

NATO UNCLASSIFIED  
IFIB-ACT-SACT-26-16



NORTH ATLANTIC TREATY ORGANISATION  
HEADQUARTERS SUPREME ALLIED COMMANDER TRANSFORMATION  
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NORFOLK, VIRGINIA, 23551-2490

## **Invitation For International Bidding**

**IFIB-ACT-SACT-26-16**

**Force Lethality Enhancement eXtended (FLEX) Modelling and Simulation Study**

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## BIDDING INSTRUCTIONS

### 1. General

a. This is a **Firm Fixed Price Deliverables** contract in accordance with the HQ SACT General Terms and Conditions.

b. HQ SACT General Terms and Conditions Dated **21 November 2025** are applicable to this procurement and can be located on the ACT Website at; [WWW.ACT.NATO.INT/CONTRACTING](http://WWW.ACT.NATO.INT/CONTRACTING) under Contractor Information.

**c. Contract Award is contingent upon funding availability; Partial bidding is allowed.**

### 2. Classification

This Invitation for International Bidding (IFIB) 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 IFIB.

b. The term “Bidder” shall refer to the bidding entity that has completed a bid in response to this IFIB.

c. The term “Contractor” shall refer to the bidding entity to whom the contract(s) is awarded.

d. The term “Contracting Officer” designates the official who executes this IFIB 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 Organization.

i. The term “days” as used in this IFIB shall, unless otherwise stated, be interpreted as meaning calendar days.

**4. Eligibility**

- a. This IFIB is open to governmental or commercial entities:
- b. Established in a North Atlantic Treaty Organization 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 of bidding. Has performed the desired past performance including size, cost and scope, as described in this IFIB.
- d. All proposed key personnel identified to work 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: 2 February 2026 to 30 April 2026

**6. Exemption of Taxes**

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 IFIB 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 IFIB 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 IFIB 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 IFIB, terms, clause, provision or specifications, shall be requested in writing, from the Contracting Officer. All Contracting Officers listed on this IFIB must receive such requests via email for clarification no later than **15 December 2025**.
- b. In lieu of a bidder's conference, HQ SACT invites bidders to submit technical and contractual questions not later than **15 December 2025**.
- 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 IFIB. Verbal Interpretations shall not be binding.

**9. Bid Closing Date**

Bids shall be received at HQ SACT, Purchasing and Contracting Office, no later than **20 January 2026, 0900 hours, Eastern Standard Time, Norfolk, Virginia, USA**. No bids shall be accepted after this date and time. **No hard copy proposals will be accepted.** Please see Proposal Submission (paragraph 12) for more details.

**10. Bid Validity**

a. Bids shall remain valid for a period of one hundred and twenty days (120) from the applicable closing date set forth within this IFIB. 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.

**b. HQ SACT will not accept supplier proposals prepared, in whole or in part, by means of generative artificial-intelligence (AI) tools, including and without limitation to chatbots, such as Chat Generative Pre-Trained Transformer (Chat GPT), or other language generating tools. HQ SACT reserves the right to screen applications to identify the use of such tools. All applications prepared, in whole or in part, by means of such generative or creative AI applications may be rejected without further consideration at HQ SACT's sole discretion, and HQ SACT reserves the right to take further steps in such cases as appropriate.**

**11. Content of Proposal**

The proposal shall consist of two (2) separate documents (Technical / Price) sent via e-mail as per the instructions. No hard copy proposals will be accepted. The E-mailed documents shall be received no later than **20 January 2026, 0900 hours, Eastern Standard Time, Norfolk, Virginia, USA**.

**The company description portion of its technical proposal shall be limited to 10 pages.**

**a. Technical Proposal shall be a Signed PDF document and contain:**

- 1) A table of contents for the entire proposal (See Enclosure #1):
- 2) The bidder's full name, address, Points of Contact, Telephone, Fax number; Internet site;
- 3) Compliance statement (See Enclosure#2);
- 4) Past performance (See Enclosure #3);

- 5) List of key personnel to produce deliverables;
- 6) Company description and supplementary relevant information; and
- 7) Compliance matrix (See Annex B to Statement of Work).

