

RFP-ACT-SACT-23-89



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

Request for Proposal

RFP-ACT-SACT-23-89

Contractor Support for Modelling and Simulation (M&S) of

Cognitive Warfare Concept Development

Bidding Instructions

RFP-ACT-SACT-23-89

Table of Contents

| | | |
|-----|--------------------------------|-----|
| 1. | General | 3 |
| 2. | Classification..... | 3 |
| 3. | Definitions..... | 3 |
| 4. | Eligibility | 3 |
| 5. | Duration of Contract..... | 4 |
| 6. | Exemption of Taxes..... | 4 |
| 7. | Amendment or Cancellation..... | 4 |
| 8. | Bidder Clarifications | 4 |
| 9. | Bid closing date | 5 |
| 10. | Bid Validity | 5 |
| 11. | Content of Proposal | 5 |
| 12. | Proposal Submission | 5-6 |
| 13. | Late Proposals | 6 |
| 14. | Bid Withdrawal | 6 |
| 15. | Bid Evaluation | 6 |
| 16. | Proposal Clarifications | 6 |
| 17. | Award | 7 |
| 18. | Communications | 7 |
| 19. | Points of Contact:..... | 7 |
| | Enclosure 1 | 8 |
| | Enclosure 2 | 9 |
| | Enclosure 3 | 10 |

BIDDING INSTRUCTIONS

1. General

This is a Firm Fixed Price deliverables contract in accordance with the HQ SACT General Terms and Conditions; as such, all employer responsibilities for the contractor performing under this contract shall lie with the contractor company. **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.

4. Eligibility

- (a) This RFP is open to governmental or commercial entities.
- (b) Established in a North Atlantic Treaty Organisation Alliance member nation.
- (c) Working in the required field of study and legally authorised to operate in the country and countries in which this contract is to be performed, at the time at the time of bidding. Please refer to our terms and Conditions paragraph 23 “Authorization to Perform.” Has performed the desired past performance including size, cost and scope, as described in this RFP.

RFP-ACT-SACT-23-89

- (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: On or about **1 September 2023 – 22 December 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.

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 **7 August 2023**.
- (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 **18 August 2023, 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);
- (c) Past performance (See Enclosure#2);
- (d) Provision of technical and price volumes (See Sealed Bid Price Proposal Enclosure #3), (Reference Annex A - Statement of Work and Annex B - Compliance Matrix).

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-23-89_Tech_ABC Inc. / RFP-ACT-SACT-23-89_Price_ABC Inc.). **Allow sufficient time in your submission should you encounter e-mail size challenges.**

- (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. 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) Due to the highly technical nature of this requirement, HQ SACT reserves the right conduct pre-award discussions with proposed key personnel to accurately assess identified technical competencies. Discussions will be limited to scope of this RFP and the evaluation criteria identified in Annex A.
- (c) Proposals shall be evaluated and awarded based on the proposal(s) that represents the best overall value to NATO. The following factors are considerations:
 - Successful administrative submission of bid packages and requested documents;
 - Compliance with mandatory criteria identified on Annex A (Compliant / Non-Compliant);
 - Technical factors / pricing factors rated the following:

RFP-ACT-SACT-23-89

Technical / Price = 70/30;

- 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 to the Offeror whose proposal represent the Best Value offer to NATO. Partial awards are not authorized. 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.

HQ SACT will collect information from references provided by the Offeror in regards 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:

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

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

RFP-ACT-SACT-23-89

Enclosure 1

COMPLIANCE STATEMENT TO SEALED BID RFP-ACT-SACT-23-89

It is hereby stated that our company has read and understands all documentation issued as part of RFP-ACT-SACT-23-89. Our company proposal submitted in response to the referenced solicitation is fully compliant with the provisions of RFP-ACT-SACT-23-89 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> |
|---------------|--|
| ----- | ----- |
| ----- | ----- |
| ----- | ----- |
| ----- | ----- |
| ----- | ----- |

(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
- (m) 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-23-89**

The categories below are “representative” of skills required to provide deliverables at each level and proposed rates will be used to support the Basis of estimate.

