Serapis Tasking Form

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

To:	Lot 1 Roke Manor Research Ltd	From:	The Authority

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

LOT 1 DSTL/AGR/SERAPIS/COL/01

VERSION CONTROL

00-01 Copied from Dstl original.

00-02 Task form revised to contain only ST2 with significant changes.

00-03 Task form revised after internal review.

01-00 Version 1.

REQUIREMENT

Proposal Required by:	09/12/2022	Task ID Number:	C72-02
The Authority Project Manager:	[Redacted]	The Authority Technical Point of Contact:	[Redacted]
Task Title:	WAMI track extraction		
Required Start Date:	24/01/2023 or ASAP	Required End Date:	15/03/2024
Requisition No:	RQ0000011301	Budget Range:	[redacted]

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

Abstract

The project aims to provide support and training for using Roke's WAMI processing toolset to process WAMI data (from trials and simulated). Additionally, the project aims to modify the processing toolset for containerisation and to support different camera configurations.

Background

In September and October 2021, Dstl conducted the Contested Urban Environment (CUE) 2021 trial in Portsmouth, UK. One of the sensors deployed was supplied by Persistent Surveillance Systems (PSS) and consisted of [Redacted]. Three types of WAMI data was produced:

- Imagery chips – Low resolution images of small areas (typically a few blocks);

- The full imagery cube – Raw images [Redacted]), composite frames, and the aircraft position, yaw, pitch, and roll information for each frame (CSV files).

- Track files for designated vehicles, approximately 20 per flight (CSV files).

Potential challenges processing WAMI include geospatial accuracy, altitude, [Redacted]. Dstl has invested previously in two solutions to process WAMI data, one led by Roke and the other by the University of Liverpool. WAMI data suffers from gaps in the target detection, due to challenges such as physical obscuration and shadows (causing reduced target contrast).

Statement of Requirements (SOR)

The Supplier **shall** provide support and training to assist the Authority in using Roke's WAMI processing toolset to process WAMI data collected during CUE 2021. The WAMI collected during CUE 2021 will not be released under this contract, and access to the data will be by appointment on a Dstl site and using Dstl hardware. The supplier **shall** also provide support and training to assist the Authority in using Roke's WAMI processing toolset to process simulated WAMI data generated as part of another task.

The Supplier **shall** modify the processing toolset for containerisation (running on Linux servers) and to be parametrisable to support different camera configurations. This version **shall** be dongle free; all of the required licenses **shall** be able to be provided within a containerised environment.

The development team **should** use an Agile development methodology. Proposals **should** provide information on the expected work rate (or velocity) of the development team (with the understanding by the Authority that this will vary depending on the features chosen for implementation), and how much could reasonably be achieved within the budget allowed. Details of how the Supplier will collaborate with the Authority as part of the Agile development methodology **should** also be given.

The task has been split into three phases: Scoping; Development; Support.

Phase 1: Scoping (1 month)

This phase consists of requirement gathering from the key Authority stakeholders, formation of a prioritised product backlog (with initial development time estimates) in collaboration with the Authority, and a workshop to gain agreement on the development priorities and progress reporting cadence.

For the requirement gathering, the supplier **shall** visit the Dstl Porton Down site to:

- Examine the CUE 2021 trial data to ascertain the modifications required to process the CUE 2021 data that was collected using the commercial WAMI sensor supplied by Persistent Surveillance Systems (PSS). Note that it is not known if any modifications will be required to support the processing of the CUE 2021 trial data.
    - o The [redacted] The specifics of the sensor model **should** be identified in this phase where they are relevant to the processing of the data.
    - o What modifications to the processing toolset is required for the different data types **should** be identified in this phase:
        - Imagery chips – Low resolution images of small areas (typically a few blocks);
        - The full imagery cube – Raw images [Redacted], composite frames, and the aircraft position, yaw, pitch, and roll information for each frame (CSV files).
        - Track files for designated vehicles, approximately 20 per flight (CSV files).
- Any modifications required to process the simulated data (which is based upon the CUE 2021 data) **should** be identified in this phase. Note that it is not known if any modifications will be required to support the processing of the simulated data.
- Any modifications required to support different camera configurations using toolset parameters **should** be identified in this phase.

- Any modifications required for containerised operation **should** be identified in this phase, considering requirements on performance and constraints on the computing environment.

- Agree with the Authority the metrics which **should** be used to assess the performance of the WAMI processing toolset and how these metrics can be applied for user acceptance testing.

- Agree with the Authority how the Supplier **shall** gain access to the CUE 2021 data. The WAMI collected during CUE 2021 will not be released under this contract, and access to the data will be by appointment on a Dstl site and using Dstl hardware.

- Agree with the Authority how the Supplier **should** deliver the support and training necessary to allow the Authority to run the WAMI processing toolset on their own systems and to process the CUE 2021 data.

- Agree with the Authority which third party licenses will be required (if any) to run the WAMI processing toolset.

The Supplier **shall** hold a workshop (deliverable D4) at the Supplier's premises to gain agreement on the development priorities, development strategy, and progress reporting cadence. The workshop **shall** include a presentation which **should** cover:

- The prioritised product backlog with initial development time estimates.

- The Agile development methodology (e.g. Scrum).

- The progress reporting cadence (e.g. fortnightly or monthly).

- How progress will be demonstrated (e.g. feature demonstrations).

- How source code and documentation will be made available for review during the project.

- The third party licenses that will be required to run the WAMI processing toolset and their cost. Note that the most likely case will be that no additional third party licences will be required.

