Ofcom Spectrum Advisory Group

Annual Report 2025

Report

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Foreword from OSAG Chair

Spectrum is a scarce resource and so its optimum use is essential to maximise societal benefits. OSAGs work has explored this in two dimensions this year. The first is the ongoing quest for technically viable spectrum sharing approaches, including dynamic sharing. The second is exploring market dynamics and trends which influence how spectrum is used and should be used over time. Some existing uses diminish and new ones emerge; hence continuous market and technology innovation monitoring is key.

As is always the case, technology has continued to evolve rapidly which results in new innovations requiring access to radio spectrum or may result in changes to utilisation of existing spectrum allocations. This has been very much the theme of this year's OSAG meetings. We explored the implications of emerging technologies, market trends and the associated demands on spectrum. This has included the impact of AI, spectrum sharing, the current and projected status of mobile and Wi-Fi supply and demand and new data-driven spectrum management approaches. Mobile coverage and rural connectivity are key to avoiding a digital divide and so coverage challenges and associated reporting metrics have also been key topics.

I would like to thank outgoing OSAG members for their contribution during their tenure and also to welcome new OSAG members for offering their expertise and time to partner with Ofcom in exploring how the UK's spectrum assets can be best utilised for consumer benefit and national interest.

Gavin Young

OSAG Chair.

Foreword from the Spectrum Group Director

The Ofcom Spectrum Advisory Group has once again provided valuable advice as we navigate a rapidly evolving spectrum environment.

Over the past year, OSAG discussions have highlighted several key developments shaping spectrum management. These include the increasing importance of spectrum sharing, the evolving role of artificial intelligence in network optimisation and spectrum management, and the continued growth in demand for mobile and Wi-Fi services.

The Group also explored important policy questions, including how to improve mobile coverage reporting, how to address persistent rural connectivity challenges, and how changing usage patterns, particularly the growth in uplink demand, may influence future spectrum strategy.

In addition, OSAG provided input on emerging trends expected to shape the future of spectrum, including the rise of non-terrestrial networks, increasing convergence between technologies, and the implications of new applications such as autonomous systems and IoT.

This year saw organisational changes, including the transition from the Ofcom Spectrum Advisory Board (OSAB) to the Ofcom Spectrum Advisory Group (OSAG), reflecting updated governance arrangements. We also welcomed new members and thanked those who have stepped down for their contributions.

The continued collaboration between Ofcom and the Group is essential for ensuring that our policies remain forward looking and evidence based. I am grateful for the expertise and engagement of OSAG members and look forward to building on this work in the year ahead.

David Willis

1. Overview

Background

1.1 The Ofcom Spectrum Advisory Board (OSAB), now referred to as the Ofcom Spectrum Advisory Group (OSAG), was established on 19 May 2004 to provide independent advice to Ofcom on strategic spectrum management issues. OSAG provides Ofcom with:

a) a rapid way to test new ideas across a wide range of experts;

b) a means to identify issues that are beyond Ofcom's regulatory "highlights"; and

c) outside-in advice on future communication landscape from technological, societal and economic perspectives

1.2 OSAG's membership spans a wide range of sectors and backgrounds (commercial, academic and consulting) to assess topics in a multidisciplinary manner, and to advise Ofcom on matters of strategic significance.

Organisational updates

1.3 During the year, the Group underwent several changes. Cristina Data and Sophie Lyddon stepped down from their role, with Chris Woolford joining as an ex officio member. Wassim Chourbaji concluded his tenure, and the Group expressed its appreciation for their contributions.

1.4 The Group welcomed Brandy Sykes as a new member.

1.5 The Terms of Reference were updated to reflect a transition from OSAB to OSAG, aligning with Ofcom's corporate governance framework.

Annual Report

1.6 This document reports on OSAG activity in 2025. It provides highlights of discussions throughout the year and its content is based on minutes taken during the OSAG meetings.

Work programme for 2025

1.7 OSAG is responsible for agreeing its own work program. During 2025, the discussions were primarily focused on the following topics:

a) Rural connectivity and coverage

b) Mobile coverage reporting and metrics

c) Mobile and Wi-Fi supply and demand

d) Spectrum sharing and innovation (including sandboxes and experimental platforms)

e) Artificial intelligence in spectrum management

f) Emerging technology and market trends influencing future spectrum demand

Future meetings

1.8 OSAG sets its agenda from meeting to meeting depending on progress made in identified areas of interest, time constraints, and prominence of emerging topics. It deliberately does not plan a year ahead to allow for flexibility and responsiveness to development in the telecommunications sector.

