# 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:<br>LOT 4 DSTL/AGR/SERAPIS/AII/01 | | | |
| **VERSION CONTROL** | | | |
| V0.5 | | | |
| **REQUIREMENT** | | | |
| **Proposal Required by:** | [02/05/2022] | **Task ID Number:** | AII121 |
| **The Authority Project Manager:** | [REDACTED] | **The Authority Technical Point of Contact:** | [REDACTED] |
| **Task Title:** | ARA WP3.1 / 3.2 Resilient Information Services – Phase 1 Continuation | | |
| **Required Start Date:** | 06/05/2022 | **Required End Date:** | [30/06/2022] |
| **Requisition No:** | RQ0000007691 | **Budget Range** | £210k |
| **TASK DESCRIPTION AND SPECIFICATION** | | | |
| **Serapis Framework Lot** | ☐ Lot 1: Collect<br>☐ Lot 2: Space systems<br>☐ Lot 3: Decide<br>☒ Lot 4: Assured information infrastructure<br>☐ Lot 5: Synthetic environment and simulation<br>☐ Lot 6: Understand | | |

**Statement of Requirements (SOR)**

**Abstract**

This requirement is to explore approaches to Resilient Information Services within CIS Architectures. It is an activity within the Autonomous Resilient Architectures (ARA) project which seeks to develop and demonstrate self-discovering, self-connecting, self-coordinating architectures across a multi-domain, multi-classification, multi-national enterprises to provide improved C2, including in Denied, Degraded, intermittent and Low bandwidth (DDIL) environments.

**1.1. Strategic Review**

The strategic framework document, "Global Britain in a competitive age; The Integrated Review of Security, Defence, Development and Foreign Policy", outlines the following four overarching and mutually supporting objectives which includes:

i. "Sustaining strategic advantage through science and technology: we will incorporate S&T (Science and Technology) as an integral element of our national security and international policy, fortifying the position of the UK as a global S&T and responsible cyber power

ii. Shaping the open international order of the future: we will use our convening power and work with partners to reinvigorate the international system

iii. Strengthening security and defence at home and overseas

iv. Building resilience at home and overseas: we will place greater emphasis on resilience".

A key S&T challenge is **Multi-domain Command & Control, Communications and Computers (C4)** [1] **–** to develop the capability for multi-domain integration with the ability to coordinate effects globally, enabling us to execute joint operations against adversaries with well-integrated and resilient capabilities.

C4 is a broad, complex, and technically challenging area characterised by rapid advances in technologies. However, it is the connective tissue that provides the information needed to make rapid decisions in a highly mobile and global environment, often with little infrastructure.

### 1.2. Future C4 challenges

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

- New techniques and technologies that mitigate against rapidly emerging communications threats
- Resilient and robust communications systems and architectures,
- Connectivity to all mobile/static platforms (underwater, land, sea, air and space),
- Global operations, often infrastructure less environment
- Conducting operations that range from disaster relief, peacekeeping, surveillance to military engagement
- Interoperability with national and international partners
- New architectures/protocols
- Systems that are application aware
- Satisfying convergence of systems and networks.

To meet the challenges of C4, and address the Strategic Review aims, research needs to be conducted into Autonomous Resilient Architectures (ARA) with an aim of demonstrating S&T technologies within the next two years.

The aim of the ARA programme is to exploit advances in S&T to develop self-discovering, self-connecting, self-coordinating architectures across a multi-domain, multi-classification, multi-national enterprises to provide improved C2, including in Denied, Degraded, Intermittent and Low bandwidth (DDIL) environments. To achieve this S&T activities may include:

- Research into Networks, Data & Information; to accelerate & bring together a variety of existing & emerging concepts & technologies. The aim would be to show how they can come together to deliver transformational architectural agility & flexibility. (This may include cross-stack agile resilience approaches)
- Contributing to future collaborations and demonstrations such as: FNC3; replacement to DIAS ITA initiative; other potential collaborations with a view to joint development & experimentation with international partners
- S&T to strengthen our intelligent customer capability in this growing area by development of SQEP.

### 1.3. ARA WP3 - Resilient Information Services

The aim of this Work Package in ARA is two-fold:

- To enable robust and flexible approaches to information discovery
- To enable responsiveness and agility in the dissemination of information.

## 2. Current Approaches to Information and Data Architectures

[1] Defence and Security Industrial Strategy: A strategic approach to the UK's defence and security industrial sectors

Existing MOD systems vary in their approaches to, and formality of, information and data architectures as they move from the static to the operational and tactical environments. Moving out from the static environment one finds a variety of platforms and devices linked by a heterogeneous communications infrastructure which is at times congested and/or contested. A variety of information and data architectures, as well as corresponding services, have grown up to tackle the different technical circumstances that arise. The variety of data architectures is likely to continue to grow with, for example, increasing collection and processing capability 'at the edge'. This presents challenges for agility as there are many integration and use cases to consider that act as an impediment to making use of the valuable information and data that is available. This is especially the case in the face of changing operational goals and of changing operational environments particularly within degraded environments.

