

Innovation in Support of Operations

Competition Briefing August 2024



Innovation for a Safer **Future**

Introduction

This Defence and Security Accelerator (DASA) competition is seeking proposals that can make a real-world difference, fast and at scale.

We are looking for scalable proposals, designed for manufacture, at market-leading prices, that can be demonstrated in a relevant environment three months from the date of contract in support of future contracting decisions.

This is a rapid, multiple cycle competition. The competition will run for three cycles, open continuously from 18 July 2024 until 3 December 2024.

Competition Key Information

Submission Deadlines:

- Cycle 1 12:00 Midday on 10 September 2024 (BST)
- Cycle 2 12:00 Midday on 22 October 2024 (BST)
- Cycle 3 12:00 Midday on 03 December 2024 (GMT)

Total Funding Available:

The total funding available for all successful bids, across all three cycles in this competition is £2 million (excluding VAT).

Funded proposals are expected to be in the range of £50,000 to £200,000.

A number of proposals may be funded.

Competition Background and Details





Background: Can you make a real-world difference, fast and at scale?

The UK Government is continually assessing lessons from world events. This has demonstrated the economic and industrial risk of only producing small numbers of expensive items.

Mass, and therefore the ability to produce at scale is an opportunity for industry to step into:

- The exercising of modern means of mass production is lacking in most defence capabilities
- We are very price sensitive. The end product must have a route to much cheaper production than the worldwide market now offers
- Full detail on the competition can be found in the Competition Document <u>here</u>

Scope: Technology Areas

Key scenarios we are interested in:

Challenge 1: Novel and enhanced scale complex manufacture of materiel

Challenge 2: Autonomous system navigation and applique options

Challenge 3: Wide-area sense and detect

Challenge 4: Innovative solutions for minefield breaching

Proposal constraints:

- For this competition we are seeking technology output and demonstration at <u>technology readiness</u> <u>level</u> (TRL) 6 as a minimum no later than three months from the contract start date.
- Innovators will be required to conduct demonstrations in the UK for the MOD customer. These demonstrations must be self-supporting and are not to require MOD assets or support to deliver.

Out of Scope

- Technology which cannot achieve minimum TRL6 within 3 months, and which does not have a very clear economic benefit over the existing market.
- We do not want UAV platforms.
- We do not want an offer that if exercised would require exclusive, expensive, or rare means of manufacture that would be costly to scale.
- No consultancy or literature reviews.
- We do not want Integration or AI as a service unless the core offer is a new source of external information.
- We are not interested in an unsolicited resubmission of a previous DASA bid.

Challenge 1: Novel and enhanced scale complex manufacture of materiel

We are looking for ways to make things much cheaper, using simpler raw materials, at scale, to make the economic case for the materiel more compelling:

- Energetics; production and service or shelf-life extension of:
 - Warhead fills including initiators;
 - Artillery propellant;
 - Propulsion compounds and mixtures.
- Artillery cases and fuses
- Seekers and terminal guidance units for use against (but not exclusively):
 - RF transmitters;
 - UAS and other air targets;
 - Maritime targets USVs, surface vessels.
- Electric drone motors
- Missile gas turbines larger than hobbyist
- Image intensifying tubes for night vision applications

Challenge 2: Autonomous system navigation and applique options

We are seeking ways to:

- Make legacy ground vehicles (military, agricultural and construction) operate with basic autonomy. To function in communications and GNSS denied or degraded environments.
- Make new UAS navigation solutions that can interface with industry standard architecture. The UAS must be able to operate in a GNSS denied environment and determine own position without manual input.

Challenge 3: Wide-area sense and detect

We are looking for reduced cost, low probability of detect/intercept, wide-area sense and detect including (but not limited to) air search (including passive) and to achieve the function of 3D counter-battery radar.

- Potential threats to be detected include:
 - Adversary RF emitters;
 - Adversary ISR assets e.g. drones, vehicles or personnel;
 - Adversary weapons in flight such as FPV-UAS, mortars, rockets, and artillery.
- Solutions proposed must be as self-contained and low impact to use as possible, placing particular emphasis on the protection and vulnerability of any users of the solution.

