

RFP-ACT-SACT-22-137



NORTH ATLANTIC TREATY ORGANISATION

HEADQUARTERS SUPREME ALLIED COMMANDER
TRANSFORMATION 7857 BLANDY ROAD, SUITE 100
NORFOLK, VIRGINIA, 23551-2490

Request for Proposal

RFP-ACT-SACT-22-137

**Deliverables in Support of Analysis of Alternatives (AoA)
for NATO Cyber Situational Awareness (CySA) Capability
and NATO Classified Cyber Range (NCCR)**

Bidding Instructions

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This Enclosure is designed to assist the respective company provide HQ SACT with all necessary documents/information required. For clarification, please refer to Bidding instructions.

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This Enclosure is designed to assist the respective company provide HQ SACT with all necessary documents/information required. For clarification, please refer to Bidding instructions.

BIDDING INSTRUCTIONS

1. General

This is a Firm Fixed Price deliverables contract in accordance with the HQ SACT General Terms and Conditions; **Contract Award is contingent upon funding availability; Partial bidding is not allowed.**

2. Classification

This Request for Proposal (RFP) is a NATO UNCLASSIFIED document.

3. Definitions

- (a) The “Prospective Bidder” shall refer to the entity that has indicated thereon its intention without commitment, to participate in this RFP.
- (b) The term “Bidder” shall refer to the bidding entity that has completed a bid in response to this RFP.
- (c) The term “Contractor” shall refer to the bidding entity to whom the contract is awarded.
- (d) The term “Contracting Officer” designates the official who executes this RFP on behalf of HQ SACT.
- (e) “Contracting Officer’s Technical Representative” or “COTR” is the official who is appointed for the purpose of determining compliance of the successful bid, per the technical specifications.
- (f) The term “HQ SACT” shall refer to Headquarters Supreme Allied Commander Transformation.
- (g) The term “ACT” shall refer to Allied Command Transformation.
- (h) The term “NATO” shall refer to the North Atlantic Treaty Organisation.
- (i) The term “days” as used in this RFP shall, unless otherwise stated, be interpreted as meaning calendar days.

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4. Eligibility

This RFP is open to governmental or commercial entities:

- (a) Established in a North Atlantic Treaty Organisation Alliance member nation.
- (b) Working in the required field of study and legally authorised to operate in the United States of America, at the time of bidding.
- (c) Has performed the desired past performance including size, cost and scope, as described in this RFP.
- (d) **All proposed key personnel on this requirement must be citizens of a NATO member nation.**

5. Duration of Contract

- (a) The contract awarded shall be effective upon date of award.
- (b) Period of Performance: Base Period is 01 November 2022 - 31 December 2022 with one (1) possible four (4) month option period from 01 January 2023 - 30 April 2023.

6. Exemption of Taxes

- (a) In accordance with the agreements (Article VIII of the Paris Protocol dated, 28 August 1952) goods and services under this contract are exempt from taxes, duties and similar charges.

7. Amendment or Cancellation

- (a) HQ SACT reserves the right to amend or delete any one or more of the terms, conditions or provisions of the RFP prior to the date set for bid closing. A solicitation amendment or amendments shall announce such action.
- (b) HQ SACT reserves the right to cancel, at any time, this RFP either partially or in its entirety. No legal liability on the part of HQ SACT shall be considered for recovery of costs in connection to bid preparation. All efforts undertaken by any bidder shall be done considering and accepting, that no costs shall be recovered from HQ SACT. If this RFP is cancelled any/all received bids shall be returned unopened, per the bidder's request.

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8. Bidder Clarifications

- (a) Prospective Bidders should seek clarification at their earliest convenience. Any explanation regarding the meaning or interpretation of this RFP, terms, clause, provision or specifications, shall be requested in writing, from the Contracting Officer. The Contracting Officer must receive such requests for clarification no later than 3 (three) calendar days prior to the bid closing date.
- (b) In lieu of a bidder's conference, HQ SACT invites bidders to submit initial technical and contractual questions not later than **14 October 2022**.
- (c) Information in response to all inquiries/requests for clarification to a prospective bidder shall be furnished to all prospective bidders at the following link: <http://www.act.nato.int/contracting> as a Question and Answer addendum. All such addendums and any necessary solicitation amendments shall be incorporated into this RFP. Oral Interpretations shall not be binding.

9. Bid closing date

Bids shall be received at HQ SACT, Purchasing and Contracting Office, no later than **24 October 2022, 0900 hours, Eastern Daylight Time, Norfolk, Virginia, USA**. No bids shall be accepted after this time and date. No hard copy proposals will be accepted.

10. Bid Validity

Bids shall remain valid for a period of one hundred and twenty days (120) from the applicable closing date set forth within this RFP. HQ SACT reserves the right to request an extension of validity. Bidder shall be entitled to either grant or deny this extension of validity. HQ SACT shall automatically consider a denial to extend the validity as a withdrawal of the bid.

