Summaries. Based on the Government’s review of applicant performance summaries, the Government reserves the right to invite none, some, or all applicants to participate in one-on-one discussions to inform the Government’s selection of invitees for the live technology demonstration.

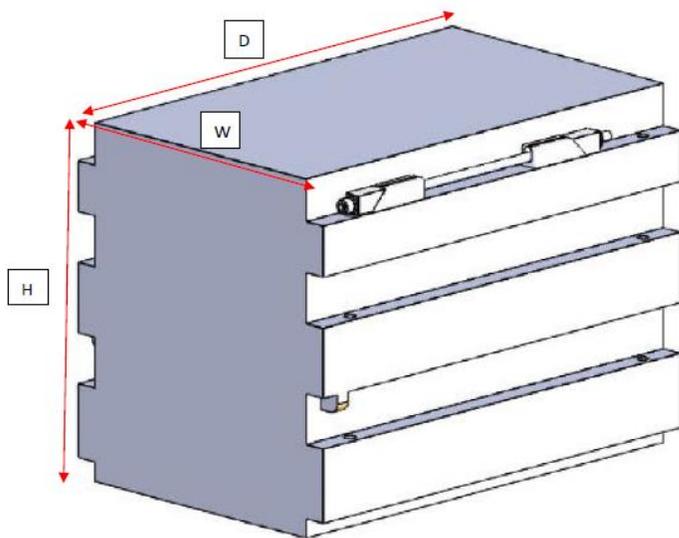
Question #7: A number of U.S. companies are owned by companies based in allied countries. This announcement appears to exclude NTIB, NATO, and other countries covered by 10 U.S.C. 2350a(a)(2) which allows for cooperative research and development with allied countries. Are companies which offer UAS from allied countries eligible to participate in the Mi2 Technology Demonstration?

Answer #7: No, participation by allied countries will not be permitted for this technology demonstration. The concept of support that the end user requires for this UAS solution is unsupportable with foreign designs even if made compliant to Made in America. Special sensor payload integration is the mission essential piece of the platforms that the UAS provides. Because integration of special payloads is so important, the United States Government needs to be able to collaborate with UAS designers. Foreign national UAS design engineers will not be authorized to collaborate on interfacing the payloads. As such, responses from allied countries cannot meet the fundamental requirements of this project.

Question #8: The document "Mod Payload Rev 4.0 October 2019" is referenced. I did a quick google search but did not find it. Are you able to provide a URL to download it? Or email it?

Answer #8: The Mod Payload Specification is a controlled document that requires coordination with the document controlling authority for release. Please refer to the payload dimension and payload interface requirements within the Request for System Performance Summary (RSPS) for desired payload capacity. While Mod Payload compliance is preferred it is understood some systems will not be able to comply with this specification and platforms will be evaluated with this understanding.

Question #9: Request for System Performance Summary (RSPS) Attribute 2.14 lists a minimum payload bay dimension but is there a maximum allowable dimension?



Answer #9: The above image is representative of a 3U payload. The modular payload specification allows for several standard payload sizes, as defined by 1U, 2U, 3U, etc. For perspective, this is similar to the concept of rack-mounted electronics, but on a smaller scale. The numerical designator indicates the number of “rack spaces” that a payload occupies. While the dimensions of the payloads are controlled by the specification, the “rack” integration will vary from UAS to UAS, based on fuselage design. The dimensions provided in the Request for System Performance Summary (RSPS) are for payload dimensions only, and do not account for the mounting racks. Maximum credit for RSPS Attribute 2.14 will be awarded for an air vehicle which is able to accommodate a payload of dimensions D= 6.15", W= 4.29", H= 7.25".

Question #10: Attribute 5.3 in the Mi2 Request for System Performance Summary (RSPS) states: "Containers shall not exceed 84 linear inches." Does linear inches, in this context, mean the length of any single container dimension, or the sum of all three dimensions?

Answer #10: In the context of RSPS Attribute 5.3, "linear inches" is intended to mean the straight-line measurement of any single side of a container. I.e., no single container dimension shall exceed 84 inches.

Question #11: Request for System Performance Summary (RSPS) Attribute 1.5 has a "*" beside it, indicating it is a critical parameter requirement but 2.21 repeats the requirement but does not indicate it is a critical parameter. Is the take-off and landing area a critical parameter? Given the totality of the requirements, can 1.5 be expanded to accommodate and aircraft large enough to meet the totality of the other thresholds and objectives?

Answer #11: RSPS attributes represent the current desired performance for the ultimately delivered system. The Mi2 Technology Demonstration is intended to confirm the current state of the art and inform the scope of potential Other Transaction (OT) prototyping awards required to ultimately achieve the desired system performance goals. Demonstrated systems that perform the closest to the stated attribute goals at the Mi2 Technology Demonstration will be scored more favorably. However, no single performance goal should be considered an eligibility criteria for application.

