Invitation to Tender (ITT)

Independent study on Future spectrum users demand: aligning access and value in a future-ready framework

02/03/2026

Background

As the UK's economy and public services become more digitally enabled, the demands placed on wireless connectivity are increasing in scale, diversity and criticality. Through the Statement of Strategic Priorities, government has emphasised the importance of maximising access to, and the efficient use of, spectrum to support growth, resilience and long-term investment in high quality digital infrastructure. Similarly, the Mobile Market Review highlights expectations of continued growth in data demand and the need for sustained investment to deliver the capacity and network quality required, with clarity over spectrum policy identified as a key enabler of that investment.

Decisions about future spectrum access therefore involve trade-offs between different uses, delivery models and time horizons, as well as the practical scope for sharing spectrum more intensively. These challenges are heightened by the scale of ongoing and planned modernisation across critical national infrastructure and public services, including those examined in the UK Government's Second National Infrastructure Assessment, where long term programmes are being designed on the assumption that reliable, high-performance connectivity will be available over extended operational lifetimes.

The study will examine how demand for spectrum is likely to evolve from the connectivity and capacity needs of different use cases across sectors and industries that underpin the UK's wider national connectivity ambitions, including the Modern Industrial Strategy and Defence and Infrastructure Strategies.

Against this backdrop, there is also growing interest in alternative ways of meeting connectivity needs, including shared networks, hybrid models and more intensive spectrum sharing. An important consideration for this study will be the assessment of how existing and emerging spectrum management approaches could help meet future demand. This will include consideration of the Public Sector Spectrum Framework as a potential mechanism to enable more efficient use of spectrum, including opportunities for sharing, coordination and re-use across public sector and wider users, where appropriate.

Scope

The study will examine how spectrum availability underpins the UK's wider national connectivity ambitions, including its Industrial and Infrastructure Strategies. It will assess the extent to which current and future technologies—such as 5G-Advanced, 6G, Wi-Fi 7, Wi-Fi 8 and beyond, AI, vRAN, LPWA, SD-WAN, edge computing, and non-terrestrial networks—depend on timely and reliable access to spectrum.

The study will align projected demand with national strategies and the practical constraints of spectrum availability, support the needs of safety-critical and essential services, and produce clear findings and valuation principles within a ten-year analytical horizon to inform future spectrum policy, prioritisation and regulatory planning.

The study will:

- Deliver a comprehensive analysis identifying emerging connectivity needs by examining two to three common use cases across multiple sectors, with particular attention to how these needs depend on improvements in spectrum efficiency; provides use case spectrum demand forecasts for the identified verticals; evaluates potential regulatory approaches; and proposes policy recommendations and mechanisms for more dynamic and flexible spectrum access. This will include:
    - analysis of long-term spectrum needs for the shared cross-sector use cases;
    - development of demand forecasts for spectrum, considering different delivery models, network architectures and spectrum-sharing opportunities;
    - a quantification of projected spectrum needs based on current and emerging connectivity requirements;
    - assessment of potential regulatory and policy approaches to meeting future spectrum demand, and proposals for mechanisms that enable more dynamic and flexible access.
- Apply a robust evidence-gathering approach through stakeholder engagement, expert workshops, literature review, and modelling techniques, making effective use of existing data sources and strategic partnerships to ensure the work is achievable within available resources.
- Support the UK SPF's advocacy for forward-looking spectrum policy by ensuring the research aligns with the objectives set in the UK's Industrial Strategy, Infrastructure Strategy, and the Statement of Strategic Priorities, reinforcing the critical role of spectrum for network connectivity for the vertical sectors that support public services, industrial and enterprise connectivity, and CNI.
- Provide insights that can inform improvements and implementation pathways over the next 10–15 years.

The work will explore the spectrum requirements to support connectivity needs of more fragmented but critical sectors, identifying where long-term pressures, gaps, or constraints may emerge. The study will not consider sectors under consideration by Ofcom, and with strong activity by trade associations and think tanks. In addition, it should take into account but not focus on describing future consumer mobile broadband demand, as it reflects a different set of considerations.

- Align demand with national strategies and practical constraints of spectrum availability.
- Incorporate realistic assumptions for sector growth, technology adoption, and emerging use cases, including the demand arising from widespread AI adoption.
- Ensures alignment with the needs of critical communications service provision and essential national sectors.
- Produce clear findings and valuation principles within a ten-year timeline to inform future policy and regulatory objectives.
- Provide sector-aligned forecasts extending the analysis to relevant long-term planning horizons and productivity growth targets.

A core component of the study is the development of a demand framework that treats spectrum as a public good. This framework will support more holistic decision-making by recognising the economic and social value of spectrum across multiple sectors. It will provide an evidence base for more future-proofed spectrum policy, prioritisation of key bands, and opportunities for future spectrum sharing.

Expected deliverables

The study will help inform approaches to dynamic and flexible spectrum access that can meet national connectivity needs while supporting the safe and resilient operation of essential services.

A report detailing the findings including:

- Establish a cross-sector set of connectivity requirements by identifying two to three common use cases in a technology- and spectrum-agnostic way, reflecting how needs will evolve over time and how they relate to national policy goals and wider digital transformation trends.
- Develop forward-looking scenarios for 10–15-year connectivity demand, translating the identified use cases into quantified requirements. These scenarios should surface needs across under-represented sectors, ensuring the study captures long-tail and emerging users.
- Assess the technologies and spectrum access models capable of meeting those requirements, analysing future standards, device evolution, spectrum-sharing models, and efficiency improvements, and clarifying where shared spectrum, short-duration licensing, or other frameworks might be suitable.
- Construct an independent valuation framework that measures the economic and social value of spectrum to the wider economy associated with meeting the identified connectivity needs. This should treat economic valuation as a standalone component while recognising wider societal impacts, drawing on international practice where appropriate.
- Produce a consolidated final report integrating the above analysis into a coherent narrative that sets out use case and cross-sector requirements, the technologies that could meet them, the implications for long-term spectrum demand, and a value-based assessment to inform future policy discussions.

This study will provide a strategic evidence base to guide the UK's next phase of spectrum policy and innovation. Bidders will be judged on the quality and relevance of the use cases they identify as drivers of future connectivity demand, and on their ability to ground these in a clear, cross-sector adoption trajectory. Proposals should demonstrate how two to three common use cases can be identified in a technology- and spectrum-agnostic way, and how these use cases relate to national policy goals and wider digital transformation trends.

The research will model long-term spectrum demand arising from the use cases bidders deem most significant, and will develop a valuation framework that captures spectrum's economic, social, and safety-critical value in line with national strategies.

Cost:

- Total budget is of the order of £30,000 (+VAT)

Timetable:

- ITT issued: 03 March 2026
- Deadline for clarification of questions[1]: 23 March 2026
- Deadline to submit your tender: 26 March 2026

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

Duration:

- Expected duration of the study: approximatively 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, 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.
- To bring together the study's insights, we propose organising at least one workshop or presentation—either as part of an SPF workshop or another suitable event—to gather input from members and the wider spectrum user community.

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.