



Defence and Security
Accelerator



Home Office

“Rapid Detection of Toxic Gases, Phase 1”

Briefing and Q&A Session

7th February 2024

DASA INNOVATION
FOR A
SAFER
FUTURE

Innovation for a Safer Future

Agenda

Time	Item	Presenter
14:00 – 14.05	Welcome, Housekeeping, Introduction	Robert Hammond-Smith DASA Delivery Manager
14:05 – 14.15	Introduction to DASA	Linda Galloway DASA Innovation Partner
14:15 – 14.40	Competition Background and Details	Karen Meadows Home Office
14.40 – 14.45	Break - opportunity to submit questions via Slido website sli.do, code #DASACOMP	
14:45 – 15.25	Question & Answer Session	Competition Team
15:25 – 15.30	Wrap Up	Robert Hammond-Smith DASA Delivery Manager

Housekeeping

- Welcome to today's Briefing and Q&A for the new DASA competition: Rapid Detection of Toxic Gases, Phase 1
- Please note your camera and microphone will be kept off.
- The slides and the anonymised questions and answers will be uploaded afterwards to the DASA gov.uk website.
- Discussions will remain at **OFFICIAL**.
- Q&A session will take place after via Slido. To access, go to the website www.sli.do (on a separate tab or device) and enter the code **#DASACOMP**.
- If you are having any technical issues, please use the chat function in Teams and direct message **Nick Deacon**.