11. Content of Proposal

A table of contents for the entire proposal

- (a) The bidder's full name, address, Point of Contacts, Telephone, Fax number; Internet site;
- (b) Compliance statement (See Enclosure#1);

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- (c) Past performance (See Enclosure #2);
- (d) Provision of technical and price volumes;
- (e) Compliance matrix (See Annex A to Statement of Work).

12. Proposal Submission

- (a) Proposals shall be submitted electronically in a two separate PDF documents, one containing the **Technical Proposal** and one containing the **Price Proposal**, each e-mailed separately to:

- Technical proposal: techproposal@act.nato.int
- Price proposal: priceproposal@act.nato.int

E-mail subjects shall include the solicitation information along with company name (for example: RFP-ACT-SACT-22-XX_Tech_ABC Inc. / RFP-ACT-SACT-22-XX_Price_ABC Inc.). **Allow sufficient time in your submission should you encounter e-mail size challenges.** Price_ABC Inc

- (b) **Price proposals shall be in U.S. Dollar currency.** Contractor may request payment post award in alternate currency based on agreed conversion rate.
- (c) Prices shall be on a **Firm Fixed Price Basis** and include any relevant discount schedule.
- (d) No oral bids or oral modifications or telephonic bids shall be considered.
- (e) It is the ultimate responsibility of a prospective bidder prior to submission that all proposal submissions are reviewed to ensure they meet the technical, contractual and administrative specifications and that offers meet the limitations and expressed conditions.

13. Late Proposals

- (a) It is solely the bidder's responsibility that every effort is made to ensure that the proposal reaches HQ SACT prior to the established closing date and time. All late bids shall be returned to the offering company unopened. Only if it can be unequivocally demonstrated that the late arrival of the bid package was the result of NATO staff negligence (mishandling) shall the bid be considered.
- (b) **A delay in an e-mail exchange due to server or size restrictions does not constitute a delay by NATO.**

14. Bid Withdrawal

A bidder may withdraw their bid up to the date and time specified for bid closing. Such a withdrawal must be completed in writing or facsimile, with attention to the HQ SACT Contracting Officer.

15. Bid Evaluation

- (a) The evaluation of bids and determination as to the responsiveness and technical adequacy or technical compliance, of the products or services requested, shall be the responsibility of HQ SACT. Such determinations shall be consistent with the evaluation criteria specified in the RFP. HQ SACT is not responsible for any content that is not clearly identified in any proposal package.
- (b) HQ SACT intends to award a firm-fixed price deliverables contract to the **lowest priced, technically compliant bid**. Technical clarification of essential competencies may be conducted.
- (c) Acceptance of HQ SACT General Terms and Conditions.

16. Proposal Clarifications

During the entire evaluation process HQ SACT reserves the right to discuss any bid with the order to clarify what is offered and interpretation of language within the bid, to resolve in potential areas of concern.

17. Award

HQ SACT intends to award a firm fixed price contract(s) to the Offeror(s) whose proposal(s) represents **lowest price, technically compliant** offer to NATO. Partial awards are not authorized.

HQ SACT will collect information from references provided by the Offeror in regard to its past performance. Contractors must provide authorization to contact references. HQ SACT reserves the right to negotiate minor deviations to the listed General Terms and Conditions to this RFP.

18. Communications

All communication related to this RFP, between a prospective bidder and HQ SACT shall only be through the nominated HQ SACT Contracting Officer. Designated contracting staff shall assist the HQ SACT Contracting Officer in the administrative process. There shall be no contact with other HQ SACT personnel in regards to this RFP. Such adherence shall ensure Fair and Open Competition with equal consideration and competitive footing leverage to all interested parties.

19. Points of Contact:

Magdalena Ornat, ACT Contracting Specialist,
757-747-3150, magdalena.ornat@act.nato.int

Tonya Bonilla, ACT Contracting Officer,
757-747-3575, tonya.bonilla@act.nato.int

Catherine Giglio, ACT Contracting Officer,
757-747-3856, Catherine.giglio@act.nato.int

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Enclosure 1

COMPLIANCE STATEMENT TO SEALED BID RFP-ACT-SACT-22-137

It is hereby stated that our company has read and understands all documentation issued as part of RFP-ACT-SACT-22-137. Our company proposal submitted in response to the referenced solicitation is fully compliant with the provisions of RFP-ACT-SACT-22-137 and the intended contract with the following exception(s); such exemptions are considered non substantial to the HQ SACT solicitation provisions issued.