**b. Price Proposal shall be**

- 1) **Submitted in U.S. Dollar Currency.** Contractor may request payment post award in alternate currency based on agreed conversion rate.
- 2) Prices shall be on a **Firm Fixed Price Basis**, include any relevant discount schedule and shall include, separately, a cost associated with any required travel associated with delivery. **Do not include the estimated associated travel costs as part of the overall bid proposal. Travel will be assessed separately post award for Fair and Reasonable pricing but will not form part of the award decision to ensure fairness to industry from all NATO members nations.**

**12. Proposal Submission**

a. Proposals shall be separate e-mail submissions to:

Technical proposal: [hqsact.techproposal@nato.int](mailto:hqsact.techproposal@nato.int)

Price proposal: [hqsact.priceproposal@nato.int](mailto:hqsact.priceproposal@nato.int)

b. E-mail subjects shall include the solicitation information along with company name (for example: IFIB -ACT-SACT-26-16\_Tech\_ABC Inc. / IFIB -ACT- SACT-26-16\_Price\_ABC Inc.). **Allow sufficient time in sending your submission should you encounter e-mail size challenges.**

c. No verbal bids or verbal modifications or telephonic bids shall be considered.

d. 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. No late bids shall 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 with attention to the HQ SACT Contracting Officer.

A bid withdraw will be annotated on the Contract Award Report.

**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 IFIB. HQ SACT is not responsible for any content that is not clearly identified in any proposal package.

b. HQ SACT reserves the right to conduct pre-award discussions with proposed key personnel to accurately assess identified technical competencies. Discussions will be limited to the scope of this IFIB and the evaluation criteria identified.

c. Proposals shall be evaluated and awarded taking into consideration the following factors:

- 1) Successful administrative submission of bid packages as requested in paragraph 11 and as listed in this IFIB.
- 2) Successful determination of compliance on mandatory criteria. (Compliant/non-compliant).
- 3) Technical factors / pricing factors rated as follows:  
Technical / Price = 70/30 (Best Value).
- 4) Technical clarifications as determined may be conducted.
- 5) 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, clarify what is offered and interpret language within the bid to resolve any potential areas of concern.

**17. Award**

a. HQ SACT intends to award a firm fixed price deliverables contract to the Offeror(s) whose proposal(s) represents the Best Value offer to NATO. Partial

awards are authorized. HQ SACT reserves the right to award a single research topic to more than one supplier.

b. HQ SACT will collect information from references provided by the Offeror on its past performance. Contractors must provide authorization to contact references.

c. HQ SACT reserves the right to negotiate minor deviations to the listed General Terms and Conditions to this IFIB.

**18. Surge Capability:**

A surge capability requirement is included to have a contract vehicle in place should emerging circumstances require a quick and temporary increase in contractor support (LOE or Deliverable) to meet new requirements within the scope of the existing Statement of Work. The Supplier shall be prepared to provide support services per labour category described above. The contractor shall be prepared to evaluate requirements and submit a price proposal for any new in scope requirement for consideration by HQ SACT. Surge proposals will be evaluated by the Contracting Officer for fair and reasonable pricing and should be developed based upon the same pricing structure as the original contract proposal. The rate for surge effort shall not exceed the base/option year rate. Surge requirements will be incorporated by formal contract modification. Requests for pricing are made on a non-committal basis and do not constitute a formal commitment by HQ SACT to contract for additional work; supplier will not be reimbursed costs for preparing price proposals or other related expenses in response to a surge request. HQ SACT surge efforts will not exceed 50% of the annual contract value or 50% of the cumulative contract value. Requests to surge from other organizations outside of HQ SACT are not counted against HQ SACT when calculating the surge tolerances

**19. Disputes**

Disputes will be settled between the bidder and the Contracting Officer by mutual agreement through negotiation, while respecting and observing NATO regulations and policies.

**20. Proposed Candidates**

If successful, contractor company must notify HQ SACT of any special accommodations or requirements of its personnel for on-site support.

**21. Communications**

All communication related to this IFIB, 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 regarding this IFIB. Such adherence shall ensure Fair and Open Competition with equal consideration and competitive footing leverage to all interested parties.

**22. Points of Contact**

**(PLEASE INCLUDE ALL BELOW ON ALL CORRESPONDENCE)**

Tonya Bonilla, ACT Contracting Officer, 757-747-3575;  
Margaret Anderson, ACT Contracting Officer, 757-747-3699;  
Louis Syms, ACT Contracting Specialist, 757-747-3788

E-mail: [Hqsact.contracting.nato.int](mailto:Hqsact.contracting.nato.int)

## Enclosure 1: Proposal Content / Checklist

### PROPOSAL CONTENT / CHECKLIST

#### Table of Contents

- Bidder's name, address, POC, Contact numbers, email address.
- Compliance Statement.
- Past Performance (including References).
- List of Key Personnel.
- Technical Proposal.
- Price Proposal (Excel worksheet – Enclosure 4 - provides mandatory price proposal format)