Proposed rates must be fully “loaded” [G&A, O/H etc.]; however they must not include per diem (meals & lodging) and travel. Travel (and related expenses) will not be covered under this contract, but handled separately in accordance with the ACT Financial Manual.

Please find on behalf of **Insert: Company Name** to provide HQ SACT with services (collectively referred as “ITEMS”), subject to the provisions, terms and conditions stated in RFP ACT-SACT-23-89 and the “**Insert : Company Name** Technical proposal”, submitted in accordance with solicitation provisions.

Deliverable Pricing Chart

| Deliverables (Refer to Annex A for further scope of each deliverable) | COST (USD) |
|---|-------------------|
| Work Package #1 Deliverable: Design modelling, simulation and experimentation mechanism for CW concept validation | |
| Work Package # 2 Deliverable: Implementation of human behaviour models and metrics’ computation within the simulation system | |
| Work Package # 3 Deliverable: Support of 2023 CW concept workshop to demonstrate the updated simulation system capacity | |

RFP-ACT-SACT-23-89

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: _____

Annex A

Headquarters Supreme Allied Commander Transformation (HQ SACT)

STATEMENT OF WORK

for

Contractor Support for Modelling And Simulation (M&S) of

Cognitive Warfare Concept Development

1. Introduction

The Cognitive Warfare (CW) Exploratory Concept is an Allied Command Transformation product based on inclusive work with a large Community of Interest from across the Alliance. Development of the concept was tasked by the Military Committee as part of the Warfare Development Agenda and is meant to enhance the Alliance's knowledge of the emerging threats in the cognitive dimension while exploring possible future warfare development. Development of the CW concept requires validation effort. The concept validation requires a synthetic environment to experiment with the main concept supportive ideas, e.g. "Protect"¹ while employing selected cognitive attacks called "Vectors"².

2. Background and Scope of Work

In general, in support of the concept development and validation team, the contractor will provide modelling and simulation services to support design, execution and assessment of a simulation based experiment that provides quantitative analysis supporting the validation effort of the CW concept. The contractor will modify its current simulation system to create a synthetic environment enabling experimentation to increase understanding of how cognitive attacks influences Alliance and get details of dynamics mechanism of cognitive warfare. The synthetic environment replicates physical, virtual and cognitive dimensions of the battlefield and it is requested to model human behaviour aspects at individual, small team societal level. It is expected to have a limited set of hypothesis that would be driving a design of simulation based experiment. An illustrative set of hypothesis is in Annex C. It is expected to have the high level metrics for the experiment that would be composed of simulation system data/information portrayed in three battlefield dimensions (physical, virtual and cognitive). An illustrative set of metrics for the experiment and human

¹ Protect- Strengthen structured capacity to deter, prevent, withstand and defend against attacks targeting the cognitive dimension.

² Vectors are cognitive attacks (traditional: kinetic force, broadcast and print mass media, corporate state, political actors, interpersonal engagement; current technology driven: social media, big data, augmented reality and wearable smart devices, gaming and encrypted communications; emerging technology driven: synthetic media, AI-enabled media, Metaverse, avatars and virtual profiles, Neuroweapons)

behaviour modelling parameters together with the working definition of three battlefield dimensions is in Annex D.

3. Overview of Duties and Deliverables

- A.** The contractor shall perform tasks/functions, complete and submit approved deliverables, and submit periodic reports as directed in this document. The contractor shall be responsible for the functions and deliverables listed in section B. As an additional assurance that the work is reviewed and accepted, the contractor shall detail the functional tasks performed, outcomes recorded and related information in monthly briefings/report and a formal briefing/report at the conclusion of the project.
- B.** The contractor will perform single period's activities with the main deliverable of the quantitative analysis powered by simulation based experiment to support the CW concept validation and demonstration of the main supportive ideas in the synthetic environment. There are three packages included in the project:

The Contractor shall produce the following deliverables:

a. Work Packages

- 1. Work Package #1** Design modelling, simulation and experimentation mechanism for CW concept validation. **Due Date: 13 October 2023**

It is required to provide services to design a human behavior modelling within the contractor's simulation system and to enable simulation based experimentation. Namely: (deliverables):

- 1.1 A proposed mechanism how to model/update human behaviour within contractor's simulation system to cover parameters specified in Annex D.
- 1.2 Design computation mechanism of metrics specified in Annex D based on data/information generated by the contractor's simulation system.
- 1.3 Design mechanism to support simulation based experiment with contractor's simulation system.
- 1.4 Set up the contractor's simulation system based on the Scenario provided by HQ SACT.
- 1.5 Report and recommendation on the updates on the current simulation system to support human behaviour modelling and execution of the experiment.