1.9 To ensure OSAG members can provide the most valuable input, whilst recognising the workload expected from them should remain manageable, OSAG meetings are held three times per year for a 2.5 hour duration with a small amount of pre-reading expected.

2. Highlights of OSAG Discussions

Rural connectivity and coverage

1.10 Richard Moore, Ofcom presented on rural connectivity challenges, focusing on the persistent coverage gap between rural and urban areas and the underlying technical and economic constraints. Both economic and technical challenges were identified, including deployment costs, planning constraints, backhaul limitations, and power availability.

1.11 Members noting persistent disparities in coverage and quality compared to urban areas. Members observed that rural connectivity challenges are increasingly shaped by changing user expectations, particularly following the rise in remote working.

1.12 Members agreed that a baseline level of service of at least 4G should be available to rural users, although achieving this remains challenging given lower population density and higher costs. Direct-to-device (D2D) satellite services were discussed as a potential complementary solution, although their applicability may be limited to low data rate or emergency use in the near term. In addition, the potential role of alternative solutions, including satellite backhaul, neutral host models, and hybrid power systems, was discussed to improve rural coverage.

1.13 While spectrum availability was not seen as a primary constraint in rural areas, innovative business models and incentives were identified as critical to improving deployment.

Mobile coverage reporting and metrics

1.14 Mrinal Patel, Ofcom presented on mobile coverage reporting, outlining current approaches, their limitations, and potential evolutions to better reflect user experience.

1.15 Members discussed the future of mobile coverage reporting, noting that existing approaches, based largely on predicted signal strength, may not reflect real user experience. The importance of developing metrics that better capture service quality, including latency, data throughput, and application-level performance was emphasised.

1.16 The limitations of both static thresholds and crowdsourced data were discussed, particularly in rural areas where data density is low and so results may be biased. There was consensus that while more sophisticated models may improve accuracy, reporting must remain clear, robust, and consistent, particularly for regulatory and compliance purposes.

1.17 Members identified a number of challenges in evolving coverage reporting frameworks. A key issue is that signal strength based models do not fully capture real-world performance, particularly for indoor usage or congested environments, where user experience can vary significantly despite nominal coverage.

1.18 Members also highlighted the inherent variability of mobile performance, which changes with time of day, network load, and location. This limits the effectiveness of static datasets

and makes it difficult to produce a single metric that is both accurate and representative across use cases.

1.19 The potential use of service-based or application-level metrics was discussed (e.g. streaming, voice, or machine communications), which could better reflect user experience. However, such approaches introduce complexity in defining thresholds, ensuring consistency across operators, and maintaining simplicity for reporting purposes.

1.20 With respect to crowdsourced data, members noted that while this offers valuable real-world insights, it is subject to several limitations, including sampling bias, limited data in rural areas, and challenges around data standardisation.

1.21 Members also observed that operator-derived data could provide more granular insights, but differences in how operators collect and define metrics make comparisons difficult without standardisation.

1.22 Overall, there was agreement that future reporting frameworks should aim to balance increased accuracy and relevance with the need for clarity, comparability, and regulatory robustness, recognising that no single metric is likely to fully capture user experience across all scenarios.

Mobile and Wi-Fi supply and demand

1.23 Gavin Young, Vodafone presented on Wi-Fi developments and roadmap considerations, while Mischa Dohler, Ericsson delivered a presentation on mobile supply and demand dynamics, covering both consumer and industry perspectives.

1.24 Members discussed trends in mobile and Wi-Fi demand, noting continued growth in data consumption driven by increasing adoption of 5G devices, new applications, and emerging use cases such as smart devices and wearables. Increasing use of applications such as smart glasses and IoT devices means that passenger data consumption is altering traditional traffic assumptions.

1.25 Members observed that demand growth is driven not only by traditional usage but also by new traffic patterns, including increased uplink demand from applications such as autonomous technology and real-time data transmission.

1.26 In Wi-Fi, adoption of newer technologies (e.g. Wi-Fi 6E and Wi-Fi 7) is starting to emerge but legacy devices continue to dominate the market. Members noted that device replacement cycles play a significant role in determining how quickly new spectrum bands such as 6 GHz are utilised, with legacy devices continuing to shape traffic patterns in the near term.