Challenge 4: Innovative solutions for minefield breaching

- We are looking for methods to effect a breach of conventional but deep and dense, and heavily protected minefields quickly, cheaply, and with sufficient regard for personnel protection.
- We need to produce a 'safe lane' to allow follow-on forces to conduct opposed offensive operations at scale.
- Focus is on the ability to generate high numbers of breaching systems generated from cheap and available input resources.
- Obfuscation of intent, ease of use, and robustness under both fire and electronic attack will be essential
 considerations

What your proposal should and should not include

- X UAV platforms
- X AI or integration as a service
- X Constitute consultancy, paper-based studies or literature reviews
- **X** Resubmissions of previous DASA bids
- Offer demonstrations of off-the-shelf products requiring no experimental development (unless applied in a novel way to the challenge)
- Offer no real prospect of out-competing existing technological solutions
- Anything that requires MOD premises, assets, or equipment to demonstrate

- Low cost solutions
- Working designs at at least TRL 6
- Exploitable with readily available industrial resources at scale
- Designed for manufacture
- Work with the constraints associated to being under constant surveillance and fire

Mandatory Criteria





Ensure your proposal includes the following Mandatory Criteria

	Mandatory Criteria	Within scope (Pass) / Out of scope (Fail)
1	The proposal outlines how it meets the scope of the competition	Pass / Fail
2	The proposal fully explains in all sections of the DASA submission service how it meets the DASA criteria	Pass / Fail
3	The proposal demonstrates how all research and development activities / services (including delivery of the final report and demonstration) will be completed within three months from award of contract (or less)	Pass / Fail
4	The proposal clearly details a financial plan, a project plan and a resourcing plan to complete the work proposed	Pass / Fail
5	The proposal output will be TRL 6 or above	Pass / Fail
6	The proposal confirms MODREC and RIPA approvals are not required	Pass / Fail
7	There are no requests for GFA or GFX within the proposal	Pass / Fail
8	To be eligible to submit a proposal into this competition you must be a UK business registered at Companies House, with UK ownership. You must be based in the UK and intending to carry out project development activity in the UK.	Pass / Fail
9	The bidder has obtained the authority to provide unqualified acceptance of the terms and conditions of the Contract.	Pass / Fail

At Stage 1, all proposals will be checked for compliance with the competition document and may be rejected before full assessment if they do not comply. Only those proposals that demonstrate compliance against the competition scope and DASA mandatory criteria will be taken forward to full assessment



Clarification Questions





Further clarification – Q&As

	Question	Answer	
Q1	Do innovations have to start at a TRL of below 6 in order to be eligible? E.g. if I am already at TRL6/7 and want to progress to TRL8/9 can I still apply?	No . You do not have to start below TRL6, but you must be at least at TRL6 and provide a demo and final report within 3 months. There must be evidence of development and innovation in your proposal.	
Q2	Do I have to include a 3 month refinement phase as a costed option beyond the initial 3 month contract? Will I be sifted out as non-compliant if I don't include this?	No . The 3 month refinement period is not a mandatory requirement for this competition. If the innovator thinks that it may be required then they should put it in.	
Q3	If I add a 3 month refinement phase in and this takes my project to 6 months, will I be sifted out?	Yes. Your proposal should be for 3 months maximum to achieve at least TRL 6 outputs (demo and final report). If you attached a 3 month costed option for a follow on refinement phase, this must not be included in your 3 month project proposal/milestones/deliverables but attached as a separate document to your submission.	
Q4	Can I ask for any GFX/GFA to support my project?	No . GFX/GFA will not be available to innovators and any proposals asking for this will be sifted out as non-compliant and not put forward to assessment.	
Q5	What is the difference between must and should in the competition document?		
Q6	Yes. As long as the project development activity takes place in the UK. Please provide further details in this section of where the work will be undertaken and by who. Ensure that you provide sufficient detail so that we can assess whether your proposal meets the intent of the competition. If you would like to speak to an Innovation Partner before you submit your proposal, please complete a contact us form and a DASA Innovation Partner will be in touch.		

Support Opportunities





Expressions of Interest

We invite **Expressions of Interest** where there are sensitive questions that you would prefer to pose either about the competition or the scope of your proposal.

DASA has a team of Innovation Partners that can provide you with support in working with DASA.

If you want to submit a maximum 500 word expression of interest we encourage you to speak to your <u>local</u> DASA Innovation Partner.

Your expression of interest should include:

- what your idea is;
- which challenge you are interested in;
- what problem does it solve for defence and how innovative it is.

Please send one idea per expression of interest. Expressions of Interest must be submitted to your DASA Innovation Partner at least three weeks before a cycle closing to get a response for the current cycle.

Industry collaboration survey during proposal preparation

We encourage collaboration between organisations for this competition. To support this, we have a short survey to collect details of those who wish to explore collaboration possibilities.

If you are interested in a collaboration, please complete the <u>supplier collaboration survey</u> and your details (including your business email address) may be circulated among other potential suppliers who have completed the survey and are interested in collaborating.

The sharing of details will only be done after an initial screening process has taken place, we reserve the right to not share all details.

If you choose to complete the <u>supplier collaboration survey</u>, please be aware all the information you submit in the survey may be provided to other suppliers who also complete the survey.

Contact us



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Defence and Security Accelerator



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