

Serapis Tasking Form

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

To:	Lot 4 QinetiQ Plc	From:	Dstl
Any Task placed as a result of your quotation will be subject to the Terms and Conditions of Framework Agreement Number: LOT 4 DSTL/AGR/SERAPIS/AII/01			
VERSION CONTROL			
Version 0.1 Updated to include AII Ref and Cyber Risk Assessment.			
REQUIREMENT			
Proposal Required by:	31/01/2022	Task ID Number:	AII110
The Authority Project Manager:	[REDACTED]	The Authority Technical Point of Contact:	[REDACTED]
Task Title:	DCEAT WP3.3: Advanced Remote Sensing of Electromagnetic Nuances for Identification and Calibration		
Required Start Date:	31/01/2022	Required End Date:	31/03/2022
Requisition No:	1000xxxxxx	Budget Range	£400k (excluding TMS)
TASK DESCRIPTION AND SPECIFICATION			
Serapis Framework Lot	<input type="checkbox"/> Lot 1: Collect <input type="checkbox"/> Lot 2: Space systems <input type="checkbox"/> Lot 3: Decide <input checked="" type="checkbox"/> Lot 4: Assured information infrastructure <input type="checkbox"/> Lot 5: Synthetic environment and simulation <input type="checkbox"/> Lot 6: Understand		
<u>Abstract</u> This work supports the requirements of the [REDACTED] programme to meet the need to be able to conduct UK based, testing, prototype and conceptual experiments at RF to support the development of the S&T needed for activities such as the development of [REDACTED] for REDACTED]. <u>Single Source</u> This Single Source SoR is targeted towards QinetiQ who are the lead provider to both DSTL and JFC DI on [REDACTED] Technology under the extant contracts; <ul style="list-style-type: none">• [REDACTED] ref. DSTL RCLoud: 1000166146• [REDACTED] ref. JFC3/113 Annex A Item No. 8 and 12			

QinetiQ has a world class [REDACTED] technical know-how based upon long term understanding supported by a trials assessment capability used by various [REDACTED], [REDACTED] and [REDACTED].

QinetiQ have developed a proprietary [REDACTED] model. DSTL wishes to develop these models to provide an [REDACTED] system capable of predicting [REDACTED] scenarios for MOD.

QinetiQ has published many [REDACTED] and [REDACTED] scientific papers in internationally peer reviewed journal and conferences.

Without QinetiQ as the single source DSTL will be unable to effectively support MOD on [REDACTED] technology topics.

Background

The MOD Science and Technology Strategy 2020¹ highlights that the ultimate goal of Science & Technology (S&T) activity is placing new technology with enhanced capabilities into the hands of the users at the right time. Consequently, experimentation is a vital component of capability development within Defence. S&T experimentation, on early prototypes and proofs of concept. This will be rigorous and the focus of S&T experimentation will be on immature concepts and technologies (with correspondingly low Technology Readiness Levels (TRLs)) to assess the feasibility of exploitation of generation after next research. Prototype or conceptual experimentation will demonstrate the opportunities S&T provides and also give valuable assessment points to change course.

It is against this strategic drive that new facilities and capabilities and know-how need to be developed to enable experimentation of low TRL concepts and ideas to support [REDACTED] technologies needed for the next generation of [REDACTED] needed to enable rapid decisions making

The future challenges in a C4 environment include the need for:

- new techniques and technologies that mitigate against rapidly emerging communications threats
- [REDACTED] systems to operate in an denied, degraded and [REDACTED] environment due to [REDACTED] and/or [REDACTED],
- resilient and robust [REDACTED] systems (i.e low probabilities of detection, interception and exploitation),
- connectivity to all [REDACTED] platforms (land, sea, underwater, air),
- communications links that can support communications ranges beyond line of sight and short range,
- communications capacities from low to very high data rate systems
- global operations, often infrastructure less environment
- conducting operations that range from disaster relief, peacekeeping, surveillance to military engagement
- interoperability with national and international partners
- low signature networking,
- new architectures/protocols
- systems that are application aware
- satisfying convergence of systems and networks

There is a need to be able to conduct UK based, testing, prototype and conceptual experiments at RF to support the development of the S&T needed for activities such as the development of [REDACTED].

