

Part II:

What Ofcom’s “Better Together” 6 GHz Plan Means for Wi-Fi, Mobile, and the EU

The potential impact of UK Ofcom’s proposed 6 GHz approach on the future balance between Wi-Fi and mobile connectivity is examined in this article. Wider implications for European spectrum policy, cross-border alignment, and innovation in next-generation wireless services are also explored, and it is argued that the UK’s approach could be adopted as a practical policy model for balancing near-term Wi-Fi capacity across Europe.

Contents

Introduction	2
The Limits of Prioritized Spectrum Allocation	2
Ofcom’s 6 GHz Blueprint: Wi-Fi First, Mobile Later and AFC Under Consideration	3
Enabling Standard Power Wi-Fi: Technical Details that Matter	5
Why the UK is a Relevant Testbed for EU 6 GHz Policy	6
A “Better Together” Path for Europe’s Upper 6 GHz	7
Summary	7
Author	8

Introduction

With the Radio Spectrum Policy Group (RSPG)'s final opinion [1], Europe took a decisive step toward possibly prioritizing most of the upper 6 GHz band for Mobile/Fixed Communications Networks (MFCN), while leaving a 160 MHz block at the bottom as a possible shared or “guard” segment depending on World Radio Conference 2027 (WRC-27) outcomes and national decisions. That framework answered the “who gets how much” question but left the “how do we actually share” question largely open. In January 2026, the UK regulator Ofcom, until recently part of the EU regulatory family and still a key CEPT member, proactively filled that gap with a detailed, engineered plan for sharing 6 GHz between Wi-Fi and mobile. It couples a split-priority upper 6 GHz model with a potential Automated Frequency Coordination (AFC) framework for standard power and low power indoor Wi-Fi across the entire 6 GHz band. Taken together, these steps show what a practical “better together” implementation of the RSPG philosophy could look like in a market that closely resembles the EU in socioeconomic structure and digital economy priorities.

The Limits of Prioritized Spectrum Allocation

The RSPG opinion on upper 6 GHz crystallized a regulatory compromise: Guarantee at least 540 MHz of spectrum above 6585 MHz as a midband runway for future MFCN, while keeping 6425 MHz to 6585 MHz open as a potential shared or Wi-Fi friendly segment after WRC-27. In pure allocation terms, this is coherent. It recognizes that the upper 6 GHz is likely the last large mid-band resource available for 5G-Advanced and 6G, and it acknowledges Wi-Fi's claims on at least part of the band. But as argued in Part I of this article series, a purely prioritized allocation is not enough to deliver the connectivity, innovation, and energy efficiency outcomes Europe has set for itself.

First, a potential priority framing risks recreating legacy “licensed block plus token guard band” thinking in the only new mid-band spectrum Europe will have for the 2030s. It implicitly assumes that macro-centric MFCN deployment is the default, and that Wi-Fi, which already carries most of the indoor traffic, must fit into whatever remains. That is at odds with the way Europeans consume connectivity: Via fiber-backed Wi-Fi in homes, offices, hospitals, schools, and public venues, with mobile providing mobility and wide-area coverage, not indoor gigabit service at scale.

Second, prioritized allocation does not fix indoor coverage economics. Part 1 of this series showed how Wi-Fi first architectures deliver near-symmetric gigabit class indoor capacity at significantly lower capex per dwelling or per square meter than 4G/5G indoor small cells or DAS, and at markedly lower energy per delivered gigabit. Residential and enterprise comparison tables demonstrate that fiber or high-speed fixed access plus Wi-Fi 6/6E/7 provides the cheapest, fastest, and greenest path to indoor gigabit, while macro “outdoor-in” and dedicated in-building MFCN layers are more expensive and more energy-intensive per bit. A spectrum strategy that effectively privileges macro-

centric MFCN over shared, Wi-Fi-centric indoor architectures would risk raising both the cost and the carbon footprint of Europe's broadband future.