<u>Clause</u>	<u>Description of Minor Deviation.</u>
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(If applicable, add another page)

Company: _____ Signature: _____

Name & Title: _____ Date: _____

Company Bid Reference: _____

Bidder's proposal must be based on full compliance with the terms, conditions and requirements of the RFP and all future clarifications and/or amendments. The bidder may offer variations in specific implementation and operational details provided that the functional and performance requirements are fully satisfied. In case of conflict between the compliance statement and the detailed evidence or explanation furnished, the detailed evidence/comments shall take precedence/priority for the actual determination of compliance. Minor or non-substantial deviations may be accepted. Substantial changes shall be considered non responsive.

Enclosure 2

PAST PERFORMANCE INFORMATION FORM

- (a) Contracting Entity:
- (b) Contract No:
- (c) Type of Contract (Firm Fixed Price, IDIQ, Requirements):
- (d) Title of Contract:
- (e) Description of Work Performance and Relevance to Current Acquisition (Type of facility, capacity, estimated patronage, summary of staff used):
- (f) Contract Dollar Amount:
- (g) Period of Performance:
- (h) Name, Address, Fax and Telephone No. of Reference:
- (i) Indicate Whether Reference Acted as Prime or Sub-contractor:
- (j) Comments regarding compliance with contract terms and conditions:
- (k) Complete Contact Information for client:
- (l) Permission to contact client for reference: Yes/ No

Name/Signature of Authorized Company Official

This Enclosure is designed to assist the respective company provide HQ SACT with all necessary documents/information required. For clarification, please refer to Bidding instructions in part 1 of subject solicitation.

Enclosure 3

SEALED BID PRICE PROPOSAL

SUBJECT: RFP-ACT-SACT-22- 137

Please provide HQ SACT with Total Cost/Firm Fixed Price for the scope of work outlined in the RFP ACT-SACT-22-137, subject to the provisions, terms and conditions stated in the RFP ACT-SACT-22-137.

To provide an indicative scale of work for the requested scope of work, Annex A of the SOW provides an example of a Cost Breakdown Structure (CBS) which could be applied to the described scope of work. Bidders can also develop a Milestone Payment Plan.

“Insert : **Company Name** Technical proposal”, submitted in accordance with solicitation provisions.

Scope of work outlined in this RFP	Total Cost Firm-Fixed Price (USD)
	\$

Please verify and acknowledge propriety of above, by duly completing signatures below.

Authorizing Company Official:

Printed _____ Name: _____

Position: _____

Title: _____

Authorizing Company (Signature): _____, Date: _____.

Company name Witness Official:

Printed _____ Name: _____

Position: _____

Title: _____

Witness Signature: _____, Date _____

Headquarters Supreme Allied Commander Transformation

**STATEMENT OF WORK
for Deliverables in Support of Analysis of Alternatives for
NATO Cyber Situational Awareness (CySA) Capability and NATO Classified Cyber Range (NCCR)**

26 September 2022

1. INTRODUCTION

- 1.1. The purpose of this Statement of Work (SoW) is to describe the scope of the contracted services required in support of North Atlantic Treaty Organization (NATO) Cyber Situational Awareness (CySA) Capability and Classified Cyber Range (NCCR) for the development of the Capability Programme Plan (CPP).
- 1.2. The NATO recently adopted a new Common Funded Capability Delivery (CFCD) model intended to enhance the speed of capability delivery for NATO's common funded capabilities. The model includes six stages focused on through lifecycle capability delivery and includes persistent collaboration between Allied Command Transformation (ACT) and Allied Command Operations (ACO), NATO's two strategic commands. The model is focused on satisfying operational requirements with capability solutions across the spectrum of Doctrine, Organisation, Training, Materiel, Leadership, Personnel, Facilities, and Interoperability (DOTMLPFI).
- 1.3. NATO ACT is currently developing a consolidated, comprehensive programme plan that will deliver a required capability to be detailed in the Capability Programme Plan (CPP). This plan will direct the necessary actions across the NATO-recognised lines of development including doctrine, organisation, training, materiel (including software), leadership, personnel, facilities and interoperability. The NATO CFCD Governance Model includes decision points on the:
 - 1.3.1. Requirement (via the Operational Requirements Statement) – the programme mandate;
 - 1.3.2. Viability of a capability-based programme to satisfy the requirement (via the Capability Requirements Brief) – the programme brief and vision; and

- 1.3.3. Establishment of a programme to deliver capabilities and to drive the transformational change (via the Capability Programme Plan) – the programme creation.
- 1.4. The CFCD model considers a range of potential courses of action to address a requirement, including the possibility of “Adopt”-ing a solution (from Nations), “Buy”-ing (acquiring a solution from Industry), or “Create”-ing (developing a solution bespoke to NATO). The varied options are analysed across DOTMLPFI lines of development. To support the CPP, Analysis of Alternatives (AoA) are conducted to provide a comparative analysis of the Operational Effectiveness, Rough Order of Magnitude (ROM) Life Cycle Costs (LCC), and Risk and Opportunities of identified alternatives (considering all DOTMLPFI aspects). The AoA in NATO’s Capability Delivery Lifecycle Standard Operating Procedure [Ref 11.1] provides guidance to conducting AoA in support of NATO CFCD programmes.