**Enclosure 2: Compliance Statement**

**COMPLIANCE STATEMENT TO SEALED BID IFIB-ACT-SACT-26-16**

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

**Note: Any requested deviations/adjustments or considerations regarding HQ SACT General Terms and Conditions must be identified here - at the time of bidding - for consideration by the contract awards committee.**

<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: \_\_\_\_\_

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Bidder's proposal must be based on full compliance with the terms, conditions and requirements of the IFIB 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 3: Past Performance Information Form

Company is required to submit minimum of one. Company should be clear how the company met the requirements of past performance. Reference to a contract must include a detailed description of the work performed relevant to the requirements outlined in the SOW. Generic or Vague references to the contract awarded without clear connection to work performed will be disqualified

- (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: \_\_\_\_\_  
\_\_\_\_\_

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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 in part 1 of subject solicitation.**

## **Enclosure 4 – Mandatory Price Proposal Excel Spreadsheet**

**Pricing shall be submitted using the excel workbook provided.** Bidders may elect to submit a PDF proposal for pricing **in addition to the required excel workbook.**

**Proposals not submitted in the proper format will not be considered.**

Formulas have been added for convenience; however, it is the company's responsibility to ensure that the formulas are correctly reflecting your expected bid proposal value.

## **ANNEX A: STATEMENT OF WORK (SOW)**

### **Statement of Work for Contract Support to Headquarters Supreme Allied Commander Transformation (SACT) for the Force Lethality Enhancement eXtended (FLEX) Modelling and Simulation Study**

#### **Introduction**

Headquarters Supreme Allied Commander Transformation (HQ SACT) was activated on 19 June 2003 to be NATO's agent for change, leading the continuous improvement of Alliance capabilities to uphold NATO's global security interests.

#### **Background and Scope of Work.**

Allied Command Transformation (ACT) is initiating Force Lethality Enhancement eXtended (FLE(X)), building upon the outcomes of the initial FLE study conducted in 2025. FLE focused on identifying novel options to deliver NATO Defence Planning Process (NDPP) Capability Targets (CT) in whole or in part. FLE(X) broadens the scope to include exploratory questions that look at the evolving operational problem sets that drive requirements and then CT. FLE(X) aims to identify new ways and means of achieving operational effects and to accelerate the translation of innovation into operational capabilities.

**FLE(X) will explore how the rapid adoption of new and emerging technologies, including robotics, autonomy, artificial intelligence, advanced networking, and precision-strike systems, can enhance the lethality of the NATO force and improve survivability, agility, sustainability and affordability. The studies will seek to deliver evidence-based insights that can support national decision-making on capability options and inform future NATO capability development including force-design activities.**

The contractor will provide analytical support through mission analysis, modelling and simulation, and structured evaluation of operationally relevant use-cases to identify credible opportunities for enhancement. This work will form part of a broader evidence base developed by ACT and participating Allies to inform the transformation of the Alliance's military instrument.

FLE(X) will commence with two research studies identified by SACT as key areas for near-term force enhancement:

- Robotics in Land Warfare: Indirect Fire; and
- Multi-Domain Precision Strike.

### **Type of Contract and Period of Performance.**

- a. **Type of Contract.** This is a Firm Fixed Price (FFP) deliverables contract
- b. **Period of Performance.** 2 February 2026 to 30 April 2026 based on the Statement of Work Deliverables' schedule.

### **Tasking and Deliverables**

#### **Tasking**

The contractor shall perform tasks/functions, complete and submit deliverables to be approved by the COTR and submit periodic reports.

#### **Approach**

Building on the background and scope of work described in paragraph 2 of this Annex, the contractor will conduct analytical work to support the initial phase of FLE(X). This includes the derivation of operational use-cases, associated mission analysis, modelling and simulation, and structured evaluation guided by the research questions identified by SACT.

The contractor shall:

- develop and use unclassified scenarios representing NATO and Allied operations to assess and measure the outcomes.
- document all assumptions, data sources, and methodologies to ensure transparency and reproducibility.
- identify alternative means and approaches (solutions) that prioritize interoperability to deliver required effects, potentially using Emerging and Disruptive Technologies (EDT) that enhance the lethality of the NATO force and improve survivability, agility, sustainability and affordability;
- apply appropriate analytical tools and validated data to quantify the operational benefits, risks, and trade-offs of using the potential solutions;
- present findings as a set of evidence-based options, including cost, manpower, industrial, and timeline implications.

