

NSTIx OpTech Co-Creation Space

Challenge Form: Condensation Removal

Release Date	Proposal Deadline	Expected Start Date	Duration	Indicative Budget
19/06/23	21/07/23	4 – 8 weeks after proposal accepted	12 weeks	Approximately £60K

Responding to NSTIx OpTech Co-Creation

The National Security Technology and Innovation Exchange (NSTIx) is a government-led science, technology and innovation (ST&I) partnership that enables coherent and agile delivery of innovative national security outcomes through a co-ordinated and systematic approach to research and capability development.

NSTIx has established a government-led network of themed Co-Creation Spaces (CCS). The CCS' combine the respective power of specialist public and private sector partners in research, capability development and end user requirements. This supports the development of effective, user-driven technology at pace in areas that are critical to national security. For more information, please see the ['NSTIx Leaflet' in digital form \(https://www.gov.uk/government/publications/nstix-information-leaflet\)](https://www.gov.uk/government/publications/nstix-information-leaflet).

The NSTIx OpTech Co-Creation Space (OCCS) has engaged with a network of key Community Collaborators, to accelerate and leverage access to their existing networks of industry and academic Solution Providers.

By responding to this Challenge (details provided in 'UK Solution Provider Proposals – 'our ask' section) and participating in Co-Creation there is an exciting opportunity for collaboration between National Security, Community Collaborators and Solution Providers.

What is the current state for this Challenge?

Several UK Government bodies, notably, those working in the field of law enforcement, have a requirement to operate discreetly from unventilated, confined spaces. A typical scenario would be police officers in a parked car undertaking surveillance of suspected criminal activity. Such scenarios take place all year round. When the weather is particularly cold, humid or hot, problems can arise from excessive condensation in the work area. This is exacerbated in high-stress situations, where officers may be perspiring or breathing more heavily than normal. It's often undesirable to open doors or windows, and in the case of discreet vehicle-based work, it's not feasible to drain the battery through use of the vehicle's own ventilation system, or to mitigate this by leaving the engine running to maintain a good state of battery charge.

What is the gap?

There is a range of commercial and domestic active and passive portable dehumidifiers that could help to remove excessive moisture from the air and alleviate the problem of condensation forming on windows and within sensitive electronic equipment in confined spaces. Active dehumidifiers, however, invariably require a mains electricity supply to operate which, in many scenarios, would not be available. Passive, desiccant-type dehumidifiers have the advantage of not requiring power, but they're unable to absorb moisture at a sufficient rate to provide an effective solution to this challenge. The gap, therefore, is for a portable, either self-powered or unpowered, and discreet (quiet) in operation means to either prevent or significantly reduce the formation of condensation on windows and other surfaces caused by people working in confined spaces.

This Challenge

This Challenge is structured over two workstreams, run sequentially, over a total period of up to 12 weeks. Workstream 1 should be undertaken prior to Workstream 2:

- Workstream 1: Research – conduct a market trawl of prospective solutions that could either be used out of the box, or adapted to solve this challenge quickly and cost-effectively. In parallel, conduct horizon-scanning outreach and research into more innovative means of solving this challenge. Findings should be summarised in a report outlining the relative merits and shortcomings of each solution and culminating in one, or more, recommended ways forward.
- Workstream 2: Concept Demonstrator – Using the findings from Workstream 1, produce one or more demonstrable prototypes for prospective users to trial and provide feedback upon. Solutions could focus on either minimising the cause of the problem (the generation of body-borne humidity) or, more likely, reducing its effect (condensation forming within a confined space due to high humidity and temperature differentials). Solutions should be capable of being developed into cost-effective, units that are easily portable, either self-powered or unpowered, and quiet in operation. It is anticipated that, depending on the final design, unit cost and performance, up to a few hundred units will be required by government teams. Dual-use solutions, with commercial applications, are welcomed and may be exploited by the solution provider for commercial gain. Whole or part solution proposals are welcomed, either from single providers or from a consortium of providers working collaboratively.

Follow-on project

If this initial project shows the concept to be feasible and there is clear potential to continue, a follow-on project may be funded.

UK Solution Provider Proposals – ‘our ask’

Proposals are requested by **21/07/23**.

We are seeking one or more Solution Providers to propose on the outlined Challenge above. Collaborative proposals are encouraged to pool their collective strengths to co-create a viable solution to this challenge. Additional funding may be made available for collaborative proposals.

Community Partners are welcome to participate in both coordination and delivery of the Workstreams to support the Solution Partners – please contact us to discuss this approach if you are considering a multi-partner approach.

Commercial Consideration:

An agile approach is preferred, i.e. with sprints designed to work with the National Security and Defence community to iteratively define the solution.

