

Serapis Tasking Form

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

To:	Lot 5 Newman & Spurr Consultancy 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 5 DSTL/AGR/SERAPIS/SSE/01			
VERSION CONTROL			
Version control please ensure this is kept up to date 0.3			
REQUIREMENT			
Proposal Required by:	[17/12/2021]	Task ID Number:	[SSE35]
The Authority Project Manager:	[REDACTED]	The Authority Technical Point of Contact:	[REDACTED]
Task Title:	AI Enhanced Wargaming		
Required Start Date:	[17/01/2022]	Required End Date:	[25/03/2022]
Requisition No:	[1000170008]	Budget Range	£120k-£130k
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 type="checkbox"/> Lot 4: Assured information infrastructure <input checked="" type="checkbox"/> Lot 5: Synthetic environment and simulation <input type="checkbox"/> Lot 6: Understand		
Statement of Requirements (SOR) <u>Summary</u> The aim of this EMR is a review of AI techniques for existing wargaming environments in which the intent of the opposition is unclear and the state of the opposition is a least partially hidden. The literature review is to focus on: <ul style="list-style-type: none">• Applicability of existing wargames to ISR of the sub-threshold information domain and the inference of actor intent. Wargames of interest are those which display the expected characteristics for sub threshold information domain activities, in particular hidden opposition games (e.g. Saboteur & Werewolf where either the presence of an adversary is unknown to the AI player or where which of the players is an adversary is unknown);• Potential applications of AI therein. <u>Background</u>			

The Machine Speed Strategic Analysis (MSSA) project has received funding under the Integrated Review to undertake research to enable the UK to undertake Intelligence, Surveillance and Reconnaissance (ISR) of the sub-threshold information domain. This will enable UK Government and Defence to process and understand the vast quantity of data at machine speed and to utilise advanced technology to infer intent and evaluate plausible responses.

The project is intended to improve the options for UK MOD to be able to undertake the ISR of the sub-threshold developing the technology and understanding to be able to deliver system and sub-system demonstrators to improve the UK ability to:

- Understand the actions in the sub-threshold, and to be able to identify which are, or appear to be malign
- Increase the UK ability to understand the implications and reach of our own defence activities in the sub-threshold
- Attribute actions to actors
- Identify likely or plausible intent or consequences
- Propose plausible response options.

In the first year of the project, MSSA will focus on making recommendations for research to be carried out in future years of the project with a particular focus on planning the next three (and seven beyond that but with less certainty) years of S&T effort to be applied in pursuit of MSSA's objectives. MSSA will be directly informing decision makers about the potential operationalisation of these capabilities through its ongoing stakeholder engagement and the demonstration of prototypes.

Task

We have identified that the field of wargaming may provide solutions to some of the most challenging aspects of this project, namely inferring intent, identifying consequences and proposing plausible response options. Under this task, we would like to explore how wargaming might be applied to the sub threshold information domain, for example, through the consideration of hidden opposition games, commercial sub-threshold games and games where the intent of the adversary is generally obscured (such as poker).

We also want to investigate how AI might be applied to such wargames to meet the overall objectives above. This second aspect should highlight the limitations of current AI, consider anticipated AI development and highlight any areas for future research. Note that related work around how AIs might play wargames with rules that change during play, rules which are different for different players, highly asymmetric sides and non-zero sum is already underway, and so not a direct focus for this task.

For this task we anticipate needing a team of SQEP with skills across wargaming and AI. In particular, skills and experience in the following areas are desirable:

- Wargaming: Expert level Game Design, Expert level system Mechanics/Rules, Expert level Adjudication, Practitioner in the use of hobby wargames relating to the Intelligence, Surveillance & Reconnaissance (ISR) domain (ISR in this context means the collection of information about a domain and then subsequent processing of that information to support decision making). Supervised Practitioner knowledge of ISR domain (Military understanding).
- AI: We are looking at how AI techniques could be utilised within the wargaming processes to enhance an aspect of the wargame (identifying the areas for enhancement could also be part of the study, with some sort of assessment on the benefits). We would like to keep this broad to avoid a stovepipe focus or looking at one method/approach.

Deliverables

Core: Literature review and recommendations for future work covering the above task.
Option: Proposal for implementing 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 [REDACTED] 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 checked="" 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	
We wish to be able to share in confidence with OGDs and foreign governmental organisations as part of international research collaboration (IRC).	

