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Our Reference*: 711647451 – Next Generation Surface Electronic Warfare Threat*

Date: 14th February 2024

**Request for Information (RFI)**

**For MUSTANG – Project 2 – Next Generation Surface Electronic Warfare Threat**

**1. Contract Title:**   
Title attributed to this request by the Contracting Authority: GB-High Wycombe:

**Surface Electronic Warfare Threat (SEWT)**

**2. Contracting Authority**

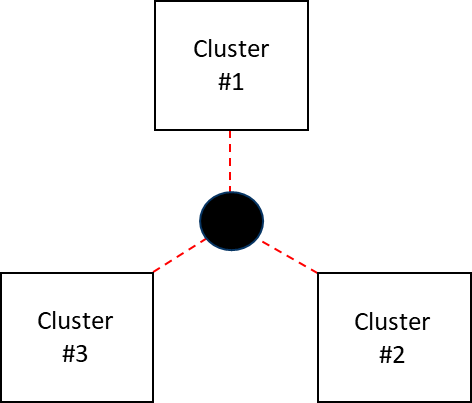
Ministry of Defence, Air Commercial, Nimrod (Bldg 7) 3 Site, RAF High Wycombe, High Wycombe, HP14 4UE, United Kingdom

Email [air-cmrcl-ngot@mod.gov.uk](mailto:air-cmrcl-ngot@mod.gov.uk)

**3. Brief Overview of Requirement:**

The Authority seeks to develop its understanding of market capability and interest in providing a new training Ground Based adversary Integrated Air Defence System (IADS). With the ability of being used individually or collectively by single service, joint or combined forces, this new training system shall provide an adversary representative Threat Replication and Electronic Warfare (EW) training capability to the Combat Air Force (CAF), other Defence Force Elements (FEs) as well as Allied and International Partners.

Based upon a ‘Hub & Spoke’ model, the capability will be centrally controlled from a Capability HQ location and offer ‘up to 3’ deployed elements. These elements - or as also known as ‘Clusters’ - will be what replicates the adversary IADS. The Clusters will be mobile by design to take the training to the User, eliminating transit time and offering the opportunity to maximise training interaction, as well as offering opportunities to rapidly vary cluster disposition and threat density.



*Figure 1 – Hub and Spoke Model*

Each Cluster will have the ability to be operated independently, or as part of a larger, networked and coordinated threat IADS, but crucially will have the ability of remote operation whilst deployed over a wide geographical area. Operating as a ‘system of systems,’ each Cluster will be made up of multiple, individual elements which come together as a whole to replicate the IADS. Made up of Core Threat Emitters, Supporting Threat Emitters, Stimulators, Electronic Warfare Systems, Surrogates & Rotators, each Cluster can be tailored in size and function, ensuring that the effects provided match the training need required of the User(s).

The whole capability will be underpinned using a data driven Command. Control & Communications (C3) System, including a robust network that hosts a Plan, Brief, Execute & Debrief (PBED) suite that not only provides management and situational awareness of training scenarios, but also management of the overall capability. This Command & Control (C2) will be conducted remotely from the HQ location via a suitable and encrypted bearer of opportunity but could also be operated from its location organically.

**Cluster Make-up:**

1. **Core Threat Emitter**. High-powered threat emitter capable of producing high-fidelity threat replication, offering the ability to transmit multiple, different & simultaneous signals.
2. **Supporting Threat Emitters**. Representing the self-protection systems of the longer-range Core Emitter, the Supporting Threat Emitters will be individual systems transmitting a minimum of 2 individual, simultaneous Threat Signals. Supporting Threat Emitters will also include Low-Cost Threat Emitters (LCTE) to build combat mass. LCTEs will be individual systems which have the ability of transmitting individual signals.
3. **Threat Stimulators**. Ultraviolet (UV) & Infrared (IR) Stimulation replicating Man Portable Air Defence Systems (MANPADS).
4. **Electronic Warfare (EW) System**. Coherent & non-coherent Electronic Countermeasures (ECM), including noise, deception of radar, communication ECM and Navigation Warfare.
5. **Surrogates**. Rapidly deployable & re-deployable Physical Surrogates offering accurate Synthetic Aperture Radio (SAR) images in terms of Size, Shape, Shadow and Reflectivity. For standoff platforms Digital SAR capabilities could be used.
6. **Rotators**. Rapidly deployable & re-deployable Rotators offering Scintillation effects or a system that emulates this.