Following the workshop, the Supplier **shall** deliver the agreed WAMI processing toolset development plan (deliverable D5) which **should** cover all requirements for processing WAMI data agreed during phase 1 and all issues agreed at the workshop (including all points listed above).

Phase 2: Development

Development **shall** proceed as agreed in phase 1. Progress **shall** be demonstrated using the method and cadence agreed in phase 1. Source code **shall** be documented and include unit/integration tests as appropriate. Tests **should** be provided to test functionality and also to ensure exceptions are raised or managed appropriately.

As phase 2 proceeds and progress is reported, it **shall** be possible for the Authority to change priorities and add/remove requirements as necessary with the understanding that this will have an impact on the scope or delivery time/cost of the WAMI processing toolset.

At the end of the phase, the Supplier **shall** provide:

- The source code for the WAMI processing toolset and a compiled executable (deliverable D6).

- A user guide for the WAMI processing toolset (deliverable D7) which **should** include at a minimum:
    - o Introduction to the WAMI processing toolset and the goals of the project.
    - o Installation/Build instructions with any dependencies and system requirements.
    - o A quick start guide to using the WAMI processing toolset.
    - o A detailed description of each part of the functionality and how to use it.
    - o Known limitations.
    - o Examples of usage.
    - o Advice to users.
    - o Glossary.

        o   Licensing information.

[Redacted]

The Authority may choose to end the task at any point in the development phase (including the start and end) if it seems unlikely that the required output will be achievable. If the project is ended by the Authority, note that deliverable D6 **shall** still be required, and the Authority may request deliverable D7 with sufficient time allowed for that to be completed and the associated acceptance processes.

Phase 3: Support (maximum 2 months)

For this phase, development of the WAMI processing toolset does not need to continue unless bugs are discovered which impact upon the effectiveness of the delivered software.

The Supplier **shall** provide the support and training necessary to allow the Authority to run the WAMI processing toolset on their own systems (deliverable D8) and to process the CUE 2021 data (deliverable D9) as agreed in phase 1. Support **shall** typically be on site at Dstl Porton Down but for certain aspects of support, Roke Romsey may also be an acceptable location.

Monitoring

Monitoring meetings can be assumed virtual unless explicitly stated otherwise.

A start-up meeting (deliverable D1) **shall** be held within the first week of the project. The Authority **shall** require regular progress meetings in order to monitor progress (deliverable D2.n), which is in addition to any technical progress reports (e.g. sprint reviews) agreed for phase 2 and not covered by this section. These meetings **should** include:

- Updates on technical progress, with demonstrations when available.
- Progress report against project schedule.
- Review of deliverables.
- Review of risk management plan.
- Current risks/issues.
- Commercial aspects.
- GFA and supplier performance.

At the end of the project there **shall** be a close-down meeting (deliverable D3), taking place no later than 1 week prior to the end of the contract, which **should** include:

- Lessons identified.
- Future work.
- Benefits.
- Any administrative aspects associated with the end of the contract.

Additional meetings and technical workshops **should** be proposed by the Supplier as required.

Following any meeting, materials and minutes **shall** be delivered to the Authority within 5 working days of the event.

Quality

The Supplier **shall** provide a description of their engineering and quality management systems and how these systems will be applied in the context of the task requirements.

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	Vests ownership with the Authority
DEFCON 705 Full Rights	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* 15* 16* , 90* 91*126*	Generally only suitable for deliverables at TRL 6 and above.
BESPOKE IP Clause	[Redacted]

* 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

[Redacted]

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*)

Unique Identifier/ Serial No	Description	Classification	Type	Available Date	Issued by	Return or Disposal Date	Any restrictions?
[Redacted]							

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]

[Redacted]

[Redacted]

[Redacted]

Please ensure all completed forms are copied [Redacted] when sending to the Lot Lead.

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

To:	The Authority	From:	The Lot Lead

Proposal Reference	**Roke - WAMI Track Extension** **Proposal Issue 02_000 FINAL** (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)

PRICE BREAKDOWN

You are to use the costs detailed in Item 2 Table I in the Schedule of Requirement and at Annex E Table 2 of the Serapis Framework Agreement. Please also provide a price breakdown which should include, but is not limited to: Lot Lead Rates, Sub-contractors costs and rates, travel and subsistence. In support of your Proposal you are requested to provide clear details of all Dependencies, Assumptions, Risks and Exclusions that underpin your price.

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

Total Proposal Price in £	£198,151.65		(ex VAT)

Start Date:	12/04/2023	**End Date:**	15/03/2024
Lot Leads Representative	Name	[Redacted]	
	Tel	[Redacted]	
	Email	[Redacted]	
	Date	12/04/2023	
Position in Company	[Redacted]		
Signature	[Redacted]		

Core Work – Breakdown

[Redacted]

[Redacted]

Travel, Subsistence, Materials & Equipment					
Please insert/delete rows as necessary					
Supplier Name	**Spend Type**	**Description / Rationale**	**Unit Cost (£)**	**Qty**	**Total Cost (£)**
	Choose an item.				
				Total	

Core Work – Milestone breakdown costs

Proposed Milestones Payments

Your TMS bid costs shall be included in milestone 1.

The final Milestone must reflect the actual cost of the deliverable, and be greater than 20% of the Task value, unless otherwise agreed with your Commercial POC

Please duplicate the template per milestone table format below as necessary, and rename milestone number accordingly.

[Redacted]

[Redacted]

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	23 June 2023
Requisition Number		RQ0000011301
Contractor's Proposal Number		Roke - WAMI Track Extension Proposal Issue 02_000 FINAL
Purchase Order Number		DSTL0000018580
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.