The contractor shall maintain close coordination with ACT staff and designated subject-matter experts throughout the project, participating in periodic review meetings and workshops to validate findings and refine analytical priorities.

The Contractor can propose adjustments to improve the research questions in terms of focus, and scope. Such proposals and any resulting change to deliverables will need to be agreed by the COTR and

## Research Topics

The following research questions define the specific areas to be assessed and analysed under this Statement of Work:

### **1. Robotics in Land Warfare: Indirect Fires.**

#### **Why and What**

NATO is conducting this research to accelerate its military pursuit of advantage in fire superiority. Specifically, to advance speed and resilience, leveraging robotics to dramatically increase the tempo and survivability of 155mm indirect fire capability in highly contested environments. A usable outcome must deliver implementable capability options. These options could reduce crew exposure, offering Allies new means to sustain indirect fires under threat.

#### **Overview.**

This research assesses how robotic systems can be integrated across the Ammunition to Effect (A2E) chain, for 155 mm artillery to increase tempo, reduce crew exposure and shorten the detect-to-effect cycle, while identifying necessary safeguards and enabling conditions. The objective is to retain the existing 155 mm gun system and not pursue further automation of the gun platform itself, while replacing or augmenting human tasks around the gun at selected steps of the A2E chain with robotic, likely semi-autonomous or autonomous, solutions where appropriate. Elements. The study will identify which steps are suitable for automation, evaluate advantages and disadvantages, and compare robotic performance to human performance in terms of effectiveness, speed, reliability, initial and maintenance cost, and risk. The results should be implementable within five years by Allied forces (TRL 4 and above).

#### **Research Questions**

1. What operational effects and risk trade-offs arise from deploying robots across the full A2E chain for 155mm artillery, and which mission profiles benefit most?
2. Which planning, tasking and fire-control functions, including AI-enabled land targeting, can be safely automated to shorten decision cycle time?
3. Can robots perform ammunition provisioning and fuze/charge configuration reliably? What fault tolerance is needed, and what safeguards prevent misconfiguration?
4. Which robotic transport and handling concepts reduce personnel levels and loading times under contested or degraded conditions, while preserving crew safety?
5. To what extent can robotic subsystems support gun laying, fire control and rapid correction without degrading first round hit probability or rounds to effect?
6. Can robots autonomously perform timely and reliable battle damage assessment that shortens the re-attack loop, and what validation and human verification is required?

7. What requirements must be met for operational adoption, including acceptable autonomy levels, cyber resilience, human on the loop governance, sustainment burden and lifecycle cost?
8. How can we ensure complementarity and collaboration of manned and unmanned capabilities (MUM-T), across battlefields (depth), formations (width) horizontally and across levels of command vertically, to achieve synergetic indirect fire effect on targets at 30 to 40 km?

### **Analytical Focus**

- Define representative operational scenarios and mission profiles for 155mm A2E employment under contested and degraded conditions.
- Model latency, detection certainty, and fire control chains and interoperability implications with and without robotic interventions.
- Analyze automation points, fault tolerance requirements and human assurance roles to establish acceptable autonomy envelopes.
- Assess logistics, sustainment and lifecycle cost impacts of robotic introductions.

### **Expected Outputs.**

- Mission descriptions and baseline assumptions, including threat and environmental conditions.
- Quantitative simulation results that compare detect to effect timelines, first round hit probability, rounds to effect and crew exposure across options.
- Risk register with suggested safeguards, human on the loop arrangements and cyber resilience requirements.
- Set of implementable capability options with cost, manpower and timeline implications.

Outputs should be delivered in the form of a written report. The report should include:

- An Executive Summary, highlighting strategic insights and potential force and capability choices;
- A Main body describing the methodology, findings and options for national consideration. The quality, rigor, and applicability of the work should be highlighted: and
- Conclusions, highlighting the key take aways.

It is important to demonstrate the conceptual soundness and strategic depth of the work. This includes the degree to which the analysis aligns with NATO strategy, policy objectives, and military plans and doctrine and the extent to which the analysis considers second- and third-order effects, not just immediate outcomes. Critical and Creative Thinking is essential, however options identified must be realistic over the next five years. Evidence of exploring a comprehensive range of alternative approaches. A candid assessment of the work's strengths and weaknesses as well as clear articulation of the risks and uncertainties associated with each option, including costs and performance trade-offs should be included. Finally, the ability to present complex strategic concepts,

analysis, and recommendations in a clear, concise, and simple manner for senior decision-makers is essential.

