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 1 2022-07-1

REQUIREMENT

Proposal Required by:	19th September 2022	**Task ID Number:**	AII137
The Authority Project Manager:	[REDACTED]	**The Authority Technical Point of Contact:**	[REDACTED]
Task Title:	Adaptive Applications, and Improved Communications Situational Awareness – Phase 2		
Required Start Date:	26th September 2022	**Required End Date:**	31st March 2023
Requisition No:	[REDACTED]	**Budget Range**	400K in Year 1 FY22-23 400K in Year 2 (based on a decision point after Year 1) FY23-24

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

Statement of Requirements (SOR) Overview

This SOR is structured as follows:

- Section 1 introduces the Autonomous Resilient Architectures (ARA) Project and the Adaptable Communication Services Work Package (i.e. Dstl WP 2) providing the context for the two research activities described within this SOR.
- Section 2 describes the Adaptive Applications task (i.e. Dstl WP 2.3) Phase 2 FY22–23 – Covering research requirements R1-R5 and deliverables D1-D5.

- Section 3 describes the Improved Communications Situational Awareness task (i.e. Dstl WP 2.4) Phase 2 FY22-23 – Covering requirements R6-R11 and deliverables D6-D10.
- Section 4 Outlines the Decision Point/ contractual option to invoke a Phase 3 in FY23-24 for both tasks.
- Section 5 provides the Innovation Benefits and Exploitation Plan (IBEP).
- Section 6 provides some background to the research and discusses the potential wider economic and societal benefits of the work.

This task will follow the supplier led approach.

1. Autonomous Resilient Architectures (ARA) Project

The ARA project aims to exploit advances in Science and Technology (S&T) to enable improved Command and Control (C2) in Denied, Degraded and Intermittent Low bandwidth (DDIL) environments. It seeks to develop self-discovering, self-connecting and self-coordinating architectures across multi-domain, multi-classification, multi-national enterprises. To achieve this, S&T research activities are being conducted into networks, and data and information handling to accelerate and integrate a variety of existing and emerging concepts and technologies. The aim is to show how they can be combined to deliver transformational architectural agility & flexibility.

WP 2 of ARA is concerned with demonstrating the autonomous reconfiguration of deployed Communications and Information Systems (CIS) infrastructure to meet the needs of Command and Control (C2) practitioners across a set of military HQs and command structure. It is made up of four research activities (Dstl WP's 2.1, 2.2, 2.3 & 2.4):

- **WP 2.1 Policy Generation and Verification Support Tools.** A Natural Language Processing (NLP) tool is being developed that can take a take a set of high-level statements on C2 support requirements from command staff and generate / convert them into a machine-readable policy for implementing infrastructure configurations.
- **WP 2.2 Self-Coordinating CIS Postures.** Identification, assessment and implementation of technologies that will ingest machine-readable policy and re-configure CIS accordingly.
- **WP 2.3 Adaptive Applications.** This SOR addresses the research to be conducted under this WP. The intent is to enable network and system aware applications that will adapt to the prevailing conditions, especially when operating in a DDIL environment.
- **WP 2.4 Improved Communications Situational Awareness.** This SOR also addresses the research to be conducted under this WP. The intent is to explore the use of network and systems monitoring techniques to help systems managers develop and maintain a dynamic understanding of the evolving CIS infrastructure.

