

PYRAMID for avionics and mission systems: Phase 2 Webinar Clarifications

Below are questions that arose during the PYRAMID for avionics and mission systems: Phase 2 webinar held on 14 October 2025. Slides used in the webinar can be found by following [this link](#).

[Eligibility etc.](#)

Q: Are companies that were successful in Phase 1 able to apply for Phase 2, and can a Phase 2 project be an extension of a successful Phase 1 project?

A: There are no exclusions on who can bid into Phase 2, and there can be 'extensions' as long as you can show some benefit of doing the additional work. Each proposal will be reviewed on its own merit regardless of Phase 1 success. If you were successful in Phase 1 we do ask that you explain clearly in your Phase 2 proposal how the additional work will further the adoption of PYRAMID within your organisation.

Q: Can the project be a refinement or update of something already made?

A: Yes, absolutely. Organisations have had great success in taking their systems and adopting PYRAMID and in doing this unlocking all sorts of new potential enabling new product lines allowing the introduction of changes more rapidly and at a modular level.

Q: Can you give more details on the differences between what you are looking for in Phase 2 compared to Phase 1?

A: They're very similar in that they're both focused on increasing PYRAMID adoption, growing the supplier base and getting feedback from industry on their experiences using PYRAMID.

But, whereas the focus of Phase 1 was entirely on PYRAMID adoption outside of the main GCAP suppliers into wider industry, Phase 2 is hoping to see PYRAMID applied as part of an end-to-end engineering process, embedded into a tool chain, and seeing that whole process from requirement to in-service, or component reuse across multiple products. We would like to see this result in PYRAMID adoption on current and future systems. We want the ability to make changes to avionics systems rapidly, and that requires looking at the whole process.

Q: Is Phase 2 targeted at existing collaborations on an existing system, or can an entirely new collaboration be proposed to be funded by PYRAMID Phase 2?

A: It could be an entirely new collaboration.

Q: When you mention collaborative working as a key requirement, are you expecting collaborating industry partners to submit joint proposals?

A: It would be great to see collaboration on bids submitted into the competition, however, it is not a key requirement. If you are submitting a collaborative bid then there would need to be one organisation who is the lead applicant with whom the contract is placed with. The submission portal allows for all collaboration partners to be listed. We have a [collaboration survey](#), so you can see if there is opportunity to link up.

Q: Can a company submit more than one proposal?

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A: You can, but be careful to avoid inter-dependencies. You should also provide information to give assessors confidence that you would be able to deliver more than one project simultaneously should more than one proposal be successful.

Q: What were the common mistakes / misinterpretations made in bids for the phase 1? Things to do / avoid for Phase 2?

A: We strongly recommend you carefully read both the Competition Document and the PYRAMID Technical Standard and Guidance documents. It is worth fully understanding what PYRAMID compliance is. Confirm that you will be developing a PYRAMID compliant version of your system and not just reviewing how you might adopt the PRA in your system design. Indicate how many PYRAMID compliant components will be developed during the funded part of your project and how they will be integrated. The description of the avionics or mission system to which PRA compliance is to be adopted should give an indication of the size/scale/complexity of the system for which you will be applying PYRAMID

Scope

Q: Could you give some examples of projects that were funded during the Phase 1 project?

A: Companies who were funded during Phase 1 included some Primes, System Integrators, Design authorities (including BAE Systems, Leonardo, Raytheon. But we also funded companies traditionally thought of as the lower-level tier suppliers; including SMEs that are developing small UAVs. Any organisation that is developing and integrating software into avionics mission systems is able to bid in and be successful. So, providing a key benefit for us in growing the supplier base that have adopted PYRAMID. If you would like to read more about the successful projects from Phase 1, please follow this [link](#).

Q: Is this competition purely for software projects only?

A: PRA is the functional breakdown of what has traditionally been called application-level software. However, the PRA could equally be adopted for Application Specific Integrated Circuits (ASICs) and Field Programmable Gate Arrays ((FPGAs), that could possibly be in scope of the competition but would still have to be a layer of application-level software. If you're developing an operating system the functionality of the PRA wouldn't cover that.

Q: What if the software in question is bare metal (i.e. no operating system)? Can this be made PYRAMID compliant (i.e. containerised)?

A: There is nothing defined in any of the PYRAMID components that ties you to a specific API or working through middleware or an operating system. The way that the bridges are defined, you could be effectively controlling the hardware directly, so it would definitely be possible to make that type of system PYRAMID compliant.

Q: Is it goal to produce a working demo/prototype for one of the identified PRA Components or is it us demonstrating compliance through our development process?