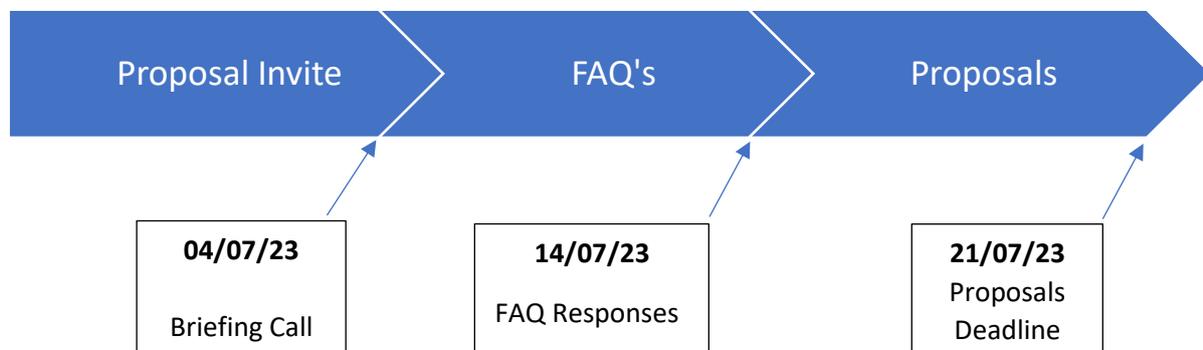
We are happy to be guided by Solution Providers proposals regarding the number and duration of these sprints within the **maximum 12-week** period.

Evaluation criteria

Proposals will be scored 1 – 5 on the following criteria:

- Timescale – will the proposal deliver a Minimum Viable Product within the time period defined within this Challenge Form?
- Does the proposal fit within the Challenge scope, taking into consideration cost and benefits?
- Is the organisation / delivery team credible in this technical area?
- Is the technical solution credible?
- Will the proposal deliver a full or partial solution? Has the proposal identified collaborators if a partial solution or is willing to work collaboratively with others?
- Is it innovative?

Next Steps



Confidentiality: All proposals will be subject to commercial confidentiality and a maximum protective marking of OFFICIAL. Please do not submit any materials above this classification.

OFFICIAL

Briefing Call: All parties will be invited to an open Briefing Call via MS Teams on **04/07/23**, where members of the OpTech CCS Challenge Team will be available to provide additional context and information on this Challenge, and where attendees can ask Clarification Questions. A calendar invite for this call with dial-in details will be sent nearer the time. NB; please note that failure to attend the Briefing Call does not exclude Community Collaborators and suppliers from submitting a proposal by the deadline stated below.

The Teams link for the briefing call is here: [Condensation Removal Briefing Call](#)

Frequently Asked Questions – responses (FAQ): All enquiries from the Briefing Call will be collated, and responses sent to all parties in an FAQ document by close of business on **14/07/23**.

Deadline: The deadline for proposals to be submitted is close of business on **21/07/23**. Please include the title of the Challenge ‘**Condensation Removal**’ in your email. Please note that shortlisted Community Collaborators and/or Suppliers may be invited to pitch prior to contract award.

Selection and notification of finalists: The OCCS Challenge Team aims to select a shortlist of successful proposals by the **04/08/23**, who will be invited to a pitch day. All applicants will be provided with written feedback via the Community Collaborator.

Pitch day: The OCCS Challenge Team aims to host a pitch day on the **15/08/23**. An option to attend face to face and online will be made.

Technology Readiness Level (TRL): A cross-section of TRLs will be considered for this Challenge, ranging from those in development (e.g. TRL 4-6) or to readily deployable commercial-off-the-shelf products (TRL 7-9). Low TRL research is out of scope due to the timescales involved and the requirement for a Concept Demonstrator.

Format: Final responses for this challenge are to be provided in MS Office (Word, PowerPoint, Excel) or PDF format to the following email address: cocreation@hmgcc.gov.uk with cc to the coordinating Community Collaborators who introduced the Challenge.

Alternative Formats: If you wish to discuss other forms of response such as a video presentation or live demonstration please contact us via the Clarification process to discuss your approach.

Feedback: All applicants will be provided with written feedback via the Community Collaborator once both technical and commercial assessments have been concluded. We will endeavour to provide feedback within 2 weeks of the competition deadline.

Commercial Engagement: The NSTIx Op-Tech Co-Creation Space will select and directly engage Solution Providers for this Challenge on the technical and commercial merit of the proposal received.

Please note that by submitting a proposal in response to this challenge you are agreeing to the terms and conditions of contract as issued and are thereby making a formal offer of contract, from which the Authority shall have the right to accept in part or in full should your proposal be deemed acceptable.

Pricing: Solution Providers are invited to submit Fixed Price or Time and Materials (T&M) proposals for the **12 week** engagement. If submitting T&M, please indicate the approximate run-rate across the sprint-profile.

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Commercial Considerations –Regardless of the Commercial Route Selected the following terms apply:

#	Category	Consideration
1	IP	Intellectual Property (IP) will be managed in accordance with the attached terms and conditions.
2	NDA	It is the responsibility of the Community Collaborator to propagate and adhere to the agreed Non-Disclosure Agreements (NDAs).
3	IT Systems	The Community Collaborator and/or Solution Provider IT system will be used as the collaboration platform for developing solutions to this challenge (including for example MS Teams, SharePoint, plus any required development and test environments). Systems must be capable of holding documents marked at OFFICIAL.
4	Data	All data will be managed in accordance with UK Data Protection legislation. This includes commercial & project documentation, and any data utilised in developing, testing and implementing the solution for this challenge.
5	Scope	Solution providers for this challenge may be from the UK or 5EYES geographies. Other geographies will be considered on a case-by-case basis.
6	Clearance	All work will be classified at no higher than OFFICIAL. It is desirable for resources working on the project from Community Member organisations to have BPSS or SC (or equivalent) clearance, however this is not essential at this stage. Collaborators are asked to please state the clearance levels of their proposed Project Team within their submitted proposals.

*Onboarding of a company onto our commercial Terms & Conditions can take up to an additional 6 weeks.