Submitting Questions

Please submit or upvote any questions via slido



Scan above, or go to the website sli.do and enter the code #DASACOMP



Introduction to DASA

Linda Galloway

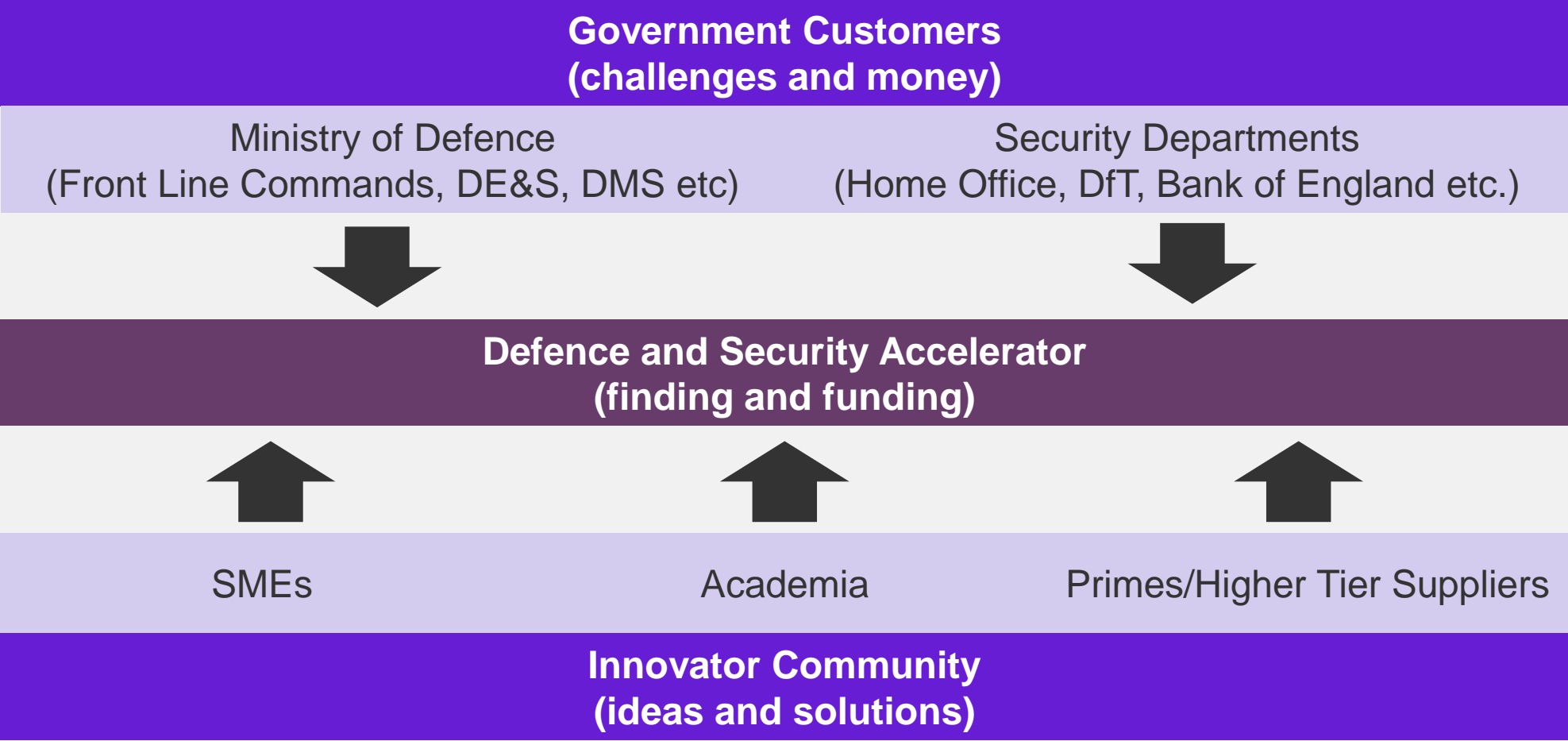
DASA Innovation Partner



Our Mission

The Defence and Security Accelerator (DASA) finds and funds exploitable innovation to support UK defence and security quickly and effectively, and support UK prosperity.

How do we work?



Since 2016...