1.27 Members also noted that spectrum availability is not always the primary constraint for performance; instead, coverage limitations and power constraints often determine user experience.

1.28 The implications of asymmetric uplink and downlink demand were discussed, highlighting the importance of low frequency spectrum for uplink performance and the potential need to reassess spectrum allocation strategies accordingly. Some potential technological responses to uplink constraints were suggested, including spectrum reallocation, network

densification, and the use of TDD configurations, while noting the trade-offs these approaches may introduce.

Spectrum sharing and innovation

1.29 Richard Moore, Ofcom and Sophie Lyddon, DSIT presented updates on spectrum sandbox initiatives, outlining the design and objectives of the programme. Dimitra Simeonidou and Simon Saunders, University of Bristol, also introduced the JOINER initiative, highlighting its role as a national-scale experimentation platform for future network and spectrum research.

Spectrum sandboxes

1.30 The spectrum sandbox initiatives aimed at exploring better approaches to spectrum sharing. These projects brought together stakeholders from academia and industry to test coexistence between different technologies and assess the benefits of shared access. Members highlighted that while sandbox environments provide valuable insights, translating these findings into deployable commercial solutions remains a key challenge.

1.31 Members also discussed the challenges of scaling such initiatives, noting the importance of aligning lab-based simulations with real-world testing and ensuring continuity across project phases. There was discussion on the limited participation of certain sectors, particularly satellite stakeholders, and whether the design of the sandbox (e.g. focus on field trials) may have influenced engagement.

1.32 The value of open access to data generated through sandbox projects was highlighted, emphasising its importance in supporting further research and enabling the development of viable business cases.

1.33 It was noted that spectrum sharing is increasingly central to future spectrum management, with opportunities to improve coexistence, automate access frameworks, and support underutilised spectrum use.

JOINER

1.34 During the presentation, the importance of providing low-friction access to spectrum for researchers and innovators was highlighted. Members noted that limited access to real-world spectrum environments has historically been a barrier to experimentation, particularly for academic research. JOINER seeks to address this by enabling controlled, large-scale trials and facilitating the development of data-rich environments to support innovation.

1.35 Members discussed the potential for JOINER to support advancements in spectrum sharing by enabling testing across a variety of realistic deployment scenarios, including different traffic profiles and operating environments. There was recognition that such platforms could help bridge the gap between theoretical research and practical implementation, particularly for emerging concepts such as dynamic spectrum access and AI-driven management.

1.36 There was also discussion around the importance of collaboration, including engagement with international initiatives and the involvement of larger industry players to ensure

meaningful impact. Members noted that while JOINER presents a valuable platform for building capability and generating insights, its long-term success will depend on sustained participation, funding, and alignment with broader industry and policy developments.

Artificial intelligence in spectrum management

1.37 Ofcom colleagues introduced this discussion with input from members based on their organisational experience, focusing on current applications of AI in spectrum management and future opportunities for adoption.

1.38 Members explored the growing role of artificial intelligence (AI) in spectrum management, including applications such as interference detection, dynamic spectrum allocation, and network optimisation. It was noted that AI is already being applied in limited areas of the radio stack, such as beamforming and channel state information compression, although wider adoption remains at an early stage.

1.39 AI has the potential to enable more agile and efficient spectrum use, including real-time monitoring of spectrum occupancy and automated decision-making. However, challenges remain, particularly around data availability, quality, and standardisation. The importance of high-quality datasets as a foundation for AI was emphasised during the discussion.

1.40 Members discussed the need for collaboration between regulators, industry, and academia to develop shared datasets and tools. There was discussion on the potential role of Ofcom in facilitating data-sharing ecosystems, including the possibility of acting as a trusted intermediary for anonymised datasets.

1.41 Members also highlighted the role of testbeds and experimental platforms in building confidence in AI-driven approaches, noting that adoption may follow a gradual transition to automated systems.

Emerging trends and future spectrum considerationsOfcom colleagues presented early considerations for the future plan of work, with members contributing perspectives on emerging technology and market, and geopolitical trends expected to shape spectrum demand.

1.42 Members discussed broader trends expected to shape the future of spectrum management, including the rapid growth of non-terrestrial networks and increasing network convergence.