**CPV code:**

* **80650000** - Training and Simulation in Aircrafts, missiles, and spacecrafts.
  + **80660000** Training and simulation in military electronic systems (sub code)

**Main Service Users:**   
**•**    The Royal Air Force: Owner and Operational Authority

**•** Combat Air Force (CAF): Primary User

**•**   Intelligence, Surveillance Target Acquisition & Reconnaissance Force Headquarters (ISTAR FHQ): Primary User

**•**   Headquarters Joint Helicopter Command (HQ JHC): Primary User

**•**   Fleet Air Arm (FAA) Helicopters: Primary User

•   Air Mobility Force Headquarters (AMF HQ): Primary User

•   UK Strategic Command (StratCom): Primary User

•   Joint Training & Exercise Planning Staff: Primary User

•   Other UK Air Domain Units: Secondary Users

•   NATO and Allied Partners: Tertiary Users

**Documentation**

Requirement documents are classified at Official Sensitive (OS) level so therefore are not shared as part of this RFI. They will be shared electronically to all qualifying parties who submit an expression of interest to attend and meet the required conditions as detailed in section 8 of this notice.

**4. Purpose**

The purpose of this Market Engagement is information exchange to further understand the current market, its competitiveness, key players and to take that information into account when considering the future procurement.

The Authority has considered our previous market engagements and would like to deliver to market updated information on timelines, scope and the revised programme thinking.

The Authority is seeking to understand from Industry to further develop and to support the project approach for the provision of Surface Electronic Warfare Threat capability. Any information shared directly in response to the RFI will be treated as commercial in confidence.

The principal information that is being sought is as follows:

**5. RFI Questions Technical**

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| **Technical Question 1** |
| **Core Threat Emitter** – Each Cluster will have an individual system which can transmit between 8 to 16 different threat signals, simultaneously. Representing Long Range Surface-to-Air Threats, the system shall have the ability of dynamically targeting and tracking multiple platforms Beyond Visual Range (BVR) from third party information sources. This system shall be autonomously mobile and be ready for transmission no more than 90 minutes following arrival at training location.  In no more than 400 words please outline the main problems and opportunities with this approach. Is this concept possible? |

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| **Technical Question 2** |
| **Supporting Threat Emitters** – Each Cluster will utilise a family of Supporting Threat Emitters to enhance the capability provided by the Core Threat Emitter. Including LCTEs, the Supporting Threat Emitters represent short and medium range adversary surface-to-air threats.  In no more than 400 words please outline the main problems and opportunities with this approach. Is this concept possible? |

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| **Technical Question 3** |
| **C3 Solution** – Each Cluster will consist of multiple, different & individual systems; however, they require to be wirelessly connected to ensure efficient & effective Command, Control & Communications (C3). Each Cluster will be geographically dispersed, potentially hundreds of miles from the Cap HQ / Excon Location.  In no more than 400 words please outline the main problems and opportunities with this approach. How could this be achieved noting that we must ensure robust and assured wireless connectivity between each individual Cluster entity, and each Cluster back to Capability HQ / ExCon? |

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| **Technical Question 4** |
| **Interoperability** – It is essential that the Capability is not only interoperable with all UK Defence Users, but also NATO and Allied partners, in both the Live and Synthetic environments, across all domains.  In no more than 400 words please outline the main problems and opportunities with interoperability with the above users / environments / domains throughout the life of the contract. |

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| **Technical Question 5** |
| **Security** – In no more than 400 words, please outline the main Risks, Assumptions, Issues, and Dependencies with handling, disseminating, storing & managing both equipment and data up to the Security classification of UK SECRET. |

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| **Technical Question 6** |
| **Capability Evolution** – In no more than 400 words please outline the main problems and opportunities with ensuring the capability maintains technological relevance and threat alignment throughout the life of the contract. |

**RFI Questions : Commercial**

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| **Commercial Question 7** |
| In no more than 400 words please respond to the following.  Since our Market Engagement Activity in December 2023, has your commercial approach or supplied information changed from the submitted information within the engagement at that time?  e.g. You were not considering partnering with other suppliers and now you are?  e.g. If mobilisation timescales were 18 months and they would now be longer/shorter?  e.g. Has there been a financial, business or interest change in this sector from your perspective? |

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| **Commercial Question 8** |
| In no more than 400 words please respond to the following.  Would you be interested in a lotting approach?  If so, how would you prefer to lot and/or would there be any lotting approaches that you would not consider?  e.g. You have the need for financial support on larger CAPEX related lines or you would prefer to offer SQEP only.  e.g. Lot by output or service (C2/C3, Logs & Booking, SQEP, Physical Assets, Support and Maintenance), customer base (Wide Body, Helicopters and Fixed Wing), threat supply (Main Threat, Surrogate, Rotator, Long Range, Short Range, UV or ECM) or lot by geography / jamming area.  If lotting were not to be selected, how would you meet the SME agenda targets as part of this project? |