RFP-ACT-SACT-23-89

2. Work Package # 2 Implementation of human behaviour models and metrics' computation within the simulation system. – Due Date: 10 November 2023

It is required to update contractor's simulation system as per design specified in WP1. Namely (deliverables):

- 2.1 Implementation and validation of WP1.1 mechanism.
- 2.2 Implementation of WP1.2 mechanism.
- 2.3 Demonstration of WP1.3 mechanism.
- 2.4 Demonstration of WP1.4 simulation system set up.

3. Work Package # 3 Support of 2023 CW concept workshop to demonstrate the updated simulation system capacity. – Due Date: 22 December 2023

It is required to execute simulation based experiment and to support 2 days of CW workshop. Namely (deliverables):

- 3.1 Design vignettes and set up the simulation system for the experiment to support hypothesis testing as in Annex C.
- 3.2 Execute simulation based experiment in accordance to vignettes.
- 3.3 Deliver measured metrics from each run of the simulation system in the excel format.
- 3.4 Design a way to include AR/VR technology into the CW concept demonstration.
- 3.5 Support from contractor's SME(s) to execute the 2 days' workshop and demonstrate implemented functionalities of the human behaviour modelling.

4. Place of Performance

- A. Place of Performance.** Contractor's personnel are expected to perform the required work at the Contractor's facility with expectations of regular update meetings at HQ SACT, 7857 Blandy Road, Norfolk, or in alternate locations or by VTC as specified by the Contracting Officer's Technical Representative (COTR).
- B. Travel.** Travel (and related expenses) will not be covered under this contract, but handled separately in accordance with the ACT Financial Manual, Section 24 "Contractor Travel". Additional travel requirements will be coordinated as needed.

5. Contractor Performance Requirements and Reporting

- A.** A Contracting Officer's Technical Representative (COTR) shall be assigned by the Contracting Officer. The COTR shall provide direction, guidance, and support information as needed for all technical and content areas of the SOW.

RFP-ACT-SACT-23-89

The COTR shall:

- a. Resolve outstanding disputes, problems, deficiencies, and/or questions on the technical aspects of the SOW.
 - b. Review (and approve) all Contractor duties for completeness and accuracy.
 - c. Review the Contractor's work at a minimum of monthly, or more often if needed.
- B.** The COTR's written approval of work reported and deliverables submitted is mandatory for Contractor invoices to be successfully processed. The COTR shall receive a letter of appointment from the Contracting Officer that describes in detail his roles and responsibilities to which he shall sign formal acceptance.
- C.** A Contracting Officer's Technical Representative (COTR) shall be assigned by the Contracting Officer. The COTR shall provide direction, guidance, and support information as needed for all technical and content areas of the SOW.

6. Contract Reporting

- A.** As specified in paragraph 3 – Overview of Duties and Deliverables, 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:
 - a. Name (s) of contractor personnel assigned to work.
 - b. Summary of work for tasking and deliverables for the reporting period.
 - c. Tasking and deliverables met for reporting period.
 - d. Interim tasking and deliverables (interim and final) to be met for the coming month.
 - e. Current or anticipated problems/deficiencies and recommended solutions.
- B.** The COTR may 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. The Contracting Officer shall receive a minimum of a monthly report, regardless of COTR changes. However, note that the report is NOT a deliverable subject to acceptance. The Contractor is expected to promptly address all identified problems and deficiencies, providing the COTR with written information on how the problem shall be corrected and any impact to on-going work.

7. Evaluation Criteria

- A.** Past Performance
 - a. The Contractor is to provide a minimum of one (1) past performance citations (for work within the past seven years) to show that it has successfully completed work that is similar to or directly traceable to the requirements outlined in this SOW.