111

Funding
Competitions



574

Innovators
Supported



1378

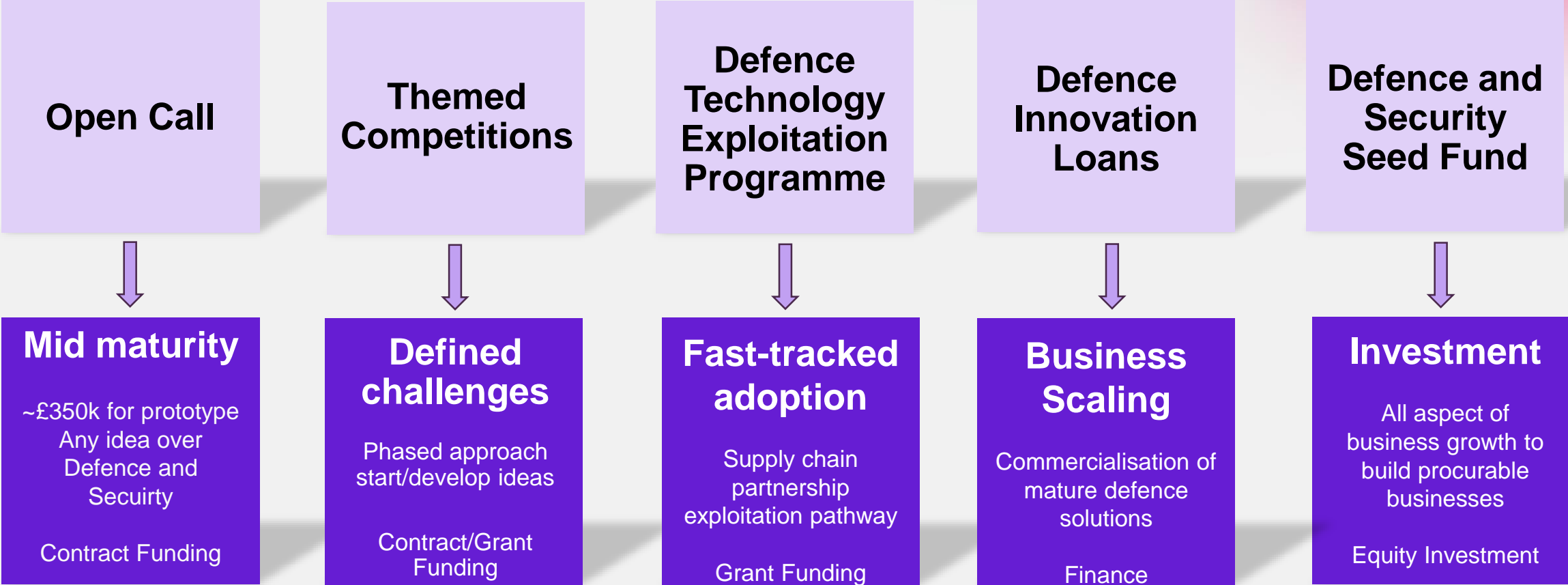
Ideas
Accelerated



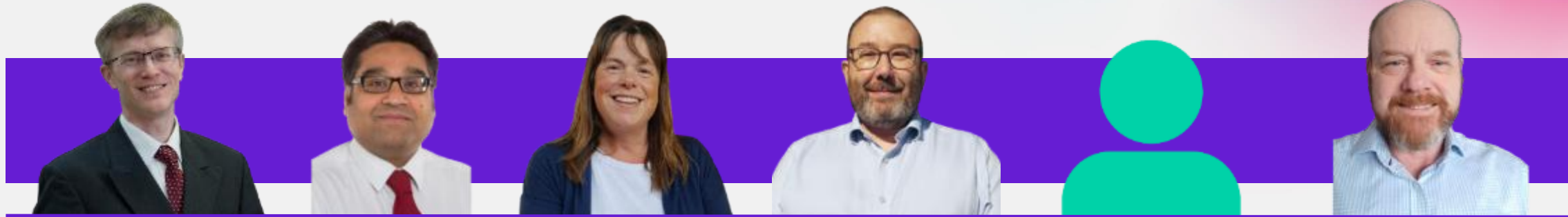
£246m

Invested in
innovation

Funding Innovation



Meet the team



Andrew Peaty
West Midlands

Jas Shanker
East Midlands

Clare Green
Yorkshire &
Humber

Jonathan
Jones
North West

Anna Taylor
North East

Mike Madden
South West



Mark Helliker
South East

Ralph Wilkins
London

Vicki Savage
East of England

Tom Adamson
Wales

Deb Carr
Scotland

Innovation Partner
Northern Ireland



Defence and Security
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Home Office

Rapid Detection of Toxic Gases (Phase 1)

Karen Meadows

Home Office



Protecting People within Public Buildings

Seeking proposals that enable **the rapid detection of toxic gases** to improve public safety by providing an **early warning to indicate unsafe levels of toxic gases in busy spaces.**

This competition is funded by the Home Office, supported by US Department of Homeland Security.



Home Office



Homeland
Security

Contextualising the Innovation Call



CONTEST is the UK's Strategy for Countering Terrorism

“The response to an attack in the UK or on UK interests overseas may be coordinated at the strategic level, but the immediate impacts will be mitigated most effectively by the early on-scene actions. Taking the right actions early on in a response can also significantly improve the recovery challenges from a chemical, biological radiological or nuclear incident.”

[Counter-terrorism strategy \(CONTEST\) 2023 - GOV.UK](https://www.gov.uk/government/consultations/counter-terrorism-strategy-2023)

www.gov.uk

Key Information

Funding Available

The total possible funding available for Phase **1** of this competition is **£1.6 million** (excluding VAT).

We are expecting to fund multiple proposals under this competition.

Proposals should **not exceed £200,000** in value or **12 months** duration.

Submission deadline

12:00 Midday on 28 March 2024 (GMT)

Where do I submit my proposal?

Via the [DASA Online Submission Service](#) for which you will require an account, that needs to be created beforehand. Only proposals submitted through the DASA Online Submission Service will be accepted.