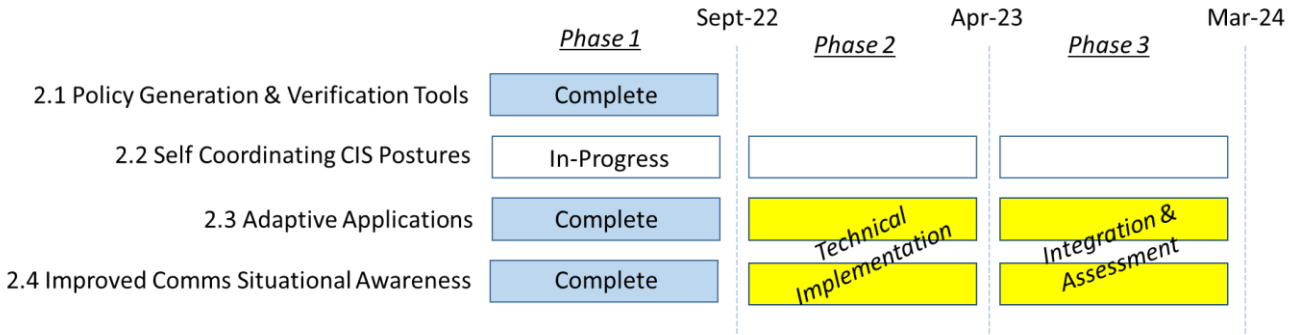

Figure 1. ARA WP 2 Schedule. The research tasks concerning this SOR are highlighted in yellow – i.e. WP 2.3 & 2.4, in phases 2 & 3.

Figure 1. Illustrates the ARA WP 2 Schedule over 3 phases:

- **Phase 1**. The focus of Phase 1 was to establish the available technologies to achieve the aim. All Phase 1 activity will have completed and delivered its outputs by Sept 22.
- **Phase 2**. Phase 2 will be complete by Mar 23 and focuses on implementing the individual self-contained capability demonstrators.
- **Phase 3.** Phase 3 will start in Apr 23 and will focus on the integration of capabilities developed by the individual WPs to build and demonstrate a complete instantiation of an Adaptable Communications Service process i.e. spanning Policy Generation, CIS Reconfiguration, Application Adaptation, and Network Situational Awareness. Phase 3 will also include experimentation and quantitative assessment.

2. Adaptive Applications Work Package (WP2.3) Phase 2 FY22-23

WP 2.3 explores approaches to Adaptive Applications within CIS Architectures to enable improved C2, including in DDIL environments. It seeks to develop and demonstrate self-discovering, self-connecting and self-coordinating architectures across multi-domain, multi-classification and multi-national enterprises.

Applications operating in different domains and at different command and management levels in the enterprise vary significantly in their expectations of communications networks, availability of information, and the ability for those applications to provide their critical business functions at times of stress. The chances are that applications will have been developed against a standard set of interfaces where information or services are expected to be available. They could be using protocols, which whilst potentially adapted to their environment, may be inflexible. It may also be the case that applications and services will have been designed to function in pre-determined operational environment, and against specific mission goals and communications infrastructure. Therefore, once these applications have become established it may be difficult to change these original design parameters. In contrast to the potentially fixed designs, command organisation information needs are extremely varied and dynamic. They will change up until the point of departure of a deployed force, and will likely change again during the conduct of an operation.

While the commercial world does not face this level of challenge, it has developed a wide range of sophisticated approaches to deliver information to where it is needed, using adaptive protocols that are able to work within fixed infrastructure as well as mobile devices and dynamically changing infrastructure. Despite the availability of these flexible capabilities, MOD has tended to define policies, standards and requirements for interoperability that result in infrastructure designs with fixed rather than variable parameters i.e. MOD has tended to define things in a manner that encourages fixed rather than adaptive infrastructure designs.

Aim & Research Requirements

The overall aim of WP2.3 is to implement and demonstrate how applications can be made more adaptive, in the context of a more agile and dynamic infrastructure. This broad aim will be furnished by the following discrete research requirements:

- **(R1) Select Adaptation Technologies and Approaches.** Consider and select technology options that are available (today) to construct a demonstration of application adaptation; within the context of the ARA Work package scenario vignettes. The phase 1 literature review [QINETIQ/22/01266] explored approaches to adaptive applications within defence and commercial CIS architectures and highlighted the application of adaptive technologies that are intended to address common communication issues related to encoding and metrics, network management and routing and resource management. This document will be supplied as GFX. The supplier is encouraged to offer viable approaches that were not previously considered, especially, looking to exploit mature adaptive service designs that reside in the commercial sector.
- **(R2) Select Application Adaptations.** Within the context of the wider ARA scenario vignettes, select application adaptions that are feasible, impactful and relevant. A taxonomy of Trigger

