

Invitation to Tender (ITT)

Independent study on the Requirements for sharing Defence spectrum and building a licensing framework for public sector spectrum access in the UK

22 February 2024

Background

Government has decided it needs to continue to try to release or share more spectrum, following the conclusion of the Public Sector Spectrum Release Programme at the end of 2022. Within that context, there is a need to understand the issues around sharing Defence spectrum that Ofcom and DSIT need to address before licensing it to users.

It comes from a perspective of security that the MoD cannot disclose all the information required by the current licensing framework. Ofcom's current framework for spectrum sharing and the Government's proposals are not well aligned with the MoD requirements over flexibility for Defence operations. Nevertheless, the study should not aim to replace existing MoD sharing arrangements, but to present a way for further sharing in terms that allow Defence to meet their present and future strategic needs.

Another barrier to spectrum sharing is control, since, as the priority user, the MoD requires an agile use of shared spectrum. The issues of security and flexibility span beyond Defence, so a framework for Defence could potentially assist spectrum sharing issues for all Government-used spectrum. The framework should make spectrum available in a frequency agile way to provide additional capacity for spectrum users. The spectrum shared by Defence might be suitable as a capacity layer or even for services which are agile or do not need 100% reliability. Meanwhile, the framework should account for the necessary conditions that make its adoption viable for commercial applications.

Scope

The objective of this study is to explore and understand how different potential frameworks for spectrum sharing could work under certain conditions set by the MoD, and how under those conditions, civil users can make use of the shared spectrum. The research should explore the possible arrangements and challenges for the proposed sharing framework structures, offering policy recommendations by describing how to build a functional framework, what are the problems and how these problems are solved.

Spectrum sharing can be done in many ways, from manual or pre-coordinated licensing to more automated Dynamic Spectrum Access (DSA) or Assisted Spectrum Access (ASA). Considering that when the MoD offers a particular frequency band for sharing, users of the shared frequency band may need to account for service interruption, upon notice from the MoD regarding a Defence exercise in a specific area and timeframe, Defence concluded that it needs an agreed framework that enables sharing, and that meets MoD's special requirements.

The scope of the study should not include the review of frequency bands already subject to formalised sharing arrangements. Instead, it will focus on exploring in which circumstances the economies from different sharing framework proposals are appropriate for different business cases, minimizing cost for users and considering the requirements from the MoD.

Taking this into consideration, it is important to recognize that a single methodology or framework may not be suitable for all sharing scenarios. A comprehensive study on the requirements for sharing MoD spectrum should aim to explore and illustrate potential sharing approaches, while also highlighting their respective benefits and challenges. Furthermore, the study should account for discrepancies between activities occurring within or near UK territory, e.g., waters and airspace, as opposed to those in other regions or geographies where UK security interests or strategic partnerships with allied nations are relevant.

In summary, Defence is seeking a framework that highlights the principles for the intended method of sharing. The study is a policy piece to describe how MoD, Ofcom, and Government can implement different functional frameworks for spectrum sharing, while clarifying what the problems are and how they can be solved under different sharing scenarios.

Expected deliverables

1. A report detailing the findings including:
 - a. Map of MoD/Defence-specific requirements and analysis of any issues from adopting sharing techniques and a framework set by these requirements.
 - b. Map of civil user requirements and tolerances, related to how they might potentially use different frequency bands where the MoD operates.
 - c. Analysis of how defence requirements are adopted by Ofcom when issuing a licence for defence-managed spectrum currently, and recommendations on effectiveness.
 - d. Pros and cons of available sharing mechanisms and preferred option(s) for the key scenarios, locations, and bands anticipated. Those pros and cons to cover both defence and civil user pros and cons.
 - e. Recommendations and economic analysis around feasible spectrum sharing frameworks under Defence requirements.
2. Additional field trials parameters would be reasonable for stakeholders and spectrum users, that allow for a frequency agile framework.

Cost:

- Total budget is of the order of £25,000 (+VAT)

Timetable:

- ITT issued: 22 February 2024
- Deadline for clarification of questions¹: 07 March 2024
- Deadline to submit your tender: 14 March 2024

Duration:

- Expected duration of the study: approximately three months, including delivering the report.
- To enable transparency and more efficient delivery management, it is suggested, at the time of commencement of the report, to establish monthly checkpoint meetings,

¹ If the bidder(s) may wish to seek clarifications concerning the invitation to tender (ITT), please get in touch with Tales Gaspar by 17.00 BST on the date stated in the timetable

during which UK SPF could provide updates on the progress and the findings of the research as well as to invite for a mid-point peer review of the final report.

Evaluation:

- The scoring system is as follows:

| Criteria | Weight |
|--------------------------------|--------|
| Understanding the requirements | 20% |
| Relevant experiences | 20% |
| Methodology and approach | 20% |
| Project management | 10% |
| Resources allocated (CVs) | 20% |
| Price | 10% |

Notes for bidders:

- Individual bidders are not discouraged however given the data requirements we will prioritise organisations/group submitters
- Unsuccessful bidders will receive their scores to help inform future tenders
- The successful contractor will be required to meet (in person or virtually) with the UK SPF drafting group to provide regular updates and feedback
- The successful bidder is expected to work with the UK SPF secretariat to create a press release and publicise the report and its findings
- Interested companies should contact Tales Gaspar at tales.gaspar@techuk.org for Terms and Conditions. Any contract or order awarded as a result of this ITT shall be subject to these Terms and Conditions. Any reference to your own conditions of contract/conditions of sale in your standard bid documentation shall be specifically withdrawn.
- Interested companies should submit one electronic copy of their quotation per proposal –including financial and technical proposals – to Tales Gaspar at tales.gaspar@techuk.org by 17.00 BST on the date stated in the Timetable. Your quotation is expected to include all required information, or clearly state the reason for being unable to do so. Any assumptions used in preparing responses should be clearly stated.
- The technical response, covering aspects such as understanding the requirements, relevant experiences, methodology and approach should be limited to a maximum of 5 pages. Your quotation shall be firm, fixed and capable of acceptance.
- Please direct any questions relating to clarification of the ITT by email to Tales Gaspar (tales.gaspar@techuk.org).
- By submitting a response, you accept that you understand the requirement and have sufficiently addressed all aspects of the tender and information provided and that you have checked all stated details, such as prices, to be correct and as intended.