

SKYNET Transition and Transformation Project (SK T&T):

Next Generation Maritime Terminal (NGMT)

Request for Information (RFI)

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| Document No: | SK6-TT-000051 |
| Date:  | 22nd October 2021 |
| UK Protective Marking:  | OFFICIAL |

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# Section 1 - Introduction

1. The Ministry of Defence (MOD) is currently developing the requirement for replacing the role of the existing maritime military satellite communication terminals (the SCOT5 (Satellite Communication Onboard Terminal 5)) through the Next Generation Maritime Terminals (NGMT) project.
2. The SCOT 5 was brought into service in 2003 by Paradigm Services (now Airbus Defence and Space (ADS)) under the Contract for Implementation and Service Delivery (CISD) funded under a Private Finance Initiative (PFI). This service provision contract had a 15-year supportability envelope aligned to the contractual period, and since its inception, the CISD has been subject to two extensions, now with a revised end date of 31 Aug 2022.
3. The MOD is seeking industry’s views on the ability to increase the capability of products throughout their life. This information will help to inform technical options, contracting routes and programme planning. The MOD would like to invite industry to provide feedback on the question set in *Section 3 – Information Requested* on page 6 of this document.
4. The objective of this RFI is to review information and contributions towards achieving the following:
	1. Assessing industry appetite for providing increased capability throughout the lifetime of the maritime military satellite communicationsterminals;
	2. Informing modelling activities in support of the options analysis;
	3. Gaining an understanding of current research and development approaches to operationally important factors such as Size Weight and Power (SWaP); and,
	4. Understanding approaches to through life support, social value and carbon reduction.

Industrial Engagement Approach

1. All responses to the question set will be treated as commercially sensitive and respondents may answer as many or as few of the questions as they wish. Only Official or Official-Sensitive responses should be sent to the email address specified on page 7 ([Response to this RFI](#_How_to_respond)).
2. The MOD may wish to invite respondents of this RFI to one-to-one sessions to discuss further details. The contents of individual responses (or lack of response) will not be taken into account in any future procurement process and is for information only.
3. The description of the NGMT project and other aspects of the SKYNET programme provided in this document are subject to change without notice or consultation. The MOD will not be held liable for any decisions or investments made based on the information contained in, or inferred from, this document.
4. Please note that it is the responsibility of the respondent to ensure that appropriate rights of distribution are in place for all information shared in response to this RFI.

RFI Security Information

1. The following security information should be read and understood before responding to this RFI:
	1. The security classification of this RFI is UK OFFICIAL.
	2. The security of the anticipated future procurement, delivery, and maintenance of NGMT is of critical national importance. The highest level of classification of the NGMT project is UK OFFICIAL SENSITIVE and this will impact on any future competitive activity regarding this project. The Official Secrets Act and other relevant legislation will also inherently apply to the SKYNET programme. Effective security will need to be designed, implemented and assured throughout the life of the programme and must cover both the system itself, the impact of connected systems and the programmatic aspect of security.

# Section 2 – The NGMT Requirement

## Background

1. The full range of MOD's satellite communication systems and services is currently delivered under several contracts and memoranda of understanding, with the bulk of services provided under the SKYNET CISD which expires on 31 August 2022. After this date, MOD will transform into an “Intelligent Owner” and will take on the responsibility for maintaining all satellite assets, services and capabilities under the SKYNET Programme.
2. This will deliver a set of requirements aimed at enabling the SKYNET Programme Single Statement of User Need (SSUN) which is described as:

“The user requires a resilient, protected, and assured worldwide communications capability to enable information superiority for UK Force Elements in the delivery of Defence Tasks and Contingent Operations.  The capability will play a significant role in ensuring positive control of UK Forces engaged in Combined, Joint, Intra-governmental, Inter-agency, Multinational (CJIIM) operations.”