RFP-ACT-SACT-23-89

- b. Further details for past performance criteria is referenced in Enclosure 2 of this RFP.

B. Relevant Experience

- a. Contractor must be able to perform work as outlined in this SOW and will be scored in accordance with the elements listed in the Grading matrix – Annex B.

C. Technical Approach

- a. Contractor must be able to describe how they will update and setup simulation systems in accordance with grading elements listed in Annex B.

8. Acceptance Criteria

Acceptance criteria for the task includes, but is not limited to the following criteria:

After each working package delivery, Project Team led by Project Officer (PO), supported by M&S SME, will get a week to confirm the acceptance of the WP deliverables. If not complying with requirements, the company will get another 2 weeks to complete the WP as requested.

9. Security

All work supporting the development of the narrative will be unclassified and contractors do not require security clearances. The deliverables will not contain any sensitive information, will not be classified and, therefore, will not bear any classification markings. However, contractors may be asked to sign non-disclosure agreements on insights obtained in order to facilitate creation of the narratives.

10. Intellectual Property Rights

All rights reserved by NATO Allied Command Transformation. The narratives may not be copied, reproduced, distributed or publically displayed without approval from ACT StratComm and SF Branches. Products developed for ACT can be further used, modified and republished by ACT SF Branch as required. Therefore, intellectual property rights for any service and product by the contractor shall be owned in perpetuity by HQ SACT.

11. Releasability

NATO nations have regulations and laws applying to the export of defence related goods by domestic commercial sources to outside entities (such as NATO). The products or services under this SOW will need to be releasable to entities identified under the statements made with regards to the Intellectual Property Rights. The StratCom Branch will hold releasability control.

RFP-ACT-SACT-23-89

12. Best Value Grading Matrix to STATEMENT OF WORK

Contractor technical proposal will be assessed based on criteria mentioned in the table below.(HQ SACT reserves the right to conduct technical discussions with contractor). Ultimately, contractor companies shall clearly demonstrate by providing unequivocal explanation to where and how he/she meet the criteria set forth in this solicitation. The Contractor must demonstrate their experience and expertise in the subject matter, in which will be graded in accordance with the Grading Matrix.

HQ SACT GENERAL TERMS AND CONDITIONS DATED 01/26/2022 ARE APPLICABLE TO THIS PROCUREMENT AND CAN BE LOCATED ON THE ACT WEBSITE AT WWW.ACT.NATO.INT/CONTRACTING UNDER CONTRACTOR INFORMATION.

Annex B

Compliance Matrix

Contractor's technical proposals will be assessed on the qualifications of the both the company and individuals proposed as applicable to perform the work.

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).

| Requirements | Compliant (C) /Non-compliant (NC) |
|--|--|
| Company is headquartered in one of the NATO Countries with proposed candidates that are citizens of and resident in NATO nations. (Nationality must be provided and any secondary or dual citizenships clearly specified). | |
| The Contractor is to provide a minimum of one (1) past performance citations (for work within the past seven years) to show that it has successfully completed work that is similar to or directly traceable to the requirements outlined in this SOW. | |
| Demonstrated proficiency in English as defined in STANAG 6001 (Standardized Linguistic Profile (SLP) (Written and Oral). NATO: 3333. | |
| Contractor has a license of the simulation system to be used in the project. | |
| Simulation system is open to modify human behaviour models | |

Grading Matrix

| # | Criteria | Range | Comments |
|----------|---|--|---|
| | | A SCORE OF ZERO IS NOT AN AUTOMATIC NON-COMPLIANCE | (Contractor should complete each section below outlining how compliance is achieved and concisely demonstrate by direct reference to technical proposal that unequivocally demonstrates compliance) |
| 1 | Contractor has previous experience in updating human behavior models within the simulation system | 0 points – no previous experience 5 points – less than 2 years 10 points – more than 2 years | |