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| **Commercial Question 9** |
| In no more than 400 words please respond to the following;  Through us seeking this service, would you need access to a RAF/MoD site to support best commercial offering?  At what stage would sight of all GFX including site assets/access be ideal as part of this process?  How long would you need to digest this information to inform your approach? |

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| **Commercial Question 10** |
| In no more than 400 words please respond to the following;  The Authority is considering its risk approach to this first generation outsource.  Please flag your top three areas of risk relating to this project from a supplier perspective.  If you have broad range estimates for risk e.g. FOREX @ 2% of total contract value, please give insight where possible with broad reasoning.  e.g. Your outside UK supply base is in the USA so FOREX would be a 25% consideration on risk. Therefore, you would prefer an approach that does not place the FOREX risk on you and prices to be in USD and GBP. |

**How to submit responses**

Responses should be only provided in accordance with the format provided in **Annex A** attached below**.**

Please do not submit additional documents, for example company brochures. The purpose of this RFI is to collect information related to the requirement outlined; any additional documents will not be reviewed.

There is no obligation for respondents to provide information to all questions respondents should look to provide relevant information they feel will assist the Authority in achieving the desired RFI outcomes.

Once Annex A is completed, please return electronically to [air-cmrcl-ngot@mod.gov.uk](mailto:air-cmrcl-ngot@mod.gov.uk)

Responses will be acknowledged electronically by return e-mail.

**Deadline for return of completed Annex A - Monday 17th March 2025 at 17:00hrs**

**6. Planned Market Engagement (ME)**

The MOD and the Royal Ari Force (RAF) will provide further briefing with details on this requirement. This engagement will take place on **25th March 2025** commencing at **10:30hrs**. Invitations will be sent out to all eligible parties who register their interest to attend. The format for this engagement will be delivered via a live hosted webinar.

Following this Market Engagement a further clarification period will be open to receive further questions from participants. All questions from participants and subsequent responses provided by the authority will be shared for transparency purposes. This Clarification period will run from 25th March 2025, last date for receipt of clarification questions will be **15th April 2025 at 17:00hrs.**

**7. Security Criteria for Participation**   
Owing to the sensitivity of the subject matter to UK Defence, responses are invited from organisations with current MOD security clearance or with clearance up to UK SECRET UK EYES ONLY. The EW capabilities are supported by Suitably Qualified and Experienced Personnel (SQEP) with the appropriate UK security clearances.

**8. Registration of Interest to attend:**   
Eligible organisations with an interest in engaging should register their interest via email to [air-cmrcl-ngot@mod.gov.uk.](mailto:air-cmrcl-ngot@mod.gov.uk) Please provide the following information:

1.   Full name of the company and UK base;   
2.   Full name(s) and contact details of the representative(s) within the company;   
3.   Confirmation of MOD security clearance or suitability for clearance to UK SECRET UK EYES ONLY including:

* SC or Above Clearance Reference Number
* SC or Above Clearance Date
* SC or Above Clearance Expiry Date

**Deadline for registration for invitation to attend - Monday 17th March 2025 at 17:00hrs**

**9. Please Note:**

* This RFI is an information gathering exercise only, no further discussions with industry are planned at this stage.
* This request is not a commitment by the Authority to launch a formal procurement activity and the requirement detailed above is subject to change.
* The Authority will assess responses to the RFI and may seek further clarification.
* Participation in the RFI will not be taken as an expression of interest.
* Participation in the RFI will not be a prerequisite for participation in any future procurement activity.
* By receiving information under this RFI, the Authority is not obligated to enter a Contract, and any future procurement activity will be at the Authority’s discretion.
* The Authority will not be liable to reimburse any costs incurred by parties who respond to this RFI.
* The Authority does not intend to offer debriefs following receipt of responses under this RFI.
* Any future procurement activity will be run through the Defence Sourcing Portal (DSP).
* Information received via **Annex A** will not be added to any tender responses received from any future procurement processes.

**ANNEX A: RFI Response Template**

Reference: *711647451 – Next Generation Surface Electronic Warfare Threat*

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| **Question** | **Answer** |
| Company Name |  |
| Company Address |  |
| Name of Company representative completing the RFI |  |
| Contact details (e-mail and telephone number) |  |
| Company web site address |  |
| ***Note: Please ensure your response in Annex A is no more than 400 words per question Anything greater than this will not be considered.*** | |
| Q.1 Technical | |
| Q.2 Technical | |
| Q.3 Technical | |
| Q.4 Technical | |
| Q.5 Technical | |
| Q.6 Technical | |
| Q.7 Commercial | |
| Q.8 Commercial | |
| Q.9 Commercial | |
| Q.10 Commercial | |
| Please use this space to provide any further information you wish to assist the Authority in achieving the desired outcomes listed in section 3 of this RFI: | |