Serapis Tasking Form

Tasking Form Part 1: *(to be completed by the Authority's Project Manager)*

To:	Lot 4 QinetiQ Plc	**From:**	The Authority

Any Task placed as a result of your quotation will be subject to the Terms and Conditions of Framework Agreement Number:

Choose an item.

VERSION CONTROL

V0.9

REQUIREMENT

Proposal Required by:	[17/09/2021]	**Task ID Number:**	[AII70]
The Authority Project Manager:	[REDACTED]	**The Authority Technical Point of Contact:**	[REDACTED]
Task Title:	Digital Battlespace Deception - INNOVATIVE IDEAS CHALLENGE CALL		
Required Start Date:	01/10/2021	**Required End Date:**	30/11/2022
Requisition No:	1000167081	**Budget Range**	£50k to £1M

TASK DESCRIPTION AND SPECIFICATION

Serapis Framework Lot	☐ Lot 1: Collect ☐ Lot 2: Space systems ☐ Lot 3: Decide ☒ Lot 4: Assured information infrastructure ☐ Lot 5: Synthetic environment and simulation ☐ Lot 6: Understand

INNOVATIVE IDEAS' CHALLENGE CALL:. DIGITAL BATTLESPACE DECEPTION

Background

The pace of technological change and the ease of access to technologies continues to increase. This, coupled with the continuous execution of sub-threshold actions by our adversaries seeking to undermine UK interests, presents a broad range of threats to western military advantage. Defence must prepare to protect UK interests, engage with, and where necessary, constrain adversaries in both the sub-threshold space, which is below the traditional threshold of war, as well as prepare for a future warfighting response.

In the future battlespace (both physical and virtual), defence assets and operations are likely to be increasingly detectable through ubiquitous ISR (intelligence, surveillance and reconnaissance) and advanced processing technologies (including machine learning and artificial intelligence); therefore, technologies which enable Defence to mask, hide, decoy, dazzle, mimic and jam will deliver a step change in;

- freedom of manoeuvre and the manoeuvrist approach;
- force protection;

- the ability to introduce uncertainty and indecisiveness in adversary commanders' understanding;
- the ability to unmask adversary deception;
- the ability to conduct discrete, non-attributable operations.

Battlespace deception is the use of deliberate measures taken to mislead a target decision maker into behaving in a manner which is advantageous to friendly forces.

Digital Battlespace deception recognises that in the future, the targeted decision maker could be an autonomous system acting with or without human decision makers in the loop. The 'digital' battlespace includes science and technologies that are highly relevant to the electromagnetic spectrum (EMS) (incl. electronic warfare, command and control warfare and C4), as well as ISR sensors, the cyber environment (cyber systems and architectures) and the online internet environment (www); therefore 'digital' in its broadest form.

Task Requirement

This task is under the SERAPIS INNOVATIVE IDEAS CHALLENGE CALL - PROCESS where innovative ideas are being sought from the widest possible community for down-selection and further study.

Concepts and ideas are sought that would allow Defence to ***'hide in plain sight, creating uncertainty in our adversaries'***.

The techniques may include (but not restricted to):

- Active deception – actions which convey deceptive information to the target, also referred to as 'simulation' or 'showing the false'
- Cover – actions taken to protect the mission by preventing the deception target from receiving the indicators of real actions, capabilities or intentions

Active deception involves adding to or changing the electromagnetic profile of friendly forces to, for example,

- Suggest additional number or locations of forces
- Manipulate electromagnetic emissions by modifying technical characteristics and profiles.
- Deny or deceive the enemy as to friendly intentions.

Cover involves hiding or concealing transmissions by, for example,

- Modification of the environment to limit detection
- Concealing within the background or resembling other innocuous transmissions, and
- Transmissions designed to test adversary ISR systems through diversion or disinformation

To develop UK capability and understanding in Digital Battlefield Deception, ideas are sought to achieve the above and other aims, from across a range of technology areas including, but not limited to:

- novel materials and waveforms
- modification of the local EM environment
- concealment of defence assets from machine-read sensor feeds

In all these areas, research is needed to understand and control force signatures and will cover all parts of the spectrum in which adversaries are able to sense.