2. BACKGROUND

- 2.1. The Cyber Situational Awareness (CySA) Capability provides the Commander with all the information elements pertaining to cyberspace that are required to make informed decisions and conduct Operations and Missions in peacetime, crisis, and conflict. The information can also be shared with Allies and other NATO Entities. It is an open system, able to consume, produce, and exchange data with multiple entities/sources in order to guarantee an overall picture of network (Blue - NATO, Green – Allied Nations, White – Public Infrastructure, Yellow – Non trusted, Red – Adversary), mission and threat status.
- 2.2. It provides a set of functionalities for user management (authentication, role-based access control), logical and physical asset management (with the ability to assign criticality to each according to the mission/operation specifics) and its dependencies among them.
- 2.3. The capability fuses, correlate, and de-conflict data received from multiple sources to provide incident management and operational impact analysis, risk analysis based on threats and assessment on attacks.
- 2.4. The capability generates customizable dashboards and views (printable as reports) that can be tailored according to the user’s need.
- 2.5. The scope of the CySA Capability should meet the following minimum requirements. The list below is not all encompassing.

2.5.1. Main input the capability shall consume:

- Authoritative and consolidated data from multiple sources in order to get the whole assets inventory, dependencies and the status of the network and its components. Technical Information from the Internet Service Provider
- Technical Information National Computer Emergency Readiness Team's
- Information from National Cyberspace Operation Centre
- Information NATO Intelligence Functional Services
- Open Source Intelligence
- Inputs from NATO Cyber Operations Centre
- Inputs from NATO Cyber Security Centre
- Inputs from NATO Communications and Information Systems
- Configuration Management Data Base
- Land, Maritime and Air Commands
- Any other source able to provide information related to network, mission or threat

2.5.2 Main functionality of the capability:

- Data Correlation on order to provide views of assets aggregated by geographical site and organizational unit
- View of authorized/not authorized software
- View the results of vulnerability assessments
- Observe remediation to vulnerabilities
- User accounts management (authorized/not authorized)
- Auditing the administrative privileges
- Role-based access control
- View network diagrams with the possibility to split the network into subnets or zones
- View physical and logical connections among the services in place
- View the status of the network services
- View the number and status of deployed cyber security controls to clients

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- Monitor specific threats activities providing number of incidents, compromises, trends, indicators and warnings
- Generate and view the mission impact analysis in real operations/simulation activities
- Create and manage customizable user's dashboard
- Import/export scenarios
- Save the current scenario
- Collect and manage asset priorities (representing potential impact mission/operation), based on input from users or automated data sources
- Organize and display assets within an operational-impact hierarchy (e.g. a hierarchy in which missions depend on services, services depend on hosts, etc.)
- View an aggregated view of the current risks of a network, arranged by geographic location/organizational unit
- View risk levels per organizational unit/each network, as well as aggregated across one or more networks
- Fuse and correlate data from multiple sources when needed
- Generate risk map analysis
- Generate risk trend analysis
- Simulation of incidents for training purposes

2.5.3 Main output of the capability:

- Current Network Status
- Current Mission Status
- Current Threat Status
- All the generated views may be printable as reports
- All the generated views may be customizable by a combination of multiple aspects (e.g. by network, by mission, by threat, by vulnerability, by service, etc.)
- Scenarios
- Emails
- Data export for other tools
- Report on all activity in Cyberspace for a specific actor (Blue, Green, Yellow, Red).

2.6. The NCCR shall provide a secure classified training environment able to support live exercises, the development and testing of classified Tactic, Threat and Procedures (TTP), and Mission rehearsal by using real data and classified tools without corrupting the operational classified network.

2.7. The scope of the NCCR shall be able to provide the following.

2.7.1. Physical Architecture:

- Operate within physical and virtual environments
- Provide remote access in classified networks
- Capability to be used in classrooms with physical security in place according to the foreseen security level
- Isolated to NATO classified network with only inbound data flow allowed

2.7.2. Non-Functional Requirements:

- Have quality features with regard to scalability, capacity, availability and security
- Be able to change its configuration according to the training needs
- Be a scalable system in order to get connected to other (national CCR) to host more user and to provide more functionalities
- Be able to train at least 25 people simultaneously and be scalable to support a larger number of users
- Be available at all times/on demand
- Meet the requirements for the accreditation on a NATO classified network
- Operate with respect to confidentiality and integrity of data (authorized / not authorized)