Demand trends

1.43 Members emphasised that wireless demand is increasingly shaped by specific use cases and business models, rather than traditional sector-based demand. This includes applications such as IoT, drones, autonomous systems and smart infrastructure. Each of which introduces distinct performance requirements, traffic patterns, and spectrum needs.

1.44 Significant growth in demand is expected from both consumer and machine-driven traffic. In addition to continued growth in mobile data usage, emerging applications such as wearables, robotics, and AI-enabled services are expected to generate new types of traffic, including more persistent and uplink-intensive data flows.

1.45 The growing reliance on wireless connectivity across sectors was noted to be driving higher expectations for resilience and reliability, particularly for critical national infrastructure and industrial use cases.

Supply considerations

1.46 Members discussed how the supply of spectrum will need to evolve to meet these changing demands. While making additional spectrum available remains important, there was a strong view that future challenges will increasingly be addressed through more efficient use of existing spectrum, rather than solely expanding supply.

1.47 Spectrum sharing and more dynamic access models were highlighted as key enablers of improved efficiency. Advances in sensing, automation, and data-driven spectrum management may support more flexible and responsive allocation of spectrum resources.

1.48 Members also discussed the role of international harmonisation, noting that global alignment remains important for enabling economies of scale and supporting device ecosystems. However, geopolitical factors and differing national priorities may make harmonisation more complex in future.

1.49 Further supply considerations included the importance of receiver performance and standards, as well as the need to ensure coexistence between services, particularly as spectrum bands become more congested and diverse in use.

Other considerations

1.50 Members highlighted the importance of protecting passive services, such as Earth observation and weather monitoring systems, which are critical for climate and scientific applications. Increasing satellite activity and overall spectrum use raises the risk of harmful interference to these services.

1.51 Members also highlighted the increasing importance of non-terrestrial networks (NTNs), particularly low Earth orbit (LEO) satellite systems, in addressing connectivity gaps and supporting new services. However, there was some caution regarding the long-term commercial viability and overall scale of demand for these services.

1.52 The impact of geopolitical developments was also discussed, including the implications for international coordination, regulatory approaches, and global spectrum governance.

1.53 In addition, members noted that emerging risks such as interference, jamming, and space weather events could have significant implications for the resilience of communication systems, reinforcing the need for robust spectrum management approaches.

A1. OSAG Terms of Reference

Roles and Responsibilities

A1.1 Section 3 of the Communications Act, 2003 requires Ofcom to secure optimal use of the radio spectrum taking account of the different needs and interests of all users.

A1.2 The Ofcom Spectrum Advisory Board was established by Ofcom on 19 May 2004 and is a continuation of a group originally established by the Government in the 1990s to advise on wireless and which transferred to Ofcom with the Radiocommunications Agency. OSAB is now referred to as the Ofcom Spectrum Advisory Group (OSAG).

A1.3 The role of OSAG is to provide independent, strategic advice to Ofcom on matters that directly, or indirectly, have a bearing on policy issues to do with future communications architectures; access methods; physical layer technologies; and spectrum services and applications. The provision of independent strategic advice will help Ofcom to carry out its remit.

A1.4 In formulating its advice, OSAG is to consider the future communications landscape from technological, economic, and societal perspectives, consonant with Ofcom's statutory duty to further the interests of citizens in relation to communications matters.

A1.5 In particular, OSAG is to advise on:

a) Ofcom's spectrum strategy, major UK national allocation decisions, spectrum management, and the application of spectrum pricing and trading

b) Issues that are currently "beyond Ofcom's headlights", to which Ofcom should start to give attention

c) New communications technologies

d) New means of managing the radio spectrum and their implications for Ofcom

e) Whether Ofcom's current and developing policy stance is appropriate and where new policy might be needed

A1.6 The OSAG may also be asked to advise on:

a) The extent to which future wireless and fixed communications infrastructure and services may be complementary or compete with one another

b) New and novel technologies

c) Emerging uses of spectrum in various sectors, for example, transport, healthcare, and scientific research

d) Ways to measure and assess the effectiveness of spectrum management policies

e) The development of market-led initiatives

f) The balance between licence and licence exempt spectrum

g) The stimulation of innovation through spectrum policy

h) Trends in international relations

Membership

A1.7 Members of OSAG should be drawn from a mix of commercial, academic, and consulting backgrounds, in order to address topics in a multidisciplinary manner, and to advise Ofcom on matters of strategic significance in such areas as future communications architectures, access methods, physical layer technologies, spectrum, services and applications.