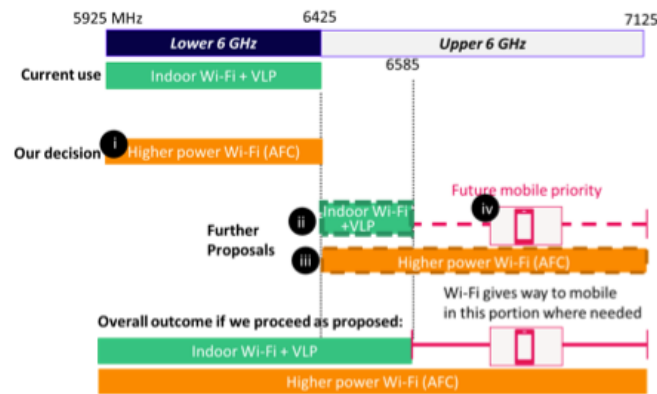
Third, without concrete sharing mechanisms, the 160 MHz “guard” segment is fragile. The RSPG acknowledges that Member States may explore opportunistic or coordinated Wi-Fi use in both the lower 160 MHz and the IMT-prioritized 540 MHz, using tools such as geolocation databases, AFC, and dynamic spectrum access. But it leaves those tools undefined and their deployment to future technical work. As a result, the RSPG model still looks like a static split, with only hints of sharing at the margins. What is missing is an operational template for how Wi-Fi and MFCN can share the same upper 6 GHz spectrum in a way that is predictable for operators, device vendors, and regulators.

Ofcom's 6 GHz Blueprint: Wi-Fi First, Mobile Later and AFC Under Consideration

This is precisely where the UK's January 2026 decision becomes relevant. In its statement and further consultation on “Expanding access to the 6 GHz band for commercial mobile and Wi-Fi services,” [2] Ofcom confirms two core decisions. First, it intends to enable standard power Wi-Fi across the 5925 MHz to 6425 MHz lower 6 GHz band, for both indoor and outdoor use, under the control of an AFC system. That means access points with up to 36 dBm EIRP can operate outdoors, on campuses, and in industrial environments, provided they register their location, query an AFC database, and respect power and channel assignments designed to protect fixed links, radio astronomy, and other incumbents.

Second, Ofcom extends this philosophy into the Upper 6 GHz band by adopting a split-priority framework that looks, at first glance, very similar to what the RSPG envisioned, but with a crucial twist. It designates 6425 MHz to 6585 MHz as a “Wi-Fi priority” portion, essentially treating it as an extension of the Lower 6 GHz: Indoor low power, very low power, and standard power Wi-Fi, with the latter operating under AFC control. Above 6585 MHz, Ofcom establishes a “future mobile priority” portion from 6585 MHz to 7125 MHz, reserved in the long term for MFCN but explicitly open to Wi-Fi in the near term, again with both LPI and standard power Wi-Fi operations under AFC control. In other words, the same 160 MHz and 540 MHz segmentation exists, but Wi-Fi is not confined to the bottom block. Instead, it is permitted early, coordinated access across the entire upper 6 GHz range with a built-in path to vacate specific channels and locations as mobile deployments arrive.

Figure 3.1: High level summary of decisions and proposals



Source: Ofcom

Figure 1: High level summary of Ofcom 6GHz decisions and proposal (Source: Ofcom)

Ofcom’s dedicated consultation “Enabling automated frequency coordination (AFC) in the 6 GHz band” [3] and its Annex 5 AFC System Specification [4] spell out a full stack. AFC providers must register with Ofcom, pass through an application and testing regime, and show that their systems can ingest sensitive license data, apply ITUR P.452-18 with 50 m resolution terrain and clutter data, and enforce a strict interference protection criteria. Standard power Wi-Fi access points and fixed clients must have geolocation capability, register their coordinates and antenna height, declare whether they are indoors or outdoors, and query an AFC system for permissible channels and power levels before transmitting. Devices must re-query regularly and whenever key parameters change.

What turns this from a purely protective mechanism into a sharing platform is the way AFC interacts with the split-priority design. In the Wi-Fi priority block, AFC maximizes Wi-Fi channel availability and power subject to incumbent protection. In the mobile-priority block, AFC allows Wi-Fi to operate initially but gives Ofcom the levers to deny specific frequencies or geographic areas either temporarily or permanently, and even to block individual devices, once MFCN deployments in that block need protection. Priority, in other words, is implemented as a programmable, time and location-dependent policy on top of a common AFC control plane, not as a static “Wi-Fi forbidden / mobile only” wall in the band plan.

Enabling Standard Power Wi-Fi: Technical Details that Matter

Ofcom's AFC and Voluntary National Specification (VNS) [5] documents are where this philosophy becomes engineering. The AFC specification defines the registration conditions for AFC service providers, including security requirements for handling Ofcom's license data, audit and enforcement hooks, and a detailed process to validate that an AFC implementation produces correct channel and power assignments under a battery of test vectors. It mandates the use of ITU-R P.45218 for long-term propagation, with Ofcom supplied Digital Terrain Model and Digital Land Use datasets at 50 m resolution, and it specifies how building entry and exit loss of 14 dB can be considered for indoor standard power devices. It defines protection criteria for fixed links in the whole 5925 MHz to 7125 MHz range, including an I/N protection criterion of -6 dB and how to model adjacent channel emissions based on a standard power out of band mask. It also lays out explicit protection thresholds and modelling assumptions for radio astronomy in the 6668.18 MHz band.