2.7.3. User Management & Authentication:

- Management of internal/external users
- Provide an authentication mechanism to log in
- Ensure Role-Based Access Control (RBAC)
- Import a list of users
- Access directory information services through Lightweight Directory Access Protocol (LDAP)

2.7.4. Internal & External Entities:

- Connect to internal and external providers
- Interface Cyber Situational Awareness capability
- Connect secure to other NATO entities, e.g. Cyberspace Security Center and Cyber Operations Center
- Import/ Exchange data with different sources, e.g. Intelligence sources
- Allow access remotely to Nations through a complete trusted isolated virtual environment
- Import real operational data from NATO classified networks

2.7.5. Input Sources:

- Import data from several trusted sources
- Accept pre-defined scenario's as a framework
- Use data from the current exercise
- Run user-injected events
- Import configuration settings

2.7.6. Functions:

- Provide a set of functionalities able to provide collective training and exercises in a classified accredited network using real data and tools up to NATO SECRET
- Allow the creation of scenarios based on realistic situations
- Allow TTPs development, execution and outcome analysis
- Provide data for further deeper analysis
- Allow the execution of scenario-driven exercises
- Allow the testing of tools in an operational-like environment
- Allow the modelling of the current scenario according to the needs of the Training Audience
- Collect data and provide reports upon request
- Run simulated operational scenarios
- Support an auditing functionality
- Provide an operation execution review
- Perform mission rehearsals
- Analyse data from a cyber-incident
- Be able to train the investigation, analysis and actions in response to an attack

- Be able to sanitize the training environment after exercise, resetting the pre-exercise status
- Support Joint Cyber operation exercises
- Provide User Awareness Training
- Allow Incident Response information sharing
- Allow/Support the evaluation of the effectiveness and efficiency of the actors involved in an exercise

2.7.7. Output:

- Provide data for further analysis, future exercises, lessons learned, roles, scenarios and reports
- Produce and archive real operational-like scenario
- Capability to extract sample data and/or execution data from a mission
- Export of system configuration settings
- Capability to create models based on roles definition
- Visualize and export mission execution reports
- Export mission execution data and lessons learned
- Identify and report potential vulnerabilities
- Analyse and identify training needs

3. SCOPE OF WORK

3.1 The current scope of work required to support the development of the NATO CySA and NCCR is to perform cost analysis based on the alternatives submitted by Nations, Industry and NATO Agencies. Two to three alternatives will be available to be analyzed. The overall scope encompasses three sequential cost analysis items:

3.1.1 **Alternatives Life Cycle Cost Analysis:** costs of each alternative across its whole life cycle. The Life Cycle Cost Analysis takes into consideration affordability constraints, DOTMLPFI capabilities, inflation, interoperability, sustainment, and length of the lifecycle. Cost analysis requires gathering and assessment of relevant cost data from identified stakeholders. A report presenting this analysis will be appended to the Analysis of Alternatives annex within the CPP.

- 3.1.2 **Program Implementation Plan cost estimation:** once a preferred alternative or set of alternatives is selected, a subsequent cost estimation is conducted to project the overall capability costs, including cost tolerances. This cost estimation will be part of the Program Implementation Plan section of the main CPP document.
- 3.1.3 **Cost breakdown by projects:** the overall capability program is decomposed into smaller projects, each covering specific lines within the DOTMLPFI spectrum (e.g. Material solution, Training, Data Migration, etc.). Every project requires a cost estimate. These projects are described within the Project Data Sheets annexes as part of the CPP.

3.2 The purpose of the Life Cycle Cost estimation is:

- 3.2.1 To compare cost analysis and identify the preferred alternative.
- 3.2.2 To provide inputs for the programme implementation section of the CPP.

3.3 The Deliverables produced by the Contractor shall contribute to:

- 3.3.1 Supporting HQ SACT PE staffs' ability to manage efficiently NATO's transformation programmes.
- 3.3.2 Reducing uncertainty by contributing to the production of evidence-based outcomes.
- 3.3.3 Enabling innovation by providing alternative perspectives or methods.
- 3.3.4 Enhancing HQ SACT's responsiveness and agility to address emergent and urgent requirements by providing niche technical contributions on a "just in time" basis in which support is rendered only as and when essential to the success of SACT's mission.
- 3.3.5 Identifying and solving practical problems that cannot be determined through studies and analysis alone.

3.3.6 Fostering a greater depth of understanding of complex subject matter.

4 DATA AVAILABLE

4.1 Data available for the NATO CySA and NCCR consists of concept papers and whitepapers, services descriptions, architectural diagrams and surveys, old Capability Package (CP) Project Data Sheets (PDS) and Request for Information to Nations and Industry. The supplier will further require to liaise with programme staff and stakeholders to solicit additional information and data as needed. The majority of data will be passed to the supplier by 15 November 2022.