Events and Adaptions [QINETIQ/22/01468] was produced under phase 1 and it will be supplied as GFX. Trigger events are those that may cause or be generated due to an adaption. This covers aspects such as physical environment, network changes as well as threats such as cyber or physical. Adaptions are changes that an application can generate on detection of a trigger. Adaptations can include Behaviour Adaptions and User Interface Adaptions, noting the significant difference between adapting the User Interface due to context or the internal aspects of application behaviour.

- **(R3) Mature and Implement API.** An API will be required across any system to provide a point of interaction to consume and publish trigger events along with allowing the software and services to interact providing the adaptions required. The adaptions are very application specific and therefore will require a flexible interface that can accommodate various methods of communication. An initial API specification [QINETIQ/22/01469] was drafted in Phase 1. This will need to be matured and implemented.
- **(R4) Application Adaptation Demonstration.** To demonstrate the application adaption the technologies selected under R1 will need to be built, integrated and configured. A prototype/ test-harness will need to be developed to demonstrate the usage of the API (R3), and adaptation responses (R2) e.g. switching networks to improve user experience or reducing video resolution to improve streaming performance.
- **(R5) Support to WP 2.2 Integration Activities.** WP 2.2 is tasked with integrating the outputs of WP 2.1, 2.3 and 2.4 (summarised above) into a policy driven, adaptable system. While the timeframes and dependencies between the WP activities limit the scope of what may be achieved during Phase 2, WP 2.3 (Adaptive Applications – this SOR) should set aside some time to support WP 2.2 (Self-Coordinating CIS Postures) in developing a shared understanding of the integration needs, dependencies and interfaces for incorporating an adaptive application into an ACS.

Please refer to the Deliverables Table for associated deliverables.

3. Improved Communications Situational Awareness Work Package (WP2.4) Phase 2 FY22-23

WP 2.4 Phase 1 recommended a modern, data-centric approach to a future NMS architecture which suits the aims of ARA WP 2 for creating self-discovering, self-configuring, adaptable and reconfigurable systems. This architecture is shown in Figure 2. It is a radical overhaul of the recognised existing NMS architecture, aiming to make network and other non-network systems configuration and monitoring data available to applications, middleware and infrastructure for the purposes of self-adaptation.

[REDACTED]

Figure 2. ARA WP 2.4 Phase 1: Recommended Data Centric Architecture. The Yellow Numbered Circles Represent Specific Areas for Research Focus to be made Available as GFX.

This new architecture should continue to provide traditional NMS services to the network management community but it should also favour automated configuration, developer driven extensions and custom data views over traditional network engineering paradigms.

The new architecture will need to fit within the policy driven framework for adaptation being developed under WP 2.2. This means making network monitoring and configuration and other non-network system data available to a policy engine, in order for it to make informed decisions.

Aims & Research Requirements

The fundamental aim of WP2.4 is to implement and demonstrate a limited functionality, data centric approach to network and system management by integrating off-the-shelf packages and configuring them appropriately, with limited software development (i.e. limited to scripting and glue-ware). This will demonstrate the feasibility, or otherwise, of the approach. This broad aim will be achieved by addressing the following discrete research requirements:

- **(R6) Validation of the approach and prioritisation of research areas.** The supplier should undertake a short study to confirm their understanding of the Phase 1 data centric NMS architecture, provide an initial view of its feasibility and ensure that the overall aims can be achieved. In the event of a negative outcome, a more conservative approach may be taken – such as the network centric alternative also defined under Phase 1. In addition, Phase 1 identified 14 research areas to explore and de-risk the nuances of a data-centric approach. The supplier should undertake a prioritisation activity with the Technical Partner to identify those research areas which offer a mix of value and challenge for immediate investigation.
- **(R7) Solution Design and Implementation.** Based on the chosen NMS architecture, the supplier should produce a High Level Design (HLD) for a data centric management system identifying primary components, interfaces and data exchanges. Integration with other systems (such as below) will be a key consideration and therefore the design must show how the following could be achieved:
    - Integration with Network Elements (NEs), applications, middleware and other infrastructure (e.g. databases).
    - Integration with the policy driven framework being generated under Dstl WP 2.2.

  Next, the supplier should work from the design and gradually create an instance of the proposed data centric approach. This may mean working on a number of individual system fragments that are to be assembled and integrated later. The following features are currently perceived to be of high implementation value and thus the supplier is encouraged to use these to help explore the prioritised research areas (mentioned in R7). For each of the features in the list below, examples of potential implementation technologies are provided to aid understanding.

- A simple network device monitoring and configuration capability, e.g. via ELK Observability and Ansible with NETCONF.
- A flexible and extensible data storage architecture, e.g. via ELK Store.
- An extensible data visualisation system (initially for NMS operators) provided through modern methods, e.g. via ELK Observability, ELK Security and Kibana;
- Uniform data access across a message bus platform, e.g. through Kafka streams and event bus, RabbitMQ etc.;
- An open, extensible and consistent API to the message bus that is available to external systems such as applications, middleware and infrastructure services, as well as the NMS itself, e.g. defined using Mulesoft, Apigee or Apache Camel. Potential military standards to consider for the interface definition include those being investigated for the NATO Network Management & Cyber Defense (NMCD) entity;

- **(R8) Qualitative Assessment.** The supplier should undertake a qualitative assessment of the data centric management system that has been developed. This could include; identifying the value of new views developed compared to traditional NMS, the ease of developing new views, the ease of making configuration and monitoring data available to external systems compared to traditional NMS etc.
- **(R9) Support to WP 2.2 Integration Activities.** WP 2.2 is tasked with integrating the outputs of WP 2.1, 2.3 and 2.4 into a policy driven, adaptable system. While the timeframes and dependencies limit the scope of what may be achieved during Phase 2, WP 2.4 should set aside some time to support WP 2.2 in developing a shared understanding of the integration needs, dependencies and interfaces for incorporating a data centric management system into an ACS.

Please refer to the Deliverables Table for associated deliverables.

4. WP2.3 & 2.4 Phase 3 – Decision Point

The following options may be enabled by contract amendment after a decision point review has been conducted by Dstl. The intention is that the decision point review will be informed by the recommendations of the work and conducted in the latter stages of Phase 2, to ensure that the option work flows seamlessly on from the core activities:

- **Option 1: Integration and Demonstration [ROM £150K].** Within WP 2, there is a planned WP 2 wide integration activity. Due to a number of dependencies, the scope of this integration is not certain. This option will ensure that the planned WP 2 integration activity will be completed and result in an end-to-end demonstration of capability. In addition, this activity will also incorporate cross ARA integration effort, e.g. with WP 3 (Resilient Information Services) dependent on their progress, to support an ARA-wide integration and demonstration activity. It is expected that new policy implementation work will be required to meet these enhanced aims, which could cover both new policies and new software feature implementation on the NLP tool delivered under WP 2.1. Finally, a technical investigation to enable integration with DCEAT activities will be conducted to inform a cross-project integration activity. It is expected that some scenario adaptation will be required to fit these cross-WP and cross-project integration activities to a suitable flow of events and therefore the scenario work should be revisited to make these alterations.
- **Option 2: Maturation [ROM £100K].** The software prototype developed under this activity is intended for demonstration and initial integration activity. In order to rapidly advance these aims, some of the performance and stability aspects of the software may need to be revisited to provide a stable platform for experimentation. Furthermore, as the CIS use cases are developed and shared across other tasks, additional functionality may need to be added to the software to

showcase features requested by stakeholders and extend the implementation and use of the APIs developed under the activity.