A1.8 Membership of OSAG will include ex-officio members from His Majesty's Government and relevant experts who work for Ofcom; such ex-officio members participate fully in discussions but reserve the right to abstain from agreement on substantive matters. All members shall be appointed by Ofcom, following the advice of the Group Director of Spectrum. The Group Director of Spectrum also seeks the approval of the Ofcom Chief Executive for the appointments.

A1.9 OSAG shall have a quorum of 6 members, one of whom must be the Group Director, Spectrum Group or their designated Alternate and excluding ex-officio members. Members attendance through telephone or video link is acceptable for the purposes of determining a quorum.

Conduct of Meetings

A1.10 An independent member (not an employee of Ofcom) will be appointed by Ofcom to chair OSAG meetings.

A1.11 OSAG shall meet four times per annum. Ad-hoc meetings of OSAG can be arranged, if necessary, with the agreement of the Chair.

A1.12 Where the Chair of OSAG considers it appropriate, matters may be considered in between meetings by email.

A1.13 Papers shall be circulated at least 3 working days before each OSAG meeting. Extensions to this will be on an exceptional basis and must be agreed by the Chair.

A1.14 To avoid any conflict of interest, members of OSAG will not have access to confidential information pertaining to Ofcom decisions affecting specific companies. This does not however preclude the discussion by members of potential Ofcom policies.

A1.15 Persons other than Members are permitted to attend meetings for particular items if the Chair of OSAG agrees.

A1.16 OSAG meetings will be supported by a Meeting Secretary and minutes and an action log will be prepared after each meeting.

A1.17 The Terms of Reference shall be reviewed periodically, as, and when required by Ofcom. Any amendments shall be approved by the Ofcom Chief Executive, usually via the Ofcom Policy Management Board (PMB).

A2. OSAG Membership

External Members

Gavin Young (Chair)

Gavin's current role is as Head of the Fixed Access Centre of Excellence within Vodafone. He is responsible within Vodafone Group for the fixed broadband access strategy, architecture, and deployment practices across the 17 countries where Vodafone currently has fixed access assets.

Gavin was previously Head of Strategy and Planning at Cable & Wireless Worldwide, leading a team of architects responsible for the technology architecture and strategy. He had previously worked at Bulldog Communications (later acquired by C&W Worldwide) where he held a variety of responsibilities from product development through to network operations and CTO. Prior to that Gavin led the Access Architecture & Design team at BT.

Gavin was a founding director of the Broadband Forum where he was overall Technical Chair for twelve years. In addition, he has been co-chair of the UK21CN consultation's Broadband Group, chair of the UK NICC's DSL Task Group and vice-chair of the NICC Ethernet Access Task Group. Gavin also serves on the IET (Institution of Engineering and Technology) Communications Policy Panel, the Ofcom Spectrum Advisory Board (OSAB) and the Broadband Forum's executive advisory board. Gavin is a member of the IEEE, Fellow of the IET and Distinguished Fellow of the Broadband Forum.

Professor Mischa Dohler

Mischa Dohler is vice president of emerging technologies at Ericsson in the Silicon Valley. He is a Fellow of the IEE, the Royal Academy of Engineering, the Royal Society of Arts (RSA), the Institution of Engineering and Technology (IET); and a Distinguished Member of Harvard Square Leaders Excellence. He is a serial entrepreneur; composer and pianist with five albums on Spotify/iTunes; and fluent in six languages. He acts as policy advisor on issues related to digital, skills and education. He has had coverage by national and international press and media.

He is a frequent keynote, panel, and tutorial speaker, and has received numerous awards. He has pioneered several research fields, contributed to numerous wireless broadbands, IoT/M2M and cyber security standards, holds a dozen patents, organised and chaired numerous conferences, was the Editor-in-Chief of two journals, has more than 200 highly cited publications, and authored several books.

He was the Director of the Centre for Telecommunications Research at King's from 2014-2018. He is the co-founder of the Smart Cities pioneering company Worldsensing, where he was CTO from 2008-2014. He also worked as a Senior Researcher at Orange/France Telecom from 2005-2008.