It is envisaged that one of the biggest areas of benefit to be gained is in the adaptation of information and data architectures to support information discovery and dissemination.

There have been a number of related research activities carried out in recent years, on which it is expected that this task will build, including:

- Information Broker (SIEI project and the linked PTF activity)
- DIAS ITA activity
- SIE Corpus and Nebula
- Nebula
- ADAIR
- Machine Speed Command and Control (C2) SR project, especially on Data Architectures
- Other SIEI work.

The AII72 Resilient Information Services Phase 1 task, has sought to understand the issues and potential solutions for Agile Information Discovery and Dissemination focused on accelerated next generation capability. To date, this task has produced the following outputs:

- Research Analysis and Experimentation Plan (RAEP)
- Baseline scenario definition (Scenario)
- Interim demonstration of potential solutions (Demonstrations)
- An Innovation, Benefits and Exploitation Plan (IBEP).

Due to unforeseen circumstances Phase 1 did not commence until late January 2022 and was therefore constrained in time and resource to complete the understanding of what specific research should be done during the following phases of research.

To ensure the team can continue into the new financial year and move the research forward we wish to provide funding for a short period of time to complete the phase and start on the most promising research items.

**3. Aims**

The aim of this task is to:

- Establish the scenario data sets required to support analysis and experimentation of the RAEP
- Put the experimentation framework into place
- Insitgate the approach for research ready to address the research items as they are selected.

**4. Requirements**

**R1 Establish scenario data sets**
In collaboration with Dstl, take the outputs from AII72 and identify a prioritised set of data to be collected, created or simulated to support the needs of experimentation.

**R2 Establish experimentation framework**
An environment is required in which experimentation can take place, including collection of metrics and allowing simulation of networks and/or bearers. Coordinate with AII105 as required.

**R3 Establish agile research methodology**
An approach is required to start to tackle research items on the backlog, which needs to be "scrubbed" in collaboration with Dstl. The process should be able to take areas of research, develop an approach to assess them, analysing and experimenting where required. The research goal is to determine the "art of the possible", trying, testing and throwing out ideas early if they have little evidence of performing in order to get to the nub of the problem quickly. This should feed into a number of solution building blocks as part of a coherent MOD-owned architecture.

**R4 Input into and attend a June 2022 demonstration event**
The June demonstration event is intended to show work carried out to date, "warts and all", and may take the form of posters, a PowerPoint, or showing the current state of any technical work that may have taken place. As such we may need suppliers to provide some input into the material and/or attend the event. It is not a formal demonstration and therefore we do not expect suppliers to expend a significant amount of effort preparing a technical demonstrator just for this event.

**R5 Maintain the Innovation Benefits and Exploitation Plan (IBEP)**
The IBEP is required to be maintained, which will include:

1. Innovation – (i.e. what are we building on?)
    a. Network management know-how in a military/civil domain
    b. Previous architectures for system of systems solutions
    c. Previous commercial collaborations
    d. Application of agile information dissemination and agile information discovery to the DDIL environment.

2. Benefits (i.e. what will the stakeholders get from this?)
    a. Novel application of developing technologies for Defence
    b. Access to industrial Defence sector expertise
    c. Development of new capabilities
    d. Closer Defence-sector / commercial collaboration.

3. Exploitation (what are the artefacts that Dstl will get that can be more widely exploited)
    a. MOD FLCs for example
    b. Know-how in the Defence Industrial base (papers, reports, presentations)
    c. Know-how in the Academic supply base
    d. Potential new recruits into the Defence supply chain if UK resources used
    e. Testing of proposed architectures through the ISS Design Pillar.

4. Plan (what's the plan for exploitation)
    a. Input into the wider WP2 ACS initiative
    b. Potential for accelerating know-how (facilities, hardware, configuration) through Industrial exploitation
    c. Briefings to MOD Stakeholders.

The task should also seek for coherence with the data architecture work under the Machine-Speed C2 and other work within the ARA projects.

Across this work the desire for an adaptable, open and modular architecture should be a key consideration.

**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** [REDACTED] | **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.<br>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 ☐ * | 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).*<br><br>*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**

Detailed deliverables will be determined during the course of the task, but the intent is that architectures, interfaces, APIs will be DEFCON 703, with any implementation being DEFCON 705. We are open to suggestions coming from the suppliers if any alternative arrangements may be preferable, as well as any specific IP conditions that may apply.

| Ref | Title | Due by | Format | TRL | Expected classification (subject to change) | Information required in deliverable | IPR DEFCON |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *D-1* | *Quarterly Progress and Technical Review (QPTR 1)* | *T0+3 Months* | *Presentation (.pptx)* | | *[REDACTED]* | *Presentation pack to include but not limited to:*<br>*• Update on technical progress*<br>*• Progress report against project schedule.*<br>*• Review of risk management plan.*<br>*• Commercial aspects.*<br>*• Review of deliverables.*<br>*• Risks/issues.*<br>*• GFA and supplier performance* | *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)*

| Unique Identifier/ Serial No | Description | Classification | Type | Available Date | Issued by | Return or Disposal Date | Any restrictions? |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**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 |
|---|---|