Dstl require provision of a suite of [REDACTED] systems to perform complete measurements and diagnostics from the ground during [REDACTED] trials and experimentation. Existing equipment is aging, with increasing risk of failure.

¹ MOD Science and Technology Strategy 2020 v1.2 October 2020

This capability is required to provide comprehensive measurements of the propagation of [REDACTED] with accuracy capable of detecting small and subtle structures in the ionosphere that are either naturally occurring or artificially induced. The contractor shall provide a suite of systems that can provide sufficient timely and [REDACTED], to support investigations into the evolution of these [REDACTED] events

SoR Aim

The aim of this SoR is to support the growing UK [REDACTED] capability through the provision of hardware and roadmaps to support detection and monitoring techniques for long-term programme of capability investigations for the next 7 years.

Requirement

The outline requirements include but are not limited to:

WP1: RF Transmitters and Receivers

The contractor shall provide up to six (x6 systems) complete units capable of, but not limited to the following capabilities:

- Able to replicate [REDACTED] currently owned by MOD
 - Able to [REDACTED] replicating current UK [REDACTED] capability
 - Provision of correct Power Amplifiers and [REDACTED] to support [REDACTED] capability
- Provision of an [REDACTED] that has the capability to [REDACTED] across [REDACTED]
- Provision of an [REDACTED] that has the capability to [REDACTED] across [REDACTED]
- Receive [REDACTED] to provide accurate timing.
- Capable of recording large datasets with the ability to enable the operator remote access
- Provision of a [REDACTED] to enable modification of operational parameters
- Interoperable with other Government, industry, academia and international partners
- Agile and deployable
- Ruggedised and capable of handling reasonable shocks through shipping
- Provision of [REDACTED] with low [REDACTED] that do not impede accuracy and sensitivity for [REDACTED]
- Provision of peripheral equipment such as monitor, keyboard and mouse as required for command and control the system

The contractor shall also provide one additional [REDACTED] to support [REDACTED] capability.

The system shall be procured from Commercially Off The Shelf (COTS) products.

The contractor shall provide the following documentation:

- System Safety case
- Design certificates

Additionally, the contractor shall conduct a short scoping study to investigate suitable replacement of MOD's [REDACTED]. The contractor shall consider new COTS products to provide a short list of options capable of providing [REDACTED] information in a deployable and interoperable configuration with the above system.

WP2: Additional (x4) RF Transmitters and Receivers

Under this costed option the contractor will provide a further 4 units, of the same specification as in WP1

WP3: Portable GNSS Prototype

The contractor shall develop a low cost, COTS, deployable GNSS signal tracking sensor. The unit shall be capable of, but not limited to:

- Detection and monitoring of [REDACTED] transmissions
- Provision of a portable, small form factor [REDACTED]
- Weather proof
- Independent and sustainable power source e.g. Solar Power and battery
- Capable of recording [REDACTED] with the ability to enable the operator remote access
- Agile and deployable
- Ruggedised and capable of handling reasonable shocks through shipping
- Inclusion of data from an [REDACTED] with suitable data storage

The contractor shall provide the following documentation:

- System Safety case
- Design certificates

WP4: Magnetometer

The contractor shall provide a deployable [REDACTED] to perform [REDACTED] measurements during trials and experimentation. The system shall provide [REDACTED], to support investigations into the [REDACTED] and influence on broader [REDACTED].

The contractor shall provide the following documentation:

- System Safety case
- Design certificates

WP5: AIM & Ionospheric Modelling System

The contractor shall provide deployable [REDACTED] systems, configured with regular updates of [REDACTED]. This system shall also be configured to include the [REDACTED].

The system should be ruggedised and capable of handling reasonable shocks through shipping.

Innovation Benefits and Exploitation Plan (IBEP)

By conducting the work the following are anticipated.