Brandy Sykes

Brandy Jo Sykes is Head of Spectrum for Apple Inc. She is responsible for leading the company's worldwide spectrum access strategy, including at the International Telecommunications Union and

its international conferences. Prior to joining Apple Inc. in 2017, she was at the U.S. National Telecommunication and Information Administration (NTIA) where she served as US Head of Delegation to ITU-R Study Group 1 and Working Party 1A.

Brandy also worked for seven years in international spectrum policy for the U.S. Department of Defense serving as US, NATO, and CITEL spokesperson at WRC-15 for military related mobile broadband issues on behalf of the United States. She has chaired at two World Radiocommunication Conferences and has held multiple ITU Chair roles since 2010, included elected positions.

Rosalind Singleton

Rosalind Singleton is a CEO, board chair, NED, advisor, and investor with over 30 years of experience in the technology sector. She is the CEO of Spring Fibre, an FTTH start up and the Chair of the Telecoms Supply Chain Diversification Advisory Council. The Council represents an opportunity to provide independent challenges and advice to the government in policy development and act as a voice for the industry on the topic of 5G supply chain diversification.

For the last five years Rosalind has been an active angel investor and mentor and has led several deals, focussing on tech businesses with a female founder. She is a member of the Angel Academe Advisory Board.

Rosalind joined UK Broadband in 2013 and was Managing Director from 2017 until it integrated into its parent company in 2019 following its delivery of the ThreeBroadband 5G launch network. She has previously held senior roles at BT Openreach, Cable and Wireless, Vodafone, various VNOs, and other international operators from start-ups to incumbents.

Rosalind is a member of the UK Government's Telecoms Supply Chain Diversification Advisory Council and Ofcom's Spectrum Advisory Board. She is an Independent NED on the board of Alphawave IP (Internet Protocol) Group PLC, a silicon IP business providing high speed connectivity solutions for global large an hyperscale customers.

Peter Hadinger

Peter Hadinger is the Chief Technology Officer at Inmarsat. Peter and his high calibre engineering team are developing next generation technologies and satellite infrastructure that will enable innovative connectivity services and solutions across land, sea and in the air. These services and solutions sustain operational, safety and mission critical applications for businesses and governments across the world.

After joining Inmarsat in 2011 to help develop the market-leading Global Xpress programme, Peter became President of the business unit responsible for US Government sales and programmes at Inmarsat and subsequently became CTO in late 2017. Prior to joining Inmarsat, Peter spent 30 years as a leader in technology development, engineering, and government spacecraft programmes at Northrop Grumman. He holds multiple patents in advanced communications technology and systems.

He also has a diverse regulatory and policy background, having successfully led industry efforts in the World Trade Organisation (WTO) Telecom Services Agreement, the Federal Communications

Commission (FCC) World Radio Conference Advisory Committee, the President's National Security Telecommunications Advisory Committee, plus a one-year fellowship in the United States Senate.

Peter received his Bachelor of Science in Electrical and Electronic Engineering from California State Polytechnic University, an MBA with emphasis in finance strategic planning from George Mason University and serves on engineering advisory boards at Virginia Tech. He was inducted into the Cal Poly Pomona Engineering Hall of Fame in 2014.

Dr Robert Pepper

Robert Pepper is Head of Global Connectivity Policy and Planning at Meta focusing on global, regional, and national infrastructure and connectivity including new technology development, deployment, adoption, and policy/regulation. Robert was previously Cisco's Vice President for Global Technology Policy, helping governments develop national digital strategies, address wireless and spectrum policy, security, privacy, and internet governance.

Pepper was Chief of the Office of Plans and Policy and Chief of Policy Development at the United States FCC for fifteen years, where he led teams designing and implementing the first U.S. spectrum auctions, developing policies promoting the development of the Internet, implementing telecommunications legislation, and planning for the transition to digital television. He also led the Office of Policy and Development at United States' National Telecommunications and Information Administration.

His academic appointments included faculty positions at the Universities of Iowa, Indiana, and Pennsylvania, and as a research affiliate at Harvard University. He is a member of the Board of Trustees of the Internet Society and the board of the US Telecommunications Training Institute and is a member of advisory boards at Columbia University and Michigan State University. He has chaired the US Department of State's Advisory Committee on International Communications and Information Policy and served on the US Department of Commerce's Spectrum Management Advisory.