4.2 Identification of potential alternatives and options for the delivery of services.

4.3 Identification and collection of all operational effectiveness measures, their associated risks, and overall lifecycles costs for the capability and individual services.

4.4 Risks and issues for all DOTMLPFI lines of development for each of the alternatives.

4.5 Data collected from the Service Provider, list of services, associated costs, and overall lifecycle plan for the services.

4.6 Industry and Nations quotations on aforementioned services.

4.7 Collection of existing PDSs, information from previous programmes and projects.

4.8 Compilation of all collected data related to lifecycle costs, schedules and risks.

5 REQUIREMENT DESCRIPTION

5.1 The supplier shall provide deliverables to identified NATO ACT Technical Authorities for the following analysis tasks:

5.2 Continuously consult as appropriate with technical authority, project/programme managers, operational users, etc., within NATO commands and agencies to obtain the information necessary for analysis:

5.3 Collect the relevant documents and information from programme subject matter experts and stakeholders;

5.4 Facilitate workshops as necessary to solicit or consolidate information required for analyses.

5.5 **Comparative Rough Order of Magnitude Life Cycle Cost (ROM LCC) estimates** of alternatives as per Ref 11.1:

5.5.1 Liaise with NATO SACT CAPDEV CAP CYBER action officers to understand the requirement, be presented with the cost data or initial estimates and define other data required to undertake assessment of cost estimates.

5.5.2 Analyze the collection of project data sheets, previous cost estimates and available data provided by NATO ACT. Upon consultation with SACT CAP REQS AOA, develop a cost breakdown structure (CBS) suitable for comparative analysis. Map the available data (including supplier data sources) to the identified alternatives across the CBS indicating (a) direct applicability (e.g. parametric), (b) indirect applicability (e.g. analogy), (c) no applicability / data missing.

5.5.3 Develop a ROM LCC model and analysis roadmap (proposal) for the programme detailing the types of analyses (methods, models, etc.), required data gathering, presentation of results, etc.

5.5.4 Develop the ROM LCC model and perform analysis: develop estimates with risk/uncertainty for each of the alternatives. The required form for presentation of total estimated costs includes synthesis as a three point estimate reflecting Baseline Estimate (Most Likely), Optimistic Estimate, and Pessimistic Estimate with example risk scenarios mapped to each and the degree of confidence in estimation.

5.6 **Documentation** as per Ref 11.1: detailed accompanying analytical report in specified format that provides all supporting evidence for the analysis and evidence for the recommendation of selected alternative(s).

5.7 Absolute Rough Order of Magnitude Life Cycle Cost (ROM LCC) analysis of the chosen alternative. This includes a cost tolerance analysis for the whole capability as part of the CPP Program Implementation Plan section.

5.8 Break down of costs by Projects as part of the Project Data Sheets of the CPP.

5.9 Undertake regular interactions to brief progress and process clarifications; provide progress reports to the technical authorities.

6 DELIVERABLES

6.1 Kick-off workshop.

6.2 Support the ACT Tasking Process and Cyberspace Programme Director through the provision of update reports on the status of main activities every two weeks.

6.3 Contribute and provide deliverables to support the further development and production of the NATO CySA and NCCR. This task is to be achieved through:

6.3.1 Execution of workshops for data collection.

6.3.2 Cost Data and Assumptions List (CDAL) and summary of proposed approach.

6.3.3 Life Cycle Cost Estimation Report encompassing all alternatives (as part of AoA), to include:

6.3.3.1 Basic definitions, ground rules, boundaries and assumptions used in cost estimation process.

6.3.3.2 Models and methods adopted for costs estimation.

6.3.3.3 Cost Breakdown Structure: DOTMLPFI costs elements data.

6.3.3.4 Identification of the cost drivers, in particular those that differentiate alternatives.

6.3.3.5 Risk and uncertainty assessment, including a set of risk scenarios.

6.3.3.6 Estimated Life Cycle Cost in a format consistent with the results of the estimation method used and with the risk and uncertainty assessment. The required form for presentation of estimate cost includes synthesis as a three-point estimate reflecting Baseline Estimate (Most likely), Optimistic Estimate, and Pessimistic Estimate with example risk scenarios mapped to each and the degree of confidence in estimation.

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- 6.3.4 Life Cycle Cost Estimation of the chosen alternative and whole capability as part of the CPP Program Implementation Plan, including cost tolerances.
- 6.3.5 Breakdown of costs by projects as part of the CPP Project Data Sheets.
- 6.3.6 Briefing/presentation of preliminary and final findings.
- 6.3.7 Interact directly with external stakeholders within the scope of this contract
- 6.3.8 Provide weekly verbal progress reports to the assigned Project Lead and COTR.