Ideas can be at any maturity level from initial idea to concept but should be innovative and present a fresh approach for the UK. Where technologies are based on existing or previous work for Dstl this should be

indicated. The call is open to those wishing to collaborate with other suppliers, including those not currently registered as SERAPIS suppliers.

The duration of the proposed task may vary from a few months to longer depending on the readiness level. For example, a short task may be proposed to explore the low TRL concept, or a longer task may be proposed to take an idea to demonstration.

A key theme for the tasks being proposed is that they should be demonstrable within 2-3 years.

Task Output

The response to the Challenge Call is in a presentation format which will be presented at the Tasking brief.

The presentation format (one slide set for each idea) is likely to comprise the following:

- Slide 1 – Introduction
    1. A free form description / illustration of the proposed idea that also demonstrates your understanding of the problem space and technique/category
    2. Where the idea has come from (e.g. building on Dstl work, building on internal IP, new idea)
    3. Who do you plan to collaborate with (Defence partner, SME, Non-traditional defence supplier, academia) Are they all UK based researchers
    4. Expected duration of the task (i.e. to get from TRL 'X' to TRL 'Y')
    5. Expected output from the study; concept paper, simulation, concept, demonstration.
- Slide 2 – A descriptive slide that is divided into 4 sections that map to the assessment criteria, namely:
    1. What deception technique are you targeting
    2. Operational Relevance
    3. Technical solution description)
    4. Risks & Commercials (including budgetary price)
- Slide 3 – Additional information and references
- Slide 4 - What could be the exploitation path for the research

[REDACTED]

All presentations (quad charts) submitted will be treated as DEFCON 705 limited rights.

Responses will not be shared with other bidders.

Any responses taken forward by Dstl will be contracted under DEFCON 703 so suppliers should be aware of this when submitting their initial ideas under DEFCON 705 limited rights.

Before ideas are taken forward, presentations (typically of 15-20mins) will be sought from proposers to explore their idea further.

It is emphasised that being asked to give a presentation is without commitment and prejudice of a task be contracted. To provide focus, clarification questions *may* be sent prior to presentations being requested.

Ideas not called for presentation will be logged and may be directed to other themes or used at a later date.

It is expected that a balanced programme will be developed from the ideas ranging from low to high TRL topics.

It is anticipated that presentations will be sought from of 5-7 proposals

Benefits

The expectation is that this task will;

- Identify new technologies and concepts for UK defence
- Increase understanding around potential technologies, uses etc.
- Develop new UK capabilities

Procurement Strategy

☒ Lot Lead to recommend ☐Single Source / Direct Award

Pricing:

☒ Firm Pricing ☐ Ascertained Costs* ☐ Other*

Firm Pricing shall be in accordance with DEFCON 127 and DEFCON 643

Ascertained Costs shall be in accordance with DEFCON 653 or DEFCON 802.

*only at Authority's discretion

SECURITY CLASSIFICATION OF THE WORK

The highest classification of this SOR

OFFICIAL ☐ OFFICIAL-SENSITIVE ☐ SECRET ☐ TOP SECRET ☐ STRAP ☐ SAP ☐

The highest expected classification of the work carried out by the contractor

OFFICIAL ☐ OFFICIAL-SENSITIVE ☐ SECRET ☐ TOP SECRET ☐ STRAP ☐ SAP ☐

The highest expected classification of Deliverables/Output

OFFICIAL ☐ OFFICIAL-SENSITIVE ☐ SECRET ☐ TOP SECRET ☐ STRAP ☐ SAP ☐

Is a Security Aspects Letter (SAL) required? *(A Security Aspects Letter (SAL) will be required for each Task above Official-Sensitive and above)*

Yes ☐ No ☐

TASK CYBER RISK ASSESSMENT. *(In accordance with DEF STAN 05-138 and the* Risk Assessment Workflow)

Cyber Risk Level	[REDACTED]
Risk Assessment Reference	[REDACTED]

ADDITIONAL TERMS AND CONDITIONS APPLICABLE TO THIS CONTRACT

Please ensure all completed forms are copied to DSTLSERAPIS@dstl.gov.uk when sending to the Lot Lead.