Question #12: Suppose the Air Vehicle was initially designed overseas, but the technology and design authority have been transferred to the US. As a result, the design control/configuration control (hardware and software) as well as the manufacturing and production would be solely accomplished by a US entity in the US. Does this mitigate the foreign influence/foreign design concern? In other words, the flight control computer and software would be owned and controlled by a US company for flight control/air worthiness purposes. The mission computer supporting UAV missionization allowing for integration of various payloads or sensors would also be US controlled. Essentially, the Outer-Mold-Line (OML) is the only thing that is based on a foreign design (and even that can be changed by a US company - if required to support the end user's needs) and that US company has a solid history of design, development and production of advanced UAS. Finally, all manufacturing and production would occur in the US.

Answer #12: The use of an OML from a foreign design is of no consequence. What matters is the origin and design of the hardware and software contained within the UAS, and the company's locations for manufacturing and repair of all UAS components. The intent of Request

for System Performance Summary (RSPS) Attribute 2.1 is to ensure that intellectual property, design authority, design expertise, repair expertise, and repair locations are all held within the US and are segregated from foreign entities. The Government sponsor must not be dependent on a foreign entity for any information or expertise to design, build, modify, and repair any aspect of the UAS.

Question #13: Is there an estimate of the number of aircraft and/or systems that would need to be produced following the demonstration? We are trying to understand what may be involved in a follow-on contract such as what type of production demands would be needed.

Answer #13: While this is subject to change, it is currently estimated that a potential OT prototyping effort following the technology demonstration would likely include the delivery of six air vehicles, four ground control stations, plus peripherals and spares within five months of the prototyping OT award (estimated delivery July-Aug 2021). In addition, the prototyping OT recipient would likely be required to provide operator and maintainer training for six-ten (6 – 10) personnel during the first two months of the prototyping OT period. Assuming the prototyping phase is successfully completed, it is anticipated that Low Rate Initial Production (LRIP) systems would be delivered between July-Aug 2022 under a follow-on production OT award. The specific number of LRIP systems has not yet been determined.

Question #14: My American owned company has been licensed by a foreign company to build and repair their UAS systems in the USA. While we are using their design, the subcomponents and assemblies will be assembled and or made in USA as well as serviced in the USA. Would this scenario meet the US based and owned requirement?

Answer #14: Please see answer #12 above.

Question #15: I gather from the announcement that participation in the Mi2 Technology Demonstration might lead to a prototyping effort, yet the UAS Technology Questionnaire (UTQ) and the Request for Performance Summary (RSPS) seem to be about whether candidate aircraft meet specification as-is. Why do the UTQ and RSPS ask for detailed technical information at this stage?

Answer #15: The Government sponsor is leveraging a non-traditional acquisition strategy to accelerate the evaluation and prototyping phases for the desired capability. If a company is awarded an Other Transaction (OT) prototyping contract after the Mi2 Technology Demonstration, the company will be required to deliver prototype systems within five months of OT award. This compressed time-line necessitates that the selected solution possess a high level of technical maturity (Please see Question and Answer #13 above).

Question #16: Request for System Performance Summary (RSPS) Attribute 2.6 has an objective calling for 0.1in or less daytime Ground Resolvable Distance (GRD) for day and night at mission altitude. Was the unit meant to be inches?

Answer #16: Yes, the unit of measurement for RSPS Attribute 2.6 is inches.

Question #17: Request for System Performance Summary (RSPS) Attribute 2.21 calls for the UAV to be able to launch and recover in a 20'x20' area or a 23' diameter circle. Is there a requirement driving an area size versus a specific dimension?

Answer #17: RSPS Attribute 2.21 was expressed in terms of the allowable launch and recovery area to more accurately describe the desired operating environment and allow for maximum flexibility in air vehicle design.

Question #18: We have a 10 foot diameter, eVTOL that has very unique characteristics. The Mi2 announcement seems to desire a propulsion beyond electric because of the mission endurance requirements. We can demo our current eVTOL, with a potential hybrid solution longer term. Is there enough interest to possibly get invited to your demo, even if the current all electric solution falls short on a couple of the stated performance goals?

Answer #18: The Government sponsor is leveraging a non-traditional acquisition strategy to accelerate the evaluation and prototyping phases for the desired capability. If your company meets the U.S. based requirements (please see Answers #7 and #12 above), you are welcome to submit an application. However, if a company is awarded an Other Transaction (OT) prototyping contract after the Mi2 Technology Demonstration, the company will be required to deliver prototype systems within five months of OT award. This compressed time-line necessitates that the selected solution possess a high level of technical maturity.