1. As the current fleet of various terminals under the SKYNET Programme move towards the end of life, a workstream under the SKYNET Transition and Transformation Project (SK T&T) is focused on ensuring that next generation equipment is available to maintain or improve the MOD’s communication capability. The current focus of this early market engagement activity is the replacement of the SCOT5 maritime terminals in the form of NGMT, which are scheduled to enter service in 2026.
2. The SCOT 5 terminals provide communications between other ships and land terminals. The NGMT may be specified to provide additional functionality, such as additional multiband frequencies beyond the existing Mil X band to a dual-band operation (e.g. Mil X Band and Mil Ka Band).

## NGMT

1. The NGMT Single Statement of User Need (SSUN) sets out what the equipment must achieve: The Royal Navy requires a family of resilient, protected and assured worldwide, Military Satellite communications equipment, capable of being fitted to a broad range of RN/RFA platforms.  The equipment must be capable of working as part of a network of wider communications capabilities to meet current and future Information Exchange Requirements in support of Defence Tasks and Contingent Operations. The equipment will play a significant role in ensuring positive control of UK Forces engaged in Combined Joint, Inter-governmental, Inter-agency and multi-national operations and should be capable of continuous Beyond Lines of Sight operation in the most hostile, natural and man-made environments.
2. To ensure no capability loss, it will be important that the future NGMT provider collaborates with MOD’s supplier base to fully execute their respective roles and responsibilities, and ensure that testing, integration, safety, and training etc. are fully managed.
3. Figure 1 (Functional Block Diagram) is provided, as a guide only for respondents to enable an indicative high-level view as to the scope of the Maritime Military Satellite Communications Terminal equipment that is the subject of this RFI. **Important**: Please note the red dashed line within the diagram is intended to enable the scope of the terminal equipment to be identified without prescribing the solution.
4. While the MoD wishes to provide its users with access to an increased SATCOM capacity, this may be constrained by other factors. For example, some platforms may not be able to take substantial additional above deck terminal size and weight. Therefore, the MOD is interested in methods via which the utility of a terminal can be increased (for example, due to offering simultaneous Ka and X band communications) but without a substantial penalty e.g. substantially increased weight or substantially decreased X-band performance.
5. In addition, while the MOD wishes to provide these new capabilities to its users as soon as is practicable, it also recognises that they may not be available at low risk in the timescales required. If this is the case, the MOD is interested to understand if a phased approach to the acquisition is tenable. The MOD is currently assuming that any modifications would be to above deck equipment only and below deck equipment would remain unchanged.



Figure 1 - Illustrative NGMT Functional Block Diagram

# Section 3 – Information Requested

1. In the questions set out below, the Maritime Satellite Communications industry is requested to volunteer information which will help the MOD to form an opinion about how capabilities can be advanced throughout the life of Maritime Military Satellite Communications Terminals.