Pepper received his BA and PhD from the University of Wisconsin-Madison.

Alastair Davidson

Alastair has spent over 20 years in the communications industry working in the mobile infrastructure, public safety, cable tv and fibre sectors, and is Chair of the Digital Infrastructure Working Group of the Digital Connectivity Forum (DCF), Board member of the European Wireless Infrastructure Association (EWIA), and Director of Strategy at Wireless Infrastructure Group (WIG).

At WIG, Alastair is responsible for strategy, regulation and public affairs, and until recently led the roll-out of 5G fibre connected small cells at WIG - an independent wireless infrastructure operator that has pioneered the neutral host model in the UK. The company builds and operates communication towers (masts) in rural and suburban areas together with indoor networks to improve mobile coverage inside buildings, stadiums and on city streets. The company is fully independent of any network operator and invests in higher capacity 'neutral-host' infrastructure that is made available to all mobile and wireless networks to use on an open and shared basis.

Alastair gained a first class degree in Engineering & Economics from Oxford University, and qualified as a Chartered Accountant, with an early career in management consultancy at Deloitte / Coopers & Lybrand.

Dr. Abhaya Sumanasena

Dr. Abhaya Sumanasena is a results-driven and influential leader with over 20 years of hands-on experience developing and delivering forward-spectrum strategies and policies. Abhaya is the Head of Policy and Regulation at Real Wireless (an independent wireless advisory firm) and the Chairman of the UK Spectrum Policy Forum (UK SPF), a cross-industry 'sounding board' to Government and Ofcom on future policy and approaches to spectrum.

Previously Abhaya led and delivered multimillion-pound strategic network capacity programmes at Three UK. At Ericsson, Abhaya provided technical leadership to deploy the UK's first HSDPA network. He has also played an influential role in maintaining UK propositions and developing spectrum policies at Ofcom. As a consulting leader, Abhaya provides leadership to multi-disciplinary teams to deliver projects and provide independent advice to global clients in the technology, spectrum, policy and regulatory areas.

Abhaya holds a PhD in Mobile Communications from the University of Surrey and an MSc from King's College London. He is a University Lecturer, a Chartered Engineer, a member of the IET and, as a volunteer, Chaired several IET local networks.

Dimitra Simeonidou

Dimitra Simeonidou is a Full Professor at the University of Bristol, the Co-Director of the Bristol Digital Futures Institute and the Director of Smart Internet Lab. Her research is focusing on the fields of high-performance networks, programmable networks, Future Internet, wireless-optical convergence, 5G/6G and smart city infrastructures. In the past few years, she is increasingly working with Social Sciences and Humanities on topics of climate change and responsible innovation. Dimitra has been the Technical Architect and the CTO of the smart city project Bristol Is Open. She is currently leading the Bristol City/Region 5G and Open RAN pilots.

Dimitra is a member of the DSIT Supply Chain Diversification Advisory Council, a founding member of UKTIN and has led major research projects funded by UKRI and the EC. She is currently coordinating the DSIT project REASON developing blueprint architectures and technologies for 6G.

She is the author and co-author of over 700 publications, numerous patents and several contributions to standards. She has been co-founder of three spin-out companies developing solutions for connected smart infrastructures.

Dimitra is a Fellow of the Royal Academy of Engineering (FREng), a Fellow of the IEEE (FIEEE), Fellow of WWRF, a Royal Society Wolfson Scholar and member of UKCRC.

Kirsty McBeath

Kirsty joined the Met Office in 2009, having completed a degree in Physics at the University of Strathclyde. She started her Met Office career as a scientist in the Cloud Physics Research Team, working with a range of remote sensing and in situ instruments to improve our understanding of cloud processes. She then went on to work as Private Secretary to the Chief Scientist where she provided support across the breadth of science undertaken in the Met Office. Kirsty has also worked

in the Government Services Team: leading on Met Office engagement with Parliament on a wide range of topics.

Since 2021, Kirsty has worked as Spectrum Policy Manager where she works to ensure that the Met Office has access to the frequencies required to make observations of the Earth system – vital for both weather forecasting and climate monitoring – and exchange data with partners around the world.