A: Not for just one component, as it is likely that any system will have multiple components working together. Demonstrations should be in terms of showing a separation of functionality across a number of components. We also expect to see evidence of an onward pathway to a prototype demonstration and future exploitation of your system.

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Q: Is there interest in projects associated with air platforms typically operated in other services, such as low-cost high-attribution, normally Army use case today?

A: There is an interest in expanding PYRAMID adoption to systems outside of traditional RAF platforms. Work is currently being undertaken with companies working on UAVs potentially for the Army; but also some of the Naval helicopter systems. We are interested in lessons from across air.

Q: Does the PYRAMID architecture manage the complexities introduced by AI autopilots that can change UAV fight paths depending on threats detected *en route*?

A: Whilst it doesn't do that, there are some components that are very much aligned with AI and autonomy and directly support it e.g. Authorisation, as an assumption was made that there would be a lot of autonomy and AI embedded into those systems.

Q: Most avionic functions are traditionally built by a small number of established large Primes. Will SMEs have any access to information/advice from the Primes?

A: We strongly encourage collaboration and to help enable this we have a [collaboration survey](#) which you can complete. The information of other organisations that have also signed up will then be available for you to review and make your own connections. DASA does not offer a brokering service.

Q: Will there be funding available to validate projects within a demo environment. (Multi-domain industry partners showcasing the PYRAMID compliant system)?

A: I think it would be welcomed, but we would also expect to see what your plans are to take that demonstration environment further to deployment.

Q: Is there interest in integrating the PRA with uncrewed systems for better compatibility and interoperability with crewed systems, or is the focus on the latter?

A: We have no preference towards bids focusing on systems for uncrewed or crewed platforms, either will be of interest to us. Similarly, platform size is also not a factor in whether you are able to submit a bid. We are equally interested in all things where the PRA can be applied.

Q: Do proposals need to sit within a single PRA Component, or can multiple components be addressed as containerisation/contamination is respected overall?

A: It's very likely that any PYRAMID deployment would require multiple component types working within that system. Unless you are working on one component which might provide huge benefits to an element of avionics mission systems, we would more expect to see multiple components working within a deployment.

General

Q: There seems to be a lot of detail required to prepare a project. Is there an expected page number for a project? How much detail are you asking for to apply?

A: We do ask for sufficient technical detail for assessors to make an informed decision. But there is a word count limit of 3,000 for each of the 3 main sections of Desirability, Feasibility & Viability. There are sections to further explain your exploitation plans and provide

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additional information so the total limit is about 10,000 words. We advise that around 4,000-6,000 words is optimal. Assessors have 90 minutes in total to complete their assessment of a proposal. All answers must be submitted in the submission service fields; PDFs cannot be attached. Do not use images as a way to overcome the word count limit.

Q: Will the PYRAMID calls continue, or is this a one-off?

A: There are no current plans for any more PYRAMID calls after Phase 2.

Q: What is the target completion TRL for project under the proposal at the conclusion of the funded period?

A: There isn't a specific TRL requirement for this competition. We are, however, interested in what level your systems are now, and where they might get to. In your proposal, use your expert opinion to decide what TRL you think your system is at and detail your reasoning.

Q: How many projects are you looking to fund. Do you have guidance on minimum / maximum project value?

A: We have up to £3 million (excluding VAT) and expect to fund 5-10 projects. We expect to see a wide range of programmes at varying stages, so it is not possible to set a limit for each bid. Your total costs should be appropriate to cover the work expected to adopt PYRAMID i.e. activity, resources required. We are not paying for the full development of your product. Consumables & hardware are not eligible costs; but the time you need and the work you will undertake to adopt PYRAMID are.

Q: Is GCAP now using the PRA? Until PRA is agreed internationally this programme will continue to be technically hampered...

A: Yes, all GCAP members have agreed that PYRAMID is the architecture of choice and will be adopting it.

Supporting Documents

Q: How does this complement the use of DefStan 00-055 for Safety Critical applications?

A: PYRAMID was designed to ensure that it was fundamentally compatible with airworthiness and software standards and ensure that it doesn't preclude the application of any of these standards to the software and systems developed. The modular approach to system design and development also enables other techniques such as modular certification based on Goal Structuring Notation that are of real interest in rapid re-certification when a change has been made.

Q: Is there a plan to issue a PRA Requirements Definition Document pack?

A: All PRA information is defined in the [Technical Standard](#). It is also described in [DEFSTAN 00-134](#) which is available online through [Knowledge in Defence](#), which may require registering for an account to access. Everything which was in the exploiters pack has been incorporated into the Technical Standard.