- **Option 3: Experimentation and Assessment [ROM £150K].** This option will take the software developed under this task and conduct a regime of experiments and assessments to determine and quantify the benefits of the functionality that has been implemented. One key aspect of this activity will be a comparison to the current baseline (which may involve a manual process, or have no analogue and therefore need to clearly outline the benefits). The CIS use cases developed under WP 2 will be used to frame the assessments.

5. Develop and Maintain an Innovation Benefits and Exploitation Plan (IBEP)

This will include a description of innovation (such as what is being built on, areas of uncertainty being explored), benefits (such as what will the contracted organisation(s) get from this), exploitation (such as artefacts that Dstl or industry will get that can be more widely exploited) and the plan to make this exploitation a reality.

By conducting the work, the following outcomes are anticipated:

1. Innovation – (i.e. what are we building on?)
    - CIS know-how in a military/civil domain;
    - Architectures for system of systems solutions;
    - Current military/civil CIS technologies;
    - Potential application of AI and novel configuration management to the DDIL environment.
2. Benefits (i.e. what will the contracted stakeholders get from this?):
    - Novel application of developing technologies for Defence;
    - Access to industrial Defence sector expertise;
    - Development of new capabilities;
    - Closer Defence-sector / commercial collaboration.
3. Exploitation (i.e. what are the artefacts that Dstl will get that can be more widely exploited):
    - Know-how in the Defence Industrial base (papers, reports, presentations);
    - Know-how in the Academic supply base;
    - Potential new recruits into the Defence supply chain if UK resources used.
4. Plan (i.e. what's the plan for exploitation):
    - Input into the wider WP2 ACS initiative;
    - Potential for accelerating know-how (facilities, hardware, configuration) through Industrial exploitation;
    - Briefings to MOD Stakeholders.

6. Background and Wider Economic and Societal Benefits of the Work

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:

1. "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;

2. Shaping the open international order of the future: we will use our convening power and work with partners to reinvigorate the international system;
3. Strengthening security and defence at home and overseas;
4. 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) – 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.

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.

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 ☐ *	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: Note these are not fixed and the selected supplier(s) will be able to negotiate an alternative schedule as part of proposal submission.

Ref	Title	Due by	Format	TRL	Expected classification (subject to change)	Information required in deliverable	IPR DEFCON
Suggested Deliverables for Adaptive Applications							
D1	Presentation to Dstl stakeholders on Selected Technologies, Approach, and Adaptations	T0+1 Months	Oral Presentation + Electronic Slide deck	N/A	[REDACTED]	Having considered the Phase 1 report, and any further considerations to report on: To identify the options and to recommend (and justify) an adaption that can be used for further evaluation. Ideally, the justification will have assessment evidence.	705
D2	Final Technical Report	End of contract	Electronic Document	3	[REDACTED]	Final Technical Report. Should include chapters on: Technologies, Approach, API, and Qualitative Evaluation	703
D3	API Definition	End of contract	Electronic File	5	[REDACTED]	Matured API Definition – captured and delivered as a self-hosted Wiki viewable in a web browser.	703
D4	Demonstration Prototype + API	End of contract	Electronic Archive of: Source Code, Compiled Binaries, Build Scripts & Documents	3	[REDACTED]	API + Demonstrator libraries + Test Harness source code + build scripts. Build Instructions and usage commands documented and delivered as a self-hosted Wiki viewable in a web browser.	705
Suggested Deliverables for Improved Communications Situational Awareness							
D5	Presentation on validation of approach, research	T0+2 months	Oral Presentation & Slide deck	N/A	[REDACTED]	Assessment of data centric NMS approach satisfying R6 with a go/no-go recommendation. A	703