7 TIMELINES. These timelines are tentative and subject to contract award date and data availability.

Target timelines for outputs are:

- 7.1.1 Deliverable item 6.1 by 7 Nov 2022;
- 7.1.2 Deliverable of items 6.2 subsequent every two weeks;
- 7.1.3 Deliverable item 6.3 by 06 FEB 2023: Intermediate brief/review on cost data, cost analysis approach, and assumptions list with HQ SACT;
- 7.1.4 Deliverable item 6.3.3 by 15 MAR 2023: Final Life Cycle Cost Analysis report in support of CPP.
- 7.1.5 Deliverable item 6.3.4 by 31 MAR 2023;
- 7.1.6 Deliverable item 6.3.5 by 21 APR 2023;
- 7.1.7 Deliverable item 6.3.6 by 30 APR 2023.

8 TYPE OF CONTRACT AND PERIOD OF PERFORMANCE

8.1. This is a Firm Fixed Price Deliverable contract in accordance with the NATO General Terms and Conditions. All employer responsibilities for the Contractor Personnel performing under this contract shall lie with the Supplier.

8.2. Period of Performance: Base Period is 01 November 2022 - 31 December 2022 with one (1) possible four (4) month option period from 01 January 2023 - 30 April 2023.

4 BIDDER EVALUATION.

4.1 HQ SACT intends to award a FirmFixed Price Deliverables contract to the lowest-cost-compliant bid. Technical clarification of essential competencies may be conducted.

5 PLACE OF PERFORMANCE AND TRAVEL

5.1 The supplier will support staff based in HQ SACT, Norfolk VA for the performance of this contract, however will not be required to be co-located. Remote support is viable. No travel is expected.

6 CONTRACTOR SUPERVISION AND REPORTING

6.1 The Contracting Officer will assign a Contracting Officer's Technical Representative (COTR) to administer all technical contract details. The Contracting Officer has final authority (in consultation with the COTR) to determine if the contract/SOW should be amended, extended, modified or cancelled for evolving requirements, new tasking, and/or technical non-performance.

6.2 The technical authorities for this contract will be Dr Arnau Pons, SACT CAPREQ AOA, Ms Manisha Parmar, SACT CAPDEV CAP CYBER, Dr. Alberto Domingo, SACT CAPDEV CAP CYBER, Lt. Col. Sven Rieche, SACT CAPDEV CAP CYBER. For administrative purposes, Ms Manisha Parmar, SACT CAPDEV CAP CYBER, will be the COTR.

6.3 The COTR shall:

- 6.3.1 Resolve outstanding disputes, problems, deficiencies, and/or questions on the technical aspects of the SOW;
- 6.3.2 Review (and approve) all Contractor duties for completeness and accuracy;
- 6.3.3 Review the Contractor's work at a minimum of monthly, or more often if needed.

6.4 The COTR's written approval of work reported and products submitted is mandatory for contractor invoices to be successfully processed.

6.5 The contractor shall submit a monthly report to the COTR and the Contracting Officer, detailing progress on the SOW for the reporting period. The report shall include, but not be limited to, the following information:

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- 6.5.1 Summary of work and status of tasks undertaken during the reporting period;
- 6.5.2 Contract hours expended showing a comparison with budgeted hours;
- 6.5.3 Current or anticipated problems/deficiencies and recommended solutions.

6.6 The COTR reserves the right to amend the reporting requirements to receive alternate/additional data and information on a more frequent or less frequent basis, and to request other reports that detail designated aspects of the work or methods to remedy problems and deficiencies.

7 QUALITY OF DELIVERABLE.

7.1 It is expected that all deliverables are developed/delivered in high quality. Reporting deliverables should be produced at the graduate level, in English using the appropriate Microsoft Office Software program. Analyses (and their documentation) must meet the following:

7.2 **Replication:** The contractor must provide a sufficiently detailed audit trail, including documentation of data and assumptions list to enable a third party to independently replicate the analyses.

7.3 **Rationale:** The contractor must provide justifiable rationale for the selection of the inputs to the proposed methods and models.

8 SECURITY AND INSTALLATION ACCESS

8.1 Personnel details are to be supplied as requested to allow access to HQ SACT, if required. All contractor personnel shall abide by the security restrictions regarding carrying and using electronic devices (e.g. laptops, cell phones) in all NATO facilities. The Supplier(s) shall be responsible for satisfying the necessary clearance requirements before bringing any such device into a NATO facility.

9 CONTRACTOR ESSENTIAL TECHNICAL COMPETENCIES.

9.1 Contractor companies shall submit papers of no more than 15 pages (single-spaced) text, describing in detail:

9.1.1 Their expertise and past experience in developing and delivering products outlined in this SOW. Contractor companies shall cite at least two past performances based on contracts held within the last ten years that are of similar scope, magnitude, and complexity to the tasks, activities, and deliverables detailed in this SOW, or succinctly state that they have no relevant, directly related or similar past performance experience. Contractor companies shall show this relevant past and present experience in a manner that is directly traceable to the requirements of the SOW and demonstrate three to five years of direct experience. In particular, contractor companies must show relevant experience in effectiveness, risk, cost and schedule analysis for similarly sized/complexity programmes.