## **2. *Multi Domain Precision Strike.***

### **Why and What**

NATO requires this research to solve the operational problem posed by sophisticated threats, including A2AD, that can deny the Alliance freedom of action and threaten the survivability of limited high-value strike platforms. This capability gap erodes deterrence and can prevent the Alliance from achieving speed in complex, contested environments, which is fundamental to Multi-Domain Operations (MDO). A usable outcome would be based around a Concept of Operation (CONOP) identifying technically validated, modular dispersed delivery nodes. These could include containerized launchers, vehicle-mounted systems, coordinated drone swarms, advanced military drones acting as a force/effect multiplier all supported by a secure, low-latency Command and Control (C2) architecture. These transformational options must allow Allies to generate persistent, converging effects at depth and scale and improve resilience including through increased use of non-traditional, lower-cost platforms. The study will also assess how loyal wingman-type systems can contribute to multi-domain precision strike, for example as persistent sensors, decoys, communications relays or munitions carriers., is an option to contribute

### **Overview**

This research examines how multi domain, dispersed delivery options using lower-cost munitions, for example containerized, truck borne, air lifted, or ship mounted launch nodes, and coordinated drone swarms, can generate precision strike effects alongside, but not necessarily relying on dedicated manned fifth generation fighters. The study will assess operational utility, risks and enabling conditions for distributed strike approaches and will evaluate how these approaches perform in contested and degraded environments compared with conventional platform centric strike. The results should be implementable within five years by Allied forces (TRL 4 and above).

### **Research Questions**

1. Which operational concepts best exploit dispersed delivery nodes to produce timely, precise effects in the deep fight, and how do they compare with conventional air delivered strike in terms of speed and tempo, reach and persistence?
2. What ISR, sensor to shooter linkages and command and control architectures are required to enable authenticated, low latency targeting and weapon release across distributed platforms and domains?
3. What detection, attribution and escalation risks do covert, dual use or distributed delivery methods introduce, and how do these risks affect political acceptability, rules of engagement, and allied decision making?
4. What survivability, signature and sustainment trade-offs arise from mobility, concealment and dispersion of strike nodes, and how do payload, signature management and logistic footprint interact?

5. Which munitions capability envelopes, including range, guidance robustness, fuzing and lethality parameters, are most compatible with nontraditional launch concepts, and what systems level integration constraints must be addressed?
6. How resilient are distributed strike concepts to countermeasures such as integrated air defence, interdiction, electronic warfare and cyber-attack, and which distributed redundancy, deception or manoeuvre techniques improve mission assurance?
7. What are the lifecycle cost, logistics and industrial base implications of fielding containerized, vehicle mounted or air lifted strike nodes at scale, compared with investing in platform centric solutions?
8. Where can loyal wingman type systems add operational value to dispersed delivery concepts, for example as persistent sensors, comms relays, decoys or munitions carriers, and how does their inclusion change the concept of operations, risk profiles and enabling requirements?
9. What human supervision, legal and ethical constraints apply to weapon release and target prosecution in distributed concepts, and what human in the loop, on the loop or human on the loop architectures are acceptable and practical for allied employment?

### **Analytical Focus**

- Develop comparative concepts of operations for dispersed delivery nodes versus conventional strike, including tempo, reach, persistence and relative cost metrics.
- Define end to end ISR to shooter chains effectiveness and model latency, authentication and C2 dependencies.
- Assess political and escalation risks and evaluate ROE constraints and attribution challenges.
- Evaluate resilience to counter measures and identify architectural or operational mitigations.

### **Expected Outputs**

- Set of concepts of operations with quantified operational metrics and comparative analysis including cost against baseline platform delivered strike.
- Architecture options for ISR, sensor to shooter linkage and secure C2, with required performance thresholds.
- Risk assessment addressing attribution, escalation and political acceptability, with recommended policy and operational mitigations. Industrial, logistics and lifecycle cost appraisal for shortlisted delivery concepts.

### **Schedule of Delivery**

The contractor shall be responsible for the functions and deliverables listed in Table 1. 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/reports and a formal briefing/report at the conclusion of the project.