1. Innovation – (i.e. what are we building on?)
 - a. Experimentation experience
 - b. S&T trends
 - c. [REDACTED] challenges
 - d. [REDACTED] proposition
 - e. Previous [REDACTED] experiments and platforms
2. Benefits (i.e. what will the contracted stakeholders get from this?)
 - a. Development of new capabilities
 - b. Closer [REDACTED] collaboration
 - c. Increased collaboration between industry, academia and government.
3. Exploitation (what are the artifacts that Dstl will get that can be more widely exploited)
 - a. Experimentation sites
 - b. Facility specifications
 - c. Process and procedures for novel experiments
 - d. Experimentation results

4. Plan (what's the plan for exploitation)
 - a. [REDACTED] experimentation
 - b. Enhanced UK reputation in defense S&T
 - c. Academic cross collaborations generate new research opportunities
 - d. Exploitation internationally e.g. [REDACTED]

Outputs.

Outputs (or artefacts) of the activities that may be exploited more widely include (noting potential security restrictions):

- Roadmap for [REDACTED] system
- Low cost Deployable sensors
- Ruggedised equipment to support multiple research areas

Deliverables.

Deliverables of the project are highlighted in the Deliverables section.

An end of FY 22 consolidated report will be required in February/March 2022 highlighting:

- Aims
- Technical Progress
- Achievements
- Exploitable outputs
- Recommendations

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

Task IP Conditions

Task IP Conditions (Follow the NIPPY guide to identify your information and IP requirements for each deliverable)	Summary of the Authority's rights in foreground IP (IP generated by the supplier in performance of the contract)
DEFCON 703 <input type="checkbox"/>	Vests ownership with the Authority
DEFCON 705 Full Rights <input checked="" type="checkbox"/>	Enables MOD to share in confidence as GFI or IRC under certain types of agreements. Can be shared in confidence within UK Government.
OTHER IP DEFCONS: 14* <input type="checkbox"/> , 15* <input type="checkbox"/> , 16* <input type="checkbox"/> , 90* <input type="checkbox"/> , 91* <input type="checkbox"/> , 126* <input type="checkbox"/>	Generally only suitable for deliverables at TRL 6 and above.
BESPOKE IP Clause <input type="checkbox"/> *	Details to be added and agreed by IP Group

* Do not use without IPG advice and approval

Please state in this text box if MOD or the customer has a requirement a) that one or more Other Government Departments is able to share confidentially with their own suppliers, b) to publish but you do not think there is a requirement to own or control the deliverable, or c) to share under a procurement* Memorandum of Understanding (MOU).

If any of these three issues applies, please contact IPG for advice before completing this form. *Listing research MOUs is not required, but can be a helpful courtesy to the supplier.

DELIVERABLES

Ref	Title	Due by	Format	TRL	Expected classification (subject to change)	Information required in deliverable	IPR DEFCON
D-1	Monthly progress reports (MPR)	T0+1 month	Presentation		[REDACTED]	PORT (progress, opportunities, Risks, Timelines) quad chart presentation pack	705
D-2	Email of PO	T0+3 Months	email		[REDACTED]	Email containing Purchase orders for all equipment under WPs taken up.	705
D-3	User instructions	31 st March 2022	Document		[REDACTED]	Each equipment will come with user manual describing basic functionality	705
D-4	Roadmap	31 st March 2022	Presentation		[REDACTED]	Roadmap on how AoA system could be developed	705

DELIVERABLE: ACCEPTANCE / REJECTION CRITERIA

Unless otherwise stated below, Standard Deliverable Acceptance / Rejection applies. This is 30 business days, in accordance with DEFCON 524 Rejection, and DEFCON 525 Acceptance.

Standard Deliverable Acceptance / Rejection:-

Yes ☐ (DEFCON 524 Rejection, and DEFCON 525 Acceptance)

No ☐ (if no, please state details of applicable criteria below)

Deliverable Acceptance / Rejection Criteria:-

If there are any other specific acceptance/rejection criteria you would like to apply to any of the deliverables, please state them here.

