# **MORPHEUS Key Management System - Discovery Event**

**Authority Reference Number:** 706430452

**Contracting Authority:**

**Project Team:** Tactical Systems Delivery Team (TacSys)

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**Background Information:**

**The Land Environment Tactical Communications and Information System (LE TacCIS) Programme**

The portfolio of capability known as Bowman, the Common Battlefield Applications Toolset (ComBAT), Digitisation Infrastructure and Platform Battlefield Information Systems Application (PBISA), and collectively known as BCIP, is the core Tactical Communications and Information System used by the UK military. The capability is delivered by the Tactical Systems Services Executive Team (TacSys) delivery team, in conjunction with the Army Headquarters (AHQ) (as capability senior responsible owner and funding sponsor) and collaboration with key Industry partners.

BCIP provides the primary secure voice and data communications and situational awareness systems to UK Land Environment (LE) in support of operations, training and readiness. The systems are deployed across 16,000 Land platforms, 130 Naval vessels, 200 aircraft, and are used on current operations. BCIP is currently undergoing a £140M technical refresh to deliver greater information advantage, address safety and security obsolescence and increase operational tempo and effectiveness.

BCIP, other elements of TacCIS such as Joint Common Remote Viewing Terminals (JCRVT), Multi-Mode Radios (MMR), Personal Role Radios (PRR) and cadet radios, along with their future replacement systems make up core elements of the LE TacCIS programme.

**The MORPHEUS Sub-programme**

MORPHEUS is a sub-programme of the LE TacCIS programme run by the TacSys team. It will deliver the next generation of TacCIS to forces operating in the LE, inclusive of the Royal Navy in the littoral environment and elements of the Royal Air Force. The transformation of TacCIS delivery through MORPHEUS will enable the Ministry of Defence (MOD) to become the MORPHEUS System Design Authority (SDA) and have the ability (both commercially and technically) to make critical system-level decisions.

In addition to updated and new capability, MORPHEUS will enable evolutionary capability development in a way that has been impossible before.

The benefits MORPHEUS will deliver to the front-line soldier include:

* Improved end-to-end shared situational awareness from soldiers to HQ
* Increased bandwidth and a more resilient network, allowing soldiers to get the information they need, when they need it
* Open architecture enabling interoperability by design, giving the ability to develop and deliver applications in the way soldiers want – leading to better usability and at a faster pace

**Discovery Event:**

The purpose of the MORPHEUS Key Management Discovery Event is to research capabilities within the current Industry base for Key Management systems and identify any possible constraints for Defence. This Discovery Event will consist of two phases as outlined below;

* **Phase 1**: Technical survey. This survey focuses solely on current and in development key management solution offerings, in particular those supporting Defence.
* **Phase 2:** Face-to-face engagement. With pre-determined agenda. Suppliers that demonstrate requisite capabilities in Phase 1 may be invited to follow up engagement with the Authority to further understand the details around technical aspects of the product or capability up to UK SECRET classification. The proposed dates and location for face-to-face engagement: 18th, 19th, 20th, 25th, 26th, 27th of April 2023 MOD Abbey Wood, Bristol, BS34 8JH.

**Who can access the survey?** The survey is open to Industry parties that may be interested in contributing to the Authority’s knowledge about existing or in development key management systems.

**What if I have a question arising from the survey?** Organisations taking part in this Discovery Event will be able to ask questions by emailing UKStratComDD-IES-BC-IndEngmt-GM@mod.gov.uk.

The deadline for clarification questions is **8th February 2023 at 17:00pm**. The Authority will issue answers to all submitted clarification questions via the DSP on the 15th February 2023.

**Phase 1 – Technical Survey**

**Survey closing date:** 1st March 2023 by 17:00pm

**Response format:** Responses shall be submitted in Microsoft Word format and shall not exceed 1500 characters per question.

**How to submit a response**: Please send all Technical Survey responses to: UKStratComDD-IES-BC-IndEngmt-GM@mod.gov.uk

**The MORPHEUS Key Management System (MKMS)**

MKMS will provide cryptographic key, and associated communications information, to the point of fill on cryptographic devices being delivered by MORPHEUS as part of the bearer solution. It will achieve this by interfacing to external key generation, manipulation and distribution systems, as well as by providing key generation for keys not supplied by external systems. MKMS will provide key manipulation and distribution internal to MORPHEUS in accordance with communication plans that are developed by system management tools. MKMS is planned to interface to the system management tools to receive communication plan information and provide any necessary information from MKMS. Keys generated by MKMS will need to be available to external key management systems to facilitate interoperability (e.g. between non-MORPHEUS Army Aviation and MORPHEUS ground troops).

MKMS will adopt a user-centric design, that takes account of the threat environment and places interoperability with allies and coalition partners at the heart of its development. The solution will also need to integrate with the wider UK crypt-key enterprise.

The scope of the project includes any fill devices and/or applications needed to fill cryptographic equipment as well as to manage the key management system in support of crypto management responsibilities. This scope shall include, where necessary, assured Public Key Infrastructure (PKI) to support the MORPHEUS crypt-key solution.