Table 1. - Deliverables

Ser	Task	Location	Date
1	Initial meeting with vendor – explanation of specific operational use-case and operational research questions.	Contractors Facility (VTC) or as directed by COTR	02 Feb -
2	Deliver monthly interim Reports (project highlights, to include issues, opportunities and risks and outlook for the next period.	N/A	01 Mar 26 01 Apr 26
3	Delivery of <b>draft</b> product – based on the format that will be provided.	Contractors Facility (VTC) or as directed by COTR	24 Apr 26
4	Interrogation of data to resolve analysis issues – if required	Contractors Facility (VTC) or as directed by COTR	24 Apr 26
5	Delivery of <b>final</b> product – based on the format that will be provided.	Contractors Facility (VTC) or as directed by COTR	30 Apr 26
6	Contract concluded – formal closing report provided to ACT.	Contractors Facility (VTC) or as directed by COTR	30 Apr 26

**Acceptance Criteria**

ACT will accept if the delivery of the products is: 1) on time; and 2) fully in line with the requirements stated in paragraph 4 of this SoW.

**Place of Performance**

Contractor’s personnel are expected to perform the required work at their contractor facility with regular update meetings by VTC as specified by the Contracting Officer’s Technical Representative (COTR).

Travel and related expenses will not be covered under this contract but handled separately if needed.

**Security considerations for the deliverables**

As this study is conducted by HQ SACT on behalf of NATO and all 32 Allies, all deliverables and results shall be fully releasable at NATO UNCLASSIFIED level for distribution across the NATO enterprise and to individual Nations’ Ministries of Defence.

**ANNEX A TO  
SOW FOR IFIB-ACT-SACT-26-16**

***Requirements Matrix***

1. Contractor’s technical proposals will be assessed on the qualifications of the company and the proposed team to perform the work. Teams will be measured against each of the criteria specified below to ascertain whether the team qualifications are considered compliant. **Scores cannot be assumed to be a one for one calculation. Scores will be assigned within a range based on the number of years, relevancy of experience, level of experience, depth of experience, etc.** (HQ SACT reserves the right to conduct technical discussions for clarification). Examples of how detailed knowledge levels were attained are expected.

***Compliance Matrix***

Item	Compliant	Non-Compliant
1. Key personnel supporting development must be citizens of NATO member nations.		
2. Personnel Expertise. The qualifications and experience of the personnel proposed must include a background in senior security and defence roles.		
3. Past Performance. At least one past performance citation within the last five years. The citation must show that work that is similar to or directly traceable to the requirements outlined in this SOW has been successfully completed.		
4. Access to data. Must have access to data that is fit for purpose (validated, authoritative and reliable) to support strategic decisions and force comparisons.		
5. Contractor company is Headquartered within a NATO member nation.		

***Best Value Criteria Matrix***

Item	Range		Score (100 pts possible)

NATO UNCLASSIFIED

1. NATO Experience. Recognized for conceptual soundness and strategic depth in analysis of military posture, plans structures, forces and capabilities from both a NATO and adversaries' perspectives.	<1yrs = 0 (Non-compliant) 1yrs< &<4yrs=1-10 points 4yrs< =11-15 points		
2. Work that demonstrates critical and creative military thinking that questions assumptions, challenges conventional wisdom, and is not subject to cognitive biases. Work that develops innovative, non-obvious approaches and solutions to complex problems.	<1yrs = 0 (Non-compliant) 1yrs< &<4yrs=1-10 points 4yrs< =11-15 points		
3. Military strategic, operational and tactical level analysis experience and the ability to integrate doctrine, logistics, cost, and risk into force options. (include references)	<2yrs = 0 (Non-compliant) 2yrs< &<4yrs=1-10 points 4yrs< =11-20 points		
4. Experience in modelling and simulation and data analysis. Expert knowledge of the relevant M&S tools to assess lethality, performance and survivability in specified mission areas. The contractor must know the models' limitations, biases, and data requirements.	<1yrs = 0 (Non-compliant) 1yrs< &<3yrs=1-10 points 3yrs< =11-15 points		
5. At least 1 analyst (contractor staff) with considerable experience in warfare capabilities in each of the Maritime, Land, Air, Space and Cyber Domains.	<1yrs = 0 (Non-compliant) 1yrs< &<4yrs=1-10 points 4yrs< =11-15 points		
6. Experience with metrics Development. Experience in defining clear, quantifiable Measures of Effectiveness (MOEs) that link force structure elements directly to mission outcomes.	Yes = 1-5 points No = 0 points (Not a disqualifier)		

<p>7. Number of successful completions of similar types of projects/analyses delivered to NATO or NATO-member(s) after 2020 (Customer references)</p>	<p>&lt;1 = 0 (Non-compliant)          1 &lt; &amp;lt;3 =1-10 points          3 &lt; =11-15 points</p>		
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