DELIVERABLES

<u>Ref</u>	<u>Title</u>	<u>Due by</u>	<u>Format</u>	<u>TRL</u>	<u>Expected classification (subject to change)</u>	<u>Information required in deliverable</u>	<u>IPR DEFCON</u>
D1	Kick-off Meeting	T0	Presentation (.pptx)	n/a	[REDACTED]	Presentation pack to include but not limited to: Proposed delivery schedule; Review of risk management plan; Communications plan.	DC705
D2	AI Enhanced Wargaming Summary Report	25/03/2022	Report (.docx, pdf)	n/a	[REDACTED]	Comprehensive technical report, based upon reviews of existing literature and original research and analysis as appropriate.	DC705
D3	Recommendations for future work	25/03/2022	Report (.docx, pdf)	n/a	[REDACTED]	Report to focus on what productive scope could follow-on work embrace and where the MSSA project could add value.	DC703

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>
Serial no	Description	Official-Sensitive	Equipment	00/00/0000	Issuer	00/00/0000	Include details here

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

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

N/A

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	
Proposal Reference		NSC-820-1579 AI Enhanced Wargaming Proposal V1.1 (attached)	
Delivery of the requirement: The proposal <u>shall</u> include, but not be limited to: <ul style="list-style-type: none"> • 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 <i>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.</i>			
Offer of Contract: <i>(to be completed and signed by the Contractor's Commercial or Contract Manager)</i>			
Total Proposal Price in £	138,923.13		(ex VAT)
Start Date:	01 February 2022	End Date:	25 March 2022
Lot Leads Representative	Name	[REDACTED]	
	Tel	[REDACTED]	
	Email	[REDACTED]	
	Date	25/01/2022	
Position in Company	Serapis SSE Programme Manager		
Signature	[REDACTED]		

Core Work – Breakdown

Lot Lead Rates for Task Management Services (TMS)

Please insert/delete rows as necessary

Team Member Name	Role	Activity Type	Rate (£)	Total Hours	LMS recovery per role per hour (‘d’ element)	Total LMS recovery due (£) (‘d’ x total hours)	Total TMS Cost (£) (Rate x total hours)
REDACTED	Project Manager	Contracting / Competition	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Project Manager	Assurance	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Principal Analyst	Research Management	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Principal Analyst	Research Management	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Senior Engineer	Research Management	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Capability Lead	Research Management	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Project Manager	Assurance	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Project Manager	Contracting / Competition	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Assistant Project Manager	Assurance	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
REDACTED	Assistant Project Manager	Contracting / Competition	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total			[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Work Delivered by Sub-Contractor(s)

We recognise that suppliers may fit into multiple categories, please choose the drop down that categorises the supplier by the definition that is lowest on the list (i.e. a Defence Supplier Academic would be treated as an Academic).

Please insert/delete rows as necessary

Name of Sub-Contractor	Supplier Type	Activity Description	Rate (£)	Total Hours	Total Cost (£)
Cordillera Applications Group	SME	Research - Labour	[REDACTED]	[REDACTED]	[REDACTED]
Daden Ltd	SME	Research - Labour	[REDACTED]	[REDACTED]	[REDACTED]
BMT Global	SME	Research - Labour	[REDACTED]	[REDACTED]	[REDACTED]
BMT Global	SME	Research – T&S			[REDACTED]
Cordillera	SME	Research – T&S			[REDACTED]
Daden	SME	Research – T&S			[REDACTED]
Total				[REDACTED]	[REDACTED]

Travel, Subsistence, Materials & Equipment

Please insert/delete rows as necessary

Supplier Name	Spend Type	Description / Rationale	Unit Cost (£)	Qty	Total Cost (£)
NSC	Accommodation	Workshop Hotel REDACTED	[REDACTED]	[REDACTED]	[REDACTED]
NSC	Lunch	Workshop Lunches	[REDACTED]	[REDACTED]	[REDACTED]
NSC	Dinner	Workshop Dinners	[REDACTED]	[REDACTED]	[REDACTED]
Total					[REDACTED]

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.

Milestone 01

Description	TMS cost (£)	Self-Delivery cost (£)	Sub-contractor cost (£)	Total milestone cost (£)	Milestone due date	DEFCON
EMR Delivery M1 SSE35 Task Completion	[REDACTED]		[REDACTED]	[REDACTED]	25 March 2022	AI Enhanced Wargaming Report - DC705

						Follow on Work Recommendation Report - DC 703
Travel/Subsistence				[REDACTED]		
Materials/Equipment						
Milestone LMS recovery (£)	[REDACTED]					

Options – Summary

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Options Breakdown

Full breakdowns will be requested upon invoking through the Serapis Contract Amendment Form. (If you do not currently know the full options breakdown, please include what you do know and rough order of magnitude costs.)

Only complete if applicable – otherwise delete table.

SSE35 Option – WG/Grey Zone R&D

Ref No.	Description	TMS cost (£)	Self-Delivery cost (£)	Sub-contractor cost (£)	T&S, Material & Equip Cost (£)	Pricing	Start date	End date
1	SERAPIS Task SSE35 Option	[REDACTED]		[REDACTED]	[REDACTED]	Ascertained Costs	Apr 22	Dec 22

Please Note: Task Option authorisation is to be issued by the Authority's Commercial Officer through a completed Contract Amendment Form and approved purchase order. No work is to be carried out prior to both of these being issued.

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	01/02/2022
Requisition Number		1000170008
Contractor's Proposal Number		NSC-820-1579 AI Enhanced Wargaming Proposal V1.1
Purchase Order Number		[REDACTED]
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>		