**Proposal Reference** _____

**Delivery of the requirement:**

**Provide continuity of work on an Ascertained Cost basis for a period of 3 months (nom. Apr'22 – Jun'22) pending Dstl review of current task deliverables and further definition of future tasks. Proposed activities are listed below.**

The summary of activities detailed in the attached proposal are shown in table below:
Notes:

- this is not an exhaustive list of tasks, other tasks may be undertaken by mutual agreement.
- not all tasks will be able to be undertaken within this period &/or within this ascertained cost provision.
- Specific tasks, deliverables/outputs and levels of effort will be discussed and agreed by the QinetiQ PM, QinetiQ Task Lead, Dstl PM and Dstl Technical Partner/Associate Technical Partner at or before the start of the activity. Agreements will be recorded in the PORT Report. Progress will be monitored & reported via PORT on monthly basis.

| ID | Activity Title | Activity description and scope | Outputs/Deliverables |
|---|---|---|---|
| 1 | Set-up Agile research framework | - Establish the research backlog<br>- Establish Sprint calendar | Backlog<br><br>Diary of events |
| 2 | Establish dev environment | Within the cloud-based environment already set up, for each research item when selected create a dev environment for that research | Dev environment per selected research item |
| 3 | Establish research item method | Depending on the focus of the research item, establish how it will be researched and what experiments could be done and what data is required to perform each experiment | Experiment design<br><br>Data set definition |
| 4 | Establish data to drive experiment | Obtain and/or generate test data for the experiment | Test Data |
| 5 | Run Experiment | Run experiment and collect results | Experiment results |
| 6 | Analyse Results | Collate results and assess what message the results portray. Is the SBB a good idea, does it meet the goals? | Analysis results |
| 7 | Present results | Following an experiment, present the method and results to the sprint team at the sprint review | Presentation |

| | | | |
|---|---|---|---|
| 8 | Archive SBB, experiment and results | Ensure the experiment and its results and code is stored for future use | Updated research results archive |

All outputs are expected to be DEFCON 705 but will be agreed

**COMMERCIAL**

Liabilities: As per the Serapis Limitation of Liability Discussion Paper Agreement, this task falls under the band of a £1 Million cap for FY22 and FY23.

Price: The prices in this Contract Amendment are based on currently agreed Serapis rates which are valid until 10th July 2022 only. Any work beyond this date by QinetiQ and its sub-contractors will be amended to reflect the agreed rates uplift as set out under Clause 8 (Variation in Price) in the Serapis Framework Agreement LOT 4 DSTL/AGR/SERAPIS/AII/01.

Suppliers: This contract amendment is to be undertaken using the same resources as the original contracted work. In the event that we consider involving any additional subcontractors &/or research workers this will be done following prior consultation with / approval of Dstl.

**PRICE BREAKDOWN**

*An Ascertained Cost Quotation of* ***£209,497.65*** *(two hundred and nine thousand and four hundred and ninety seven pounds sixty five pence) (ex VAT) is submitted for the Task AII121 and broken down as shown in the tables below. Note this breakdown is indicative only and may changes according to the tasks undertaken.*

It should be noted that the following effort associated with this task will be charged against AII102 DCEAT/ARA Management and Enablers:

Associate Technical Partner support.

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

| | | | |
|---|---|---|---|
| **Total Proposal Price in £** | **£209,497.65** | | (ex VAT) |
| **Start Date:** | 06/05/22 | **End Date:** | 30/06/22 |

| | | |
|---|---|---|
| **Lot Leads Representative** | Name | [REDACTED] |
| | Tel | [REDACTED] |
| | Email | [REDACTED] |
| | Date | 28/04/22 |
| **Position in Company** | Assistant Commercial Manager | |
| **Signature** | pp. [REDACTED] | |

## Core Work – Breakdown

## [REDACTED]

**[REDACTED]**

**[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.*

## [REDACTED]

### Options – Summary

**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.***

| Ref No. | Description | TMS cost (£) | Self-Delivery cost (£) | Sub-contractor cost (£) | T&S, Material & Equip Cost (£) | Pricing | Start date | End date |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | Choose an item. | | |
| 2 | | | | | | Choose an item. | | |
| 3 | | | | | | Choose an item. | | |
| 4 | | | | | | Choose an item. | | |
| 5 | | | | | | Choose an item. | | |

*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 | 17/05/2022 |
| **Requisition Number** | | RQ0000007691 |
| **Contractor's Proposal Number** | | QINETIQ/EMEA/CIT/PRO2200953 |
| **Purchase Order Number** | | DSTL0000003708 |
| **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.* | | |