| **No.** | **Question** |
| --- | --- |
| 1 | Please provide insights into how industry’s products’ capabilities may evolve in the foreseeable future. Could features and performances be upgraded during the Maritime Military Satellite Communications Terminal’s lifetime? Examples are: could there be an upgrade from a single-band of operation (e.g. Mil X Band) to a dual-band operation (e.g. Mil X Band and Mil Ka Band)?  |
| 2 | Is industry considering measures that would ensure that upon installation of an initial single-band terminal, the terminal could be prepared for a future increase in capability to dual-band?  |
| 3 | Is industry considering developing a dual-band terminal with a minimal weight penalty compared to a single band terminal? (e.g. 10% additional weight including any necessary ancillary equipment such an environmental conditioning) |
| 4 | One of the defining characteristics of a dual-band terminal in comparison to a single band terminal is the location of the Ka-band transmission equipment. Normally, this would be near the antenna with consequent exposure to a wide range of temperatures. Under this request for information question, we would like to ascertain the following: 1. Has industry considered or is it considering developing a dual-band terminal which does not need cooling in high temperatures or heating in low temperatures?
 |
| 5 | One of the defining characteristics of a dual-band terminal in comparison to a single band terminal is the location of the Ka-band transmission equipment. Normally, this would be in close proximity to the antenna and consequently would be exposed to a wide range of temperatures. If conventional transmission equipment is used, this may require ‘environmental conditioning’ for it to operate correctly. This may provide an additional weight penalty compared to a single band terminal. Under this RFI question, we would like to ascertain the following: 1. Is industry considering developing a dual-band terminal that uses a lightweight environmental conditioning system to ameliorate this weight penalty?
 |
| 6 | One of the defining characteristics of a dual-band terminal in comparison to a single band terminal is the location of the Ka-band transmission equipment. Normally, this would be in close proximity to the antenna. Under this RFI question, we would like to ascertain the following: 1. Is industry considering developing a low-loss feeder system that would allow the Ka-band transmission equipment to be relocated Below Decks?
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| 7 | Please provide indicative timescales for the following:1. The product development cycle to upgrade from a single-band operation to dual-band operation?
2. When would industry be ready to deliver a lightweight upgradable product?
3. When would industry be ready to deliver a lightweight upgraded product?
 |
| 8 | Please provide indicative costs for the following:1. Research and development activity to upgrade from a single-band operation to dual-band operation
2. Production of a lightweight upgraded product
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| 9 | What would be the foreseeable risks and issues in upgrading a Maritime Military Satellite Communications Terminal from a single-band operation to a dual-band during its lifetime? Please ensure your response covers the complexity and duration of the work required and the impact to the platform.  |
| 10  | Regarding NGMT in-service support:1. Please describe the industry norms for contracting for initial and enduring support (e.g. contracting models, contract duration and requirement for OEM involvement)
2. How would industry suggest the Authority manages software and hardware obsolescence?
3. How would industry suggest the Authority resolves a situation in which it wishes to continue using the NGMT but the OEM supplier is no longer willing or able to provide through life support e.g. the provision of a licence to enable a 3rd party supplier to maintain the terminals?
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| 11 | Social value has a lasting impact on individuals, communities and the environment. Government has a huge opportunity and responsibility to maximise benefits effectively and comprehensively through its commercial activity. In September 2020, the Cabinet Office issued a [Procurement Policy Note (PPN) 06/20](https://www.gov.uk/government/publications/procurement-policy-note-0620-taking-account-of-social-value-in-the-award-of-central-government-contracts) which sets out how central government organisations will take account of the additional social benefits that can be achieved in the delivery of its contracts, using policy outcomes that are aligned with this government’s priorities. Under this RFI question, we would like to ascertain the following:1. What areas of improvement has your industry identified that could deliver social value through contracts? (Central government priority themes include: COVID-19 recovery, tackling economic inequality, fighting climate change, equal opportunity, and wellbeing).
2. How is industry delivering increased benefits through innovative application of social value priorities during pre-market engagement?
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| 12 | The government is committed to continued efforts to reduce greenhouse gas emissions and deliver on its carbon budget commitments, while keeping costs down for consumers and supporting the creation of good jobs and growing the economy. As environmental and carbon considerations feature in most public contracts, this is an opportunity for the Authority to take steps to support that commitment and reduce emissions through public procurement.In June 2021, the Cabinet Office issued a [Procurement Policy Note (PPN) 06/21](https://www.gov.uk/government/publications/procurement-policy-note-0621-taking-account-of-carbon-reduction-plans-in-the-procurement-of-major-government-contracts) which sets out how to take account of suppliers’ Net Zero Carbon Reduction Plans in the procurement of major Government contracts. Under RFI question, we would like to ascertain the following:1. How is industry demonstrating its commitment to carbon reduction?
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## How to respond to this RFI

1. Please be aware that the MOD is not seeking promotional material or sales pitches for unproven technologies in response to this RFI.
2. **Responses to this RFI should be sent directly to mailbox**:
* **ISSComrcl-Skynet-6A-Mailbox@mod.gov.uk**
1. **The closing date for RFI responses is:**
* **Friday 19 November 2021.**
1. Thank you for your interest in this RFI