Tasking Form Part 2: *(To be completed by the Lot Lead)*

To:	The Authority FAO: Tel:	**From:**	The Lot Lead

Proposal Reference **Please see below for Tranche 1** **(attached)**

Delivery of the requirement:

This proposal includes five technical proposals from [REDACTED] as follows:

- [REDACTED] Technical Proposal: Virtual Sandbox for Deception Application, QINETIQ/21/04212 Issue 1.0
- [REDACTED] Technical Proposal: Lightweight Deceptive Decoys, QINETIQ/21/04210 Issue 1.0
- [REDACTED] Technical Proposal: Range Profiling, QINETIQ/21/04214 Issue 1.0
- [REDACTED] Technical Proposal: Dazzle camouflage and adversarial image patches, QINETIQ/21/04213 Issue 1.0
- [REDACTED] Technical Proposal: Digital Deception Suite, QINETIQ/21/04211 Issue 1.0

[REDACTED] have some background IP, please refer to their technical proposal.

COMMERCIAL

[REDACTED]

Thales have requested that some of the deliverables will be DEFCON 705 Full Rights.

Please note that in the [REDACTED] Proposal Work Packages 5 and 6 are not included in the costs, and there for reference only.

Optional Tranche 2

Our Firm Price offer for Tranche 2 is £1,058,848.21 [REDACTED]

Optional Tranche 3

QinetiQ provide a budgetary estimate of approximately £1 million for Tranche 3. This number is provided to support Dstl with securing funding for Tranche 3 only and cannot be described as a price, or a "Not To Exceed" number. Any work considered for Tranche 3 will require a full assessment of the scope and requirements to allow QinetiQ to produce a firm price. This estimate is in addition to the Firm Price for Tranches 1 and 2.

PRICE BREAKDOWN

The Firm Price offer is shown below.

Please refer to the pricing breakdown below.

Total Proposal Price in £	£917,560.82 for Tranche 1 only £1,130,342.31 for Tranche 1 only inclusive of [REDACTED] optional WP4	(ex VAT)

Start Date:	13th December 2021		**End Date:**	31st December 2022 for the core work.
Lot Leads Representative	Name	[REDACTED]		
	Tel	[REDACTED]		
	Email	[REDACTED]		
	Date	17th December 2021		
Position in Company	Assistant Commercial Manager			
Signature	[REDACTED]			

Contractor price breakdown

Prices excluding optional [REDACTED] **activity**

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Total	**£917,560.82**

~~**Prices including optional** [REDACTED] **activity**~~

~~[REDACTED]~~

~~[REDACTED]~~

~~[REDACTED]~~

~~[REDACTED]~~

~~[REDACTED]~~

~~**Total**~~	~~**£,130,342.31**~~

Tasking Form Part 3:

1. **Offer of Contract:** *(to be completed by the Authority's Commercial Officer or Contract Manager and copied to the Authority's Project Manager)*		
Authority's Commercial Officer	Name	[REDACTED]
	Tel	[REDACTED]
	Email	[REDACTED]
	Date	17/12/2021
Requisition Number		R1000167081
Contractor's Proposal Number		Multiple Proposals
Purchase Order Number		DSTLX-1000166049
Signature		[REDACTED]
Please Note: Task authorisation to be issued by the Authority's Commercial Officer or Contract Manager. Any work carried out prior to authorisation is at the Contractor's own risk.		