9.1.2 Contractor companies shall identify the individual or set of individuals that will deliver on the task and provide evidence to assure appropriate levels of experience and expertise.

10 APPLICABLE STANDARDS AND GUIDES

10.1 Analysis of Alternatives in NATO's Capability Delivery Lifecycle Standard Operating Procedure [Ref 11.1] provides indicative guidance to conducting analysis in support of NATO CFCD programmes. NATO standardization recommendation (STANREC) 4755 lists recommended practices regarding LCC estimation. NATO STANREC 4755 recommends the following standard: NATO Guidance on Life Cycle Costs ALCCP-01 (Edition B). NATO STANREC 4739 lists recommended practices regarding risk management, to include schedule.

11 REFERENCES:

11.1 NATO SOP 407 - The Analysis Of Alternatives in NATO'S Capability Delivery Lifecycle, Revision 1, 14 July 2020.

11.2 NATO STANREC 4755, NATO Guidance on Life Cycle Costs, EDITION 2, 23 May 18, NSO/0639(2018)WG3/4755.

11.3 NATO - ALCCP-1 NATO Guidance on Life Cycle Costs, EDITION B, Dec 17.

11.4 NATO SANREC 4739 on Risk Management EDITION, 11 April 2013 NSA/0496(2013)STR-CDS/4739.

11.5 NATO STANDARD ARAMP-1 NATO RISK MANAGEMENT GUIDE FOR ACQUISITION PROGRAMMES Edition 1
Version 1 FEBRUARY 2012.

Annex A – Cost Breakdown Structure

To provide an indicative scale of work for this task, this Annex gives an example of a Cost Breakdown Structure (CBS) which could be applied to the described scope of work.

Cyberspace Situational Awareness

1	Consumed Inputs
2	Functionality, Correlation
3	Functionality, Software View
4	Functionality, Vulnerability Assessments
5	Functionality, Remediation
6	Functionality, User Accounts Management
7	Admin Privileges
8	Role Based Access control
9	View network diagrams
10	View physical and logical connections
11	View network services
12	View cyber security controls
13	Monitor specifics threads
14	Generate and view mission impact analysis
15	Customizable dashboards
16	Import / export scenarios
17	Collect and manage asset priorities
18	Organize and display assets
19	View aggregated risks by network, by geo location or organization unit
20	View risk levels per organization / network and aggregated
21	Fuse and correlate data from multiple sources
22	Generate risk map and trend analysis
23	Simulation of incidents for training purposes
24	Outputs

NATO Classified Cyber Range

1	Physical Architecture
2	Non Functional Requirements
3	User Management & Authentication
4	Internal & External Entities
5	Input Sources
6	Functions
7	Output

Annex B – Compliance Matrix

Contractor’s technical proposals will be assessed on the qualifications of the both the company and individuals proposed to perform the work. Individuals’ résumés will be measured against each of the criteria specified below in order to ascertain whether the individuals have adequately qualifications to be considered compliant. (HQ SACT reserves the right to conduct technical discussions of nominated candidates). **Examples of how detailed knowledge levels were attained are expected. Ultimately Contractor companies shall clearly demonstrate by providing unequivocal reference to where company/key personnel meet the criteria set forth in this solicitation (please include page number, reference to CV or links as applicable).**

Bidder Name _____

Item	Compliant	Non-compliant
Contractor companies shall submit papers of no more than 15 pages (single-spaced) text		
Expertise and past experience in developing and delivering products outlined in this SOW.		
At least two past performances based on contracts held within the last ten years that are of similar scope, magnitude, and complexity to the tasks, activities, and deliverables detailed in this SOW, or succinctly state that they have no relevant, directly related or similar past performance experience. Contractor companies shall show this relevant past and present experience in a manner that is directly traceable to the requirements of the SOW (especially to paragraphs 5.6.x and 6.3.3.x).		
Three to five years of relevant experience in cost and schedule analysis for IT and software programmes.		
Relevant experience in cost and schedule analysis for programmes delivering solutions to store and process classified information.		
Proposed key personnel have demonstrated at least 10 years of experience and expertise in cost estimating for similarly sized and complex programmes.		
Proposed key personnel are proficient in the English language (Listening, Speaking, Reading & Writing). SLP3333		
Proposed key personnel has access to information classified as NATO RESTRICTED and the company has infrastructure to store and process such data.		
Demonstrated ability to develop/deliver high quality reports.		
Demonstrated ability to produce deliverables at the graduate level, in English using the appropriate Microsoft Office Software program.		
Experience with NATO STANREC 4755 and 4739		