	prioritisation and next steps					prioritisation of research areas with a rationale and recommended areas to explore first.	
D6	Final Technical Report	End of contract	Document	N/A	[REDACTED]	Including: A High Level Design of the software addressing R7. Qualitative assessment of the software addressing R8. WP 2 integration implications, addressing R9. The overall outcomes and next steps for the work.	703
D7	Research grade software implementation	End of contract	Electronic archive	3	[REDACTED]	The commented software source code delivered as a beta version to address R7. Any called functions, libraries and dependencies. Build Instructions and usage commands.	705
D8	Demonstrations	Monthly from T0+4	Visual demonstration of functionality by VTC. However, the final demonstration will be a physical meeting supported by a Slide deck	N/A	[REDACTED]	Rolling demonstrations of functionality – these could be presented in routine progress meetings. Final demonstration to showcase functionality and limitations.	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:-

To be agreed on a per-deliverable basis.

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?
QINETIQ/ 22/01266	AII87 Adaptive Applications Literature Review Report	[REDACTED]	Report	On contract award	Dstl	On project closure	© Frazer-Nash Consultancy, 2iC, Airbus 2022. Permission for use or dissemination is to be made to the Serapis Programme Manager at [REDACTED]
QINETIQ/ 22/01468	AII87 Adaptive Applications Taxonomy Report	[REDACTED]	Report	On contract award	Dstl	On project closure	© Xi Systems, Frazer-Nash Consultancy, 2iC, Airbus 2022 Permission for use or dissemination is to be made to the Serapis Programme Manager at [REDACTED]
QINETIQ/ 22/01469	AII87 Adaptive Applications Application Programming Interface Report	[REDACTED]	Report	On contract award	Dstl	On project closure	© Crown Copyright 2022 Permission for use or dissemination is to be made to the Serapis Programme Manager at [REDACTED]
QINETIQ/ 22/01639	Serapis Lot 4 Task AII71 WP2.4: Improved Communications Situational Awareness Final Report	[REDACTED]	Report	On contract award	Dstl	On project closure	© Crown Copyright 2022 Permission for use or dissemination is to be made to the Serapis Programme Manager at

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

Please ensure all completed forms are copied to [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

Delivery of the requirement:

QinetiQ's response to the above requirements is detailed in AII137 Adaptive Applications - Technical proposal v1.0 "

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. If any of the Options are taken up this figure will increase in line with the bands within the agreement.

We have included a Limit of Liability for FY23/24. This will need to be Firm Priced via a mutually agreed Contract Amendment Form. Whilst individual Contract Amendment Forms detail a separate package of work, it is linked to (and shall reference) this Tasking Form. It is understood that the scope of the work being undertaken using the LOL is not yet defined, and will be done so at the time of each Contract Amendment Form.

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

Total Proposal Price in £	£452,674.61 for the core work. LoL for FY23/24 £347,352.39		(ex VAT)
Start Date:	December 2022	**End Date:**	T0+16 weeks
Lot Leads Representative	Name	[REDACTED]	
	Tel	[REDACTED]	
	Email	[REDACTED]	
	Date	12th December 2022	
Position in Company	[REDACTED]		
Signature	[REDACTED]		

Core Work – Breakdown

11							
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]							
			[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 (£)
[REDACTED]					

Travel, Subsistence, Materials & Equipment *Please insert/delete rows as necessary*					
Supplier Name	**Spend Type**	**Description / Rationale**	**Unit Cost (£)**	**Qty**	**Total Cost (£)**
[REDACTED]					

Core Work – Milestone breakdown costs

Proposed Milestones Payments

Milestone 01

[REDACTED]

[REDACTED]

[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	09/01/2023
Requisition Number		[REDACTED]
Contractor's Proposal Number		[REDACTED]
Purchase Order Number		[REDACTED]
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.		