On the device side, the 6 GHz VNS extends ETSI EN 303 687 to cover 5925 MHz to 7125 MHz and defines the minimum technical characteristics for WAS/RLAN equipment. It maintains the same basic structure of device categories (standard power access points and fixed clients, low power indoor access points and clients, and very low power devices) and maps center frequencies, EIRP limits, PSD limits, and transmitter masks to the full 1200 MHz band. SP devices are permitted up to 36 dBm EIRP and 23 dBm/MHz PSD across 5925 MHz to 7125 MHz. LPI access points and clients operate at 24 dBm EIRP and 11 dBm/MHz PSD. VLP devices remain restricted to the lower part of the band. Most importantly, the VNS explicitly states that SP use across 5925 MHz to 7125 MHz and LPI or mobile outdoor use in 6585 MHz to 7125 MHz is only permitted under the control of a dynamic spectrum access service (in practice, the AFC system defined in Annex 5).

From a European perspective, two points are worth highlighting:

1. Ofcom is deliberately reusing the framework, only extending it where necessary, rather than creating a UK only technical standard. That means the 6 GHz device ecosystem (chipsets, radios, customer premise equipment, and enterprise access points) can treat the UK as a near European profile, reducing certification and implementation friction.
2. The AFC design itself draws heavily on the same ITUR methods and CEPT style data that European regulators are used to. There is nothing about P.452based propagation, 50 m terrain and clutter, or fixed service interference criteria that would be alien to CEPT working parties. That makes Ofcom's documents not just interesting reading, but a practical starting point for a CEPT wide, ETSI anchored AFC framework if Europe chooses to follow.

Why the UK is a Relevant Testbed for EU 6 GHz Policy

Sceptics might argue that the UK, having left the EU, is not an appropriate model for EU wide policy. In spectrum and connectivity terms, however, the UK digital ecosystem remains remarkably similar to large EU Member States. Fiber and high-speed cable networks are widely deployed and expanding. 5G coverage is extensive in cities and along transport corridors. Wi-Fi is established as the de facto last hop technology for residential and enterprise connectivity, from homes and small and medium sized enterprises (SMEs) to hospitals, universities, and public venues. The same XR headsets, laptops, smartphones and smart TVs that will soak up European gigabits are being bought and used in the UK.

Demand patterns also align. In London, Manchester or Birmingham, as in Paris, Berlin or Madrid, the most acute connectivity challenges are dense indoor or campus environments and crowded public spaces: Stadiums, transport hubs (bus/train/metro stations), university campuses, convention centers, and industrial sites. These are precisely the environments that would benefit most from the standard power 6 GHz Wi-Fi under AFC control, because they already have fiber backhaul and require very dense, short-range capacity layers that licensed macro networks are not designed to deliver efficiently on their own. It is telling that Ofcom's impact assessments repeatedly highlight such venues, campuses and industrial sites as key use cases for standard power 6 GHz Wi-Fi.

Institutionally, the UK remains fully embedded in CEPT, contributing to the same ECC and ITUR preparatory work as EU Member States. Ofcom's use of ITUR P.45218, CEPT-style terrain and clutter datasets, and protection thresholds compatible with CEPT sharing studies reflects that shared heritage. On the equipment side, anchoring 6 GHz requirements in ETSI EN 303 687 plus a VNS rather than bespoke national standards aligns with European manufacturers' roadmaps. In practice, this means the UK is not a divergent outlier, but a CEPT native implementation of dynamic sharing in 6 GHz.

Finally, in policy terms, the UK's digital priorities mirror those of the EU. The goals are familiar: Becoming an AI leader, Nationwide gigabit coverage, robust indoor and outdoor wireless connectivity, digitalization of SMEs and industry, and improved energy efficiency of networks. Ofcom's 6 GHz decisions address precisely these issues: How to use the only new midband spectrum to support both a Wi-Fi centric indoor and local-area layer and a macro-centric future 6G layer, while protecting incumbents and managing interference in a predictable way. From Brussels' perspective, that makes the UK's 6 GHz plan less a foreign experiment and more a live candidate reference design.