RFP-ACT-SACT-23-89

| | | | |
|---|---|--|--|
| 2 | Contractor's simulation system has been used in the NATO experiment or exercise. | 0 points – not used at all 3 points – simulation system has been used in an experiment or an exercise, but not in an official NATO one 5 points – simulation system has been used in the NATO experiment or exercise [in MTEP] | |
| 3 | Contractor's simulation system can be run in automated mode for the benefits of the experiment. | 0 points -entities are fully controlled by human operator 5 points - entities can be controlled by human or automation 10 points - simulation system can run in a batch mode with and without any human in the loop inputs | |
| 4 | Contractor's simulation system covers operations in all military domains (Land, Air, Maritime, Cyber, Space) | 0 points - Only 1 domain is covered 3 points - 2 domains are covered 5 points - 3 domains are covered 8 points - 4 domains are covered 10 points - all domains are covered | |
| 5 | Describe how to model/update human behaviour within contractor's simulation system to cover parameters specified in Annex D | 0 points -no explicit idea how to update the simulation system 10- some ideas on the modelling, mostly in Affective and Motivational parameters domain 20 points – explicit way of modelling all three parameters domains (Emotions, Behaviour, Cognition) | |
| 6 | Describe how to measure the metrics in Annex D | 0 points -no idea how to measure any of the metrics 5 points - some ideas how to measure the metrics 10 points - M1, M2, M3, M4, M5 metrics measurement explicitly described | |
| 7 | Describe how you want set up the simulation system to replicate cognitive attacks – Vectors | 0 points -no idea how to materialized that in the simulation system 10 points - some ideas, mostly for traditional Vectors 15 points - some ideas, mostly for traditional and current technology driven Vectors 20 points -all three domains of Vectors described (traditional, current technology driven and emerging technology driven) | |

RFP-ACT-SACT-23-89

| | | | |
|-----------------------------|--|--|--|
| 8 | Describe how you want to integrate VR/AR technology for CW concept demonstration | 0 points -no idea on bringing VR/AR technology into the concept demonstration 8 points - some ideas, mostly related to the individuals/commanders wearing the technology 15 points -anything above previous category | |
| TOTAL MAX SCORE: 100 | | | |

Annex C – Illustrative set of hypothesis³

- If a cognitive attack affects the cognitive processes of military personnel, it could lead to decreased combat readiness. For example, if soldiers are disoriented or confused, they may not be able to respond quickly and effectively to threats.
- A cognitive attack can reduce the operational effectiveness of military units by causing confusion, reducing trust among personnel and disrupting communication channels.
- If a cognitive attack diverts the attention of military personnel, it could make them more vulnerable to physical attacks, such as ambushes or surprise attacks.
- A cognitive attack that targets electronic devices may compromise the security of military information systems, potentially leading to the theft or alteration of sensitive information.
- If military leaders or personnel are manipulated or deceived by cognitive attack, they may make decisions that are not in the best interests of their unit or their mission.

³ When the contract is awarded hypothesis will be confirmed and prioritized

Annex D – Illustrative set of high level metric for the experiment, human behavior modelling parameters and the working definition of battlefield dimensions⁴

Metrics:

- M1- combat readiness
- M2- operational effectiveness
- M3- vulnerability to physical attacks
- M4- information security
- M5- decision making process

Human behavior modelling parameters:

- Emotions – Mental reactions usually experienced as strong feelings towards a specific object and accompanied by physiological and behavioural changes in the body (fear, joy, anger, rage)
- Behaviour – conscious, unconscious and sub-conscious processes to external and internal stimuli
- Cognition – activities and processes related to acquiring, storing, retrieving and processing information within the brain.

Definitions:

Physical dimension of the battlefield

The physical dimension relates to consequences on the audiences, the sub-surface, surface, airspace and space areas where all physical activities take place, and where audiences live, including all physical objects and infrastructure that support them

Virtual dimension of the battlefield

The virtual dimension relates to the consequences of activity on the storage, content and transmission of analogue and digital data and information, and all supporting communication and information systems and processes.

Cognitive dimension of the battlefield

The cognitive dimension relates to the consequences on the audiences' perceptions, beliefs, interests, aims, decisions and behaviors. It encompasses all forms of interaction between them.

⁴ When the contract is awarded metrics and human behaviour model's parameter will be confirmed and prioritized