Government Furnished Assets (GFA)

ISSUE OF EQUIPMENT/RESOURCES/INFORMATION/FACILITIES (if not applicable, delete table and insert "None" in this text box)

<u>Unique Identifier/ Serial No</u>	<u>Description</u>	<u>Classification</u>	<u>Type</u>	<u>Available Date</u>	<u>Issued by</u>	<u>Return or Disposal Date</u>	<u>Any restrictions?</u>
N/A	N/A						

QUALITY STANDARDS

- ☐ **ISO9001** (Quality Management Systems)
- ☐ **ISO14001** (Environment Management Systems)
- ☐ **ISO12207** (Systems and software engineering — software life cycle)
- ☐ **TickITPlus** (Integrated approach to software and IT development)
- ☐ **Other:** (Please specify in free text below)

SECURITY CLASSIFICATION OF THE WORK [REDACTED]

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	From: The Lot Lead
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Proposal Reference QINETIQ/22/00318 **(attached)**

Delivery of the requirement:

The proposal shall include, but not be limited to:

- A full technical proposal that meets the individual activities that are detailed in Statement of Requirements (Part 1 to Tasking Form).
- Breakdown of individual Deliverables, with corresponding Intellectual Property rights applied.
- Breakdown of Interim Milestone Payments, with corresponding due dates.
- A work breakdown structure/project plan with key dates and deliverables identified.
- A list of required Government Furnished Assets from the Authority, including required delivery dates.
- A clear identification of Dependencies, Assumptions, Risks and Exclusions which underpin your Technical Proposal.
- Sub-Contractors Personnel Particulars Research Worker Form and security clearances (if applicable)

COMMERCIAL

As per the Serapis Limitation of Liability Discussion Paper Agreement, this task will fall under the band of a cap on liabilities of £1 million for the core work only. If any of the Options are taken up this figure will increase in line with the bands within the agreement.

The prices in this proposal are based on our current agreed rates which are valid until July 2022 only. Any work beyond this date will therefore be subject to review and amended to include any agreed rates uplift as set out under Clause 8 (Variation in Price) in the Serapis Framework Agreement LOT 4 DSTL/AGR/SERAPIS/AII/01.

Price and Schedule Volatility

Prices and lead times are fluctuating and cannot be confirmed until contract placement, and we can confirm with suppliers. We have therefore taken quotations and best estimates of prices and added 10% contingency to the LOL detailed. For budgetary purposes you may wish to hold a higher contingency.

Equipment is provided without support or warranty beyond the manufacturer warranties for the components.

This Proposal is offered on a Firm Price basis for the CORE WP1 and for the 4 costed Options for all but the material items. These are priced on an LoL basis and will be invoiced on an actuals basis.

PRICE BREAKDOWN

Offer of Contract: *(to be completed and signed by the Contractor's Commercial or Contract Manager)*

Total Proposal Price in £	Total CORE plus Options <u>£610,231.54</u> [REDACTED]		(ex VAT)
Start Date:	04/02/22	End Date:	31/05/22
Lot Leads Representative	Name	[REDACTED]	
	Tel	[REDACTED]	
	Email	[REDACTED]	
	Date	4 th February 2022	
Position in Company	Assistant Commercial Manager		
Signature	[REDACTED]		

Core Work – Breakdown

[TABLE REDACTED IN ITS ENTIRETY]

Core Work – Milestone breakdown costs

Proposed Milestones Payments

[TABLE REDACTED IN ITS ENTIRETY]

Outputs:

All110/O01	Minutes of the start-up meeting A document containing the minutes of the start-up meeting.	T0 + 4 weeks	Output: Document 705 Full Rights
All110/O02	Certificate of conformity, Safe systems of work, user guides and statement of transfer of ownership of equipment to Dstl.	Aiming for 30th March 22, but dependent on completion of CE assurance	Output: Documentation 705 Full Rights
All110/O03	Roadmap for NIRIS replacement	30 th March 2022	Output: Documentation 705 Limited Rights

Tasking Form Part 3:

To be completed by the Authority's Commercial Officer and copied to the Authority's Project Manager.

1. Acceptance of Contract:		
Authority's Commercial Officer	Name	[REDACTED]
	Tel	[REDACTED]
	Email	[REDACTED]
	Date	[REDACTED]
Requisition Number		RQ0000002791
Contractor's Proposal Number		QINETIQ/22/00318
Purchase Order Number		DSTL0000000881
Signature		[REDACTED]
<i>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.</i>		