A “Better Together” Path for Europe’s Upper 6 GHz

Europe’s real choice for the upper 6 GHz is not Wi-Fi versus 6G. It is static prioritized allocation versus dynamic, AFC-enabled sharing. The RSPG has already drawn the rough outline of a split between a 160 MHz and a 540 MHz portion. Ofcom has now shown how to turn that outline into a functioning spectrum-sharing architecture: Wi-Fi gets guaranteed, early access to a Wi-Fi priority 160 MHz segment plus opportunistic access to the rest of upper 6 GHz under AFC, while MFCN is assured a mobile-priority 540 MHz segment that protects mobile operations while permitting Wi-Fi operations subject to certain limitations.

An EU implementation could follow a similar logic. At the policy level, the Commission and Member States could codify a Wi-Fi priority segment around 6425 MHz to 6585 MHz and a mobile-priority segment above 6585 MHz, in line with the RSPG’s emphasis on securing midband spectrum for future MFCN. At the technical level, CEPT and ETSI could develop a common AFC framework for 6 GHz, drawing on Ofcom’s Annex 5 for concepts such as AFC provider registration, security, propagation models, protection criteria, device registration, and enforcement hooks. Member States would then be free to choose whether and when to enable standard power Wi-Fi under AFC in upper 6 GHz, but they would do so within a harmonized, pan European technical and certification regime.

Such a “better together” model would do three things. It would honor the RSPG’s midband priorities by reserving a clear 540 MHz path for future MFCN layers while still recognizing Wi-Fi’s central role in indoor and local area connectivity. It would unlock near term socioeconomic gains from standard power 6 GHz Wi-Fi in the very environments (homes, enterprises, public venues, and industrial sites) that matter most for the Europe’s Digital Decade [6]. And it would embed spectrum sharing as a first-class design principle, using AFC and related tools to manage coexistence dynamically rather than relying on static guard bands and siloed allocations.

Part I argued that Europe’s 6 GHz crossroads was not about choosing Wi-Fi or 6G, but about choosing collaboration over constraint. In the UK, we now have a concrete demonstration of what that collaboration can look like in the 6 GHz band: Wi-Fi and MFCN sharing a common midband resource under a common AFC control plane, each playing to its strengths. The question for European regulators is no longer whether such a model is technically possible, but whether they are prepared to adopt a similarly engineered, “better together” strategy for the upper 6 GHz band before the window for shaping the continent’s midband future closes.

Summary

Ofcom’s “Better Together” approach positions the upper 6 GHz band as a shared resource for both Wi-Fi and mobile, with Wi-Fi given priority in part of the band and mobile prioritized in the remainder under technical controls such as AFC. The plan reflects a pragmatic spectrum-sharing model that aims to balance near-term Wi-Fi demand with longer-term mobile and 6G needs, while improving indoor and venue connectivity for homes, enterprises, and high-density public spaces.

Ofcom's approach allows for the coexistence of Wi-Fi and mobile networks by using programmable, location-dependent policies to manage interference, providing a practical, CEPT-aligned blueprint that could enable Europe to meet its connectivity, innovation, and energy-efficiency goals for the 2030s without forcing a binary choice between Wi-Fi and 6G.

Author

Pelin Salem, PhD – Radio Regulatory Technical Leader, Corporate Compliance & Wireless CTO Office.

Citations and Bibliography

- [1] Radio Spectrum Policy Group (RSPG), *Opinion on Long-term vision for the upper 6 GHz band*, https://radio-spectrum-policy-group.ec.europa.eu/document/download/3301c2fd-7bff-4ecf-bfcd-cfb572a5972f_en?filename=RSPG25-031final-RSPG-Opinion-Upper_6GHz_band.pdf.
- [2] UK Ofcom, *Expanding access to the 6 GHz band for commercial mobile and Wi-Fi services*, <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-3-4-weeks/consultation-expanding-access-to-the-6-ghz-band-for-commercial-mobile-and-wi-fi-services/main-document/expanding-access-to-the-6-ghz-band-for-commercial-mobile-and-wi-fi-services.pdf?v=410329>.
- [3] UK Ofcom, *Enabling automated frequency coordination (AFC) in the 6 GHz band*, https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-3-4-weeks/automated-frequency-coordination-afc-for-the-6-ghz-frequency-band/main-docs/consultation_enabling-automated-frequency-coordination-afc-in-the-6-ghz-band.pdf?v=410328.
- [