Dr. Philip Kalmus

Dr Philip Kalmus works as an economic consultant for Charles River Associates. He assisted in many of the 3G, 4G and 5G spectrum auctions in the pre-auction regulatory process, as well as in the design of auctions for governments and in bidding support for participants, including in the UK, Austria, Switzerland, France, Spain, Italy, Latvia, Germany, Canada, United States, Singapore and Taiwan. Philip also has advised in several merger control proceedings in the mobile industry in Europe, such as the joint venture of Virgin Media and O2, and has been involved in other regulatory matters in the telecommunications industry.

More recently Philip has turned his attention to empirical economics, statistics and machine learning. He holds a BA Economics from Cambridge University, MSc Economics from Universitat Pompeu Fabra, Barcelona, and a PhD Economics from the London School of Economics.

Graham Louth

Graham Louth has over 30 years' experience in the telecommunications industry, originally as a leading advisor to operators and regulators on regulatory issues such as universal service, interconnect pricing, retail price control, margin squeeze analysis and market reviews; then as Director of Spectrum Policy at Ofcom, in which role he was responsible for the introduction of spectrum trading and liberalisation, refinement of spectrum pricing, auctioning of key spectrum bands, including the UK's 4G auction of the 800 MHz and 2.6 GHz bands, and regulatory reviews of various mobile network sharing and merger agreements. Graham joined Aetha Consulting as a Partner in September 2014 and has subsequently been providing expert advice and support to operators and regulators around the world on a range of spectrum and regulatory topics. He is a regular presenter at telecoms and spectrum conferences worldwide.

Ex-Officio Members

Chris Woolford

Chris Woolford is Ofcom's Director of International Spectrum Policy where his responsibilities cover the UK's international spectrum interests, especially in relation to the ITU and CEPT. Chris has closely engaged for the UK on key European regulatory initiatives in the field of electronic communications and has participated for many years in various European spectrum groups. Chris also leads UK engagement with the ITU and led the UK delegation to WRCs in 2023, 2019, 2015 and 2012.

From 2019-2024, Chris was Chair of the CEPT Electronic Communications Committee (ECC) and a co-President of CEPT, during which time he oversaw the development of various key spectrum initiatives in Europe. Chris is also a Board Director of the International Institute of Communications (IIC) and in 2024 was appointed Treasurer of the IIC.

Chris has more than 25 years' experience of working on spectrum and communications regulation, both at Ofcom and its predecessor (Oftel). He has a degree in mathematics and statistics from Manchester University.

Board Members Stepping Down

Cristina Data (ex officio)

Cristina was Ofcom's Director of Spectrum policy and analysis, Spectrum Group. She is also NED of the Energy System Catapult and sits on the Digital Twin Strategic Advisory board hosted by the Connected Places Catapult. Prior to joining Ofcom Cristina held various market and business intelligence roles within strategy at Telefonica O2 setting up a framework to benchmark data growth across different countries, financial planning, and analysis at Orange UK, looking at the profitability of different marketing initiatives and market research and intelligence at Red Bee Media where Cristina had the responsibility to set up the entire unit. Cristina holds a master's degree in Industrial Engineering from the Politecnico di Torino university in Italy.

Wassim Chourbaji

Wassim Chourbaji is Qualcomm's Senior Vice President and Head of Government Affairs for Europe, the Middle East, and Africa. He oversees Qualcomm's public policy, regulatory affairs, and senior government relations in the region. Mr Chourbaji leads a senior team dealing with innovation, 5G, 12 intellectual property, digital economy, spectrum, standardisation, data protection and anti-trust policy. Mr Chourbaji studied engineering and mathematics.

Sophie Lyddon (ex officio)

Sophie Lyddon has held fast paced policy roles in Brussels, UK Parliament, and Government for over a decade. Sophie originally joined the Digital Infrastructure team in what was the Department for Digital, Culture, Media, and Sport in 2020. Prior to joining the Civil Service, she was over the road in Westminster as a Political Adviser leading on Europe, Foreign Affairs, and Equalities. Sophie has an MPhil degree in International Relations and Politics from the University of Cambridge and a BA in Geography from Queen Mary, University of London.

Since 2024, Sophie has worked as Head of Spectrum Policy in the Department of Science, Innovation and Technology (DSIT). DSIT is the lead government department for spectrum policy. Sophie's team is responsible for setting cross-government policy to maximise the value of this finite asset for the UK and to support departmental priorities and wider strategic objectives.