MORPHEUS will operate at up to, and including, SECRET Releasable to the Mission/NATO. The key management system scope will include all cryptographic key material including interoperability keys, GPS, transmission and communication security.

The current planned timeframe for MKMS operation with other MORPHEUS system elements is 2028.

**Early Market Engagement**

The purpose of this engagement is for MOD to understand Industry’s capability to offer solutions to meet the MKMS need. A set of questions are provided below, the answers to which would assist MOD in this regard.

**Section 1: Company Details**
Company Name:
Companies House Registration Number:
Point of Contact:
Name:
Role:
Phone:
Email:

**Section 2: UK Crypt-Key Supply**

For the questions in this section please identify examples of solutions as supporting evidence. However, detailed description of these solutions is not required.

**Q1.** Are you a supplier of high assurance crypt-key solutions to the UK?

[ ] Yes

[ ] No

**Q2.** Which national authority provides assurance of your company crypt-key capability and facilities?

Please Insert Answer (1500 characters)

**Q3.** Are you a current supplier of UK High Grade products?

[ ] Yes

[ ] No

**Q4.** Are you currently in the process of becoming an approved supplier of UK High Grade products?

[ ] Yes

[ ] No

If Yes, please provide details of current engagement and progress to date (1500 characters)

**Section 3: Key Management System**

**Q1.** Does your company have the capability to deliver the described scope of MKMS?

[ ] Yes

[ ] No

**Q2.** Would you need to partner with another company to be able to supply all high assurance elements of MKMS to meet the described scope?

[ ] Yes

[ ] No

Please identify those elements of the system you would consider offering for supply by another company: (1500 characters)

**Q3.** What high assurance elements of an MKMS solution do you believe you could offer, either directly or potentially by supplying through another company?

Please identify those elements of the system you would consider offering: (1500 characters)

**Q4.** Do you have a key management solution within your current product range (i.e. actively supported):

[ ] Yes

[ ] No

If yes please provide an overview including scope of functionality, assurance status and national assurance body (as appropriate). Please provide details of any planned development of this capability within MKMS timescales.

Please Provide Details (1500 character)

**Q5.** Does your current key management solution provide an assured key generation capability?

[ ] Yes

[ ] No

If yes please provide details (1500 characters)

**Q6.** Do you have a key fill solution(s) within your current product range (i.e. actively supported)?

[ ] Yes

[ ] No

If yes please provide an overview including scope of functionality, assurance status and national assurance body (as appropriate) Please provide details of any planned development of this capability within MKMS timescales.

If yes please provide details (1500 characters)

**Q7.** Do you have a key management solution that is currently under development that will be available within MKMS timescales?

[ ] Yes

[ ] No

If yes please provide an overview including scope of functionality, assurance status and national assurance body (as appropriate).

If yes please provide details (1500 characters)

**Q8.** Will this solution provide an assured key generation capability?

[ ] Yes

[ ] No

If yes please provide details (1500 characters)

**Q9.** Do you have key fill solution(s) that are currently under development that will be available within MKMS timescales?

[ ] Yes

[ ] No

If yes please provide an overview including scope of functionality, assurance status and national assurance body (as appropriate)

If yes please provide details (1500 characters)

**Q10.** Do the previously described products (available or in development) support international crypt-key standards (including, but not limited to, crypto interoperability specifications and system interfaces)?

[ ] Yes

[ ] No

Please provide details (1500 characters)

**Q11.** Do the previously described products (available or in development) support current and emerging UK crypt-key standards (including, but not limited to, crypto specifications and system interfaces)?

Please provide details (1500 characters)

**Q12.** Are your products able to be driven by other applications/systems, such as through the use of APIs to integrate with wider communications planning tools?

Please provide details (1500 characters)

**Q13.** Are the details of the system interfaces of your solution(s) (e.g. APIs, physical connectors, interface protocols and data structures) releasable to the Authority, system integrator, third party suppliers and are they conformant with standards.

Please provide details (1500 characters)

**Section 4: Delivery**

**Q1.** How would you resource any proposed development of products and systems to provide MKMS?

If additional resources are required, please detail any current activity that would assist in meeting these potential future demands.

Please provide details (1500 characters)

**Section 5: Through Life Support**

**Q1.** Do you currently support in-service crypt key solutions, including repair, system patching, and obsolescence management?

[ ] Yes

[ ] No

If yes please provide some further details, including the countries where these activities take place

Please provide details (1500 characters)

**Q2.** Are the elements of your solution extensible and able to support introduction of additional capabilities through-life as part of system updates?

Please provide details (1500 characters)

**You must not take this announcement to mean confirmation that MOD shall award a contract for this requirement. MOD is publishing this announcement without any commitment to issue an invitation to tender or place a contract. Accordingly, any expenditure, work or effort undertaken prior to contract award is a matter solely for the commercial judgement of potential suppliers.**