Supporting events

Dial-in session

14th February 2024 13:00-16:00 GMT – A series of 15 minute one-to-one teleconference sessions, giving you the opportunity to ask specific questions. If you would like to participate, please register on the Eventbrite page. Booking is on a first come first served basis.

22nd February 2024 14:00-17:00 GMT – A series of 15 minute one-to-one teleconference sessions, giving you the opportunity to ask specific questions. If you would like to participate, please register on the Eventbrite page. Booking is on a first come first served basis.

These sessions are proving popular so we have added 3 further slots for each session. If your question has been answered today please consider releasing your session for somebody else

Scope of Competition

Please see sections 4.1, 4.2, 4.3 and 4.4 of the competition document for a full description of the scope of the competition.

To summarise:

- Sensors need to provide an **early warning to the presence of a range of toxic gases** should there be an accidental or malicious release within an enclosed space.
- We want the sensors to provide **warning prior to people in the vicinity experiencing adverse health effects.**
- The spaces, gases and actions to take as a result are outlined below.



Scope of Competition

Space: Public spaces of various sizes and access points, enclosed or semi enclosed, that have the potential to be very busy



Scope of Competition

Toxic gases: Materials to be considered for detection include, but are not limited to the following broad categories, each of which contains exemplar chemicals:

Acids and bases such as ammonia, hydrogen bromide, hydrogen chloride, hydrogen cyanide, nitric acid, sulfuric acid.

Reductants such as hydrides (arsine, diborane stibine, hydrogen selenide, hydrogen sulfide, phosphine) sulfur dioxide, methyl mercaptan

Oxidants such as chlorine, fluorine

Halo-Organics such as bromomethane, phosgene, chlorosilanes

The exemplar chemicals are **included for illustration purposes only** and are not intended to limit the breadth of the application; exemplar chemicals could be classified in more than one category.

For the full list of gases we're interested in please see the following links from the competition document:

Gases found in the Public Health England (now the UK Health and Safety Agency) [Chemical hazards compendium - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/672222/chemical_hazards_compendium.pdf);

Gases from the "high hazard" and "medium hazard" categories of the US [Toxic Industrial Chemicals \(TICs\) Guide - Occupational Safety and Health Administration \(osha.gov\)](https://www.osha-slc.gov/toxic-industrial-chemicals-tics-guide);

[Acute Exposure Guidelines for Airborne Chemicals](https://www.osha-slc.gov/acute-exposure-guidelines-for-airborne-chemicals)

Scope of Competition

Actions following sensor alarm:

- The sensors need to rapidly provide an early warning of the presence of toxic gases, **in order for follow-on action to be taken.**
- Within 30 seconds or less, with minimum false positives
- The sensors could be used to trigger the following response actions, **which include but are not limited to:**
 - Stop additional people going into the space.
 - Initiate evacuation procedures out of the space to be implemented rapidly.
 - HVAC* system adjustments (increased or decreased airflow depending on the scenario)
 - Notify specialist responders to come to the scene
 - Automatically trigger any of the above as part of a smart building system

*Heating, Ventilation and Air Conditioning



Submitting Questions

Please submit or upvote any questions via slido



Scan above, or go to the website sli.do and enter the code #DASACOMP



Closing remarks

- Thank you for attending this Q&A event
- The slides from today's event along with the anonymised questions and answers will be uploaded to the competition page on the gov.uk website in the coming days.
- We also invite you to book a 1-1 session with the customer team if you have any further questions you would like to ask.
- Slots are available on: -
 - 1-2-1 Session **Wednesday 14 February 2024**
 - 1-2-1 session **Thursday 22 February 2024**
- The links to these sessions can be found on the competition page on Gov.uk



Contact us



www.gov.uk/DASA



@DASAccelerator



accelerator@dstl.gov.uk



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01980 950000 option 3

Thank you for attending!

We look forward to receiving your submissions by
12:00 hrs (GMT) on Thursday 28th March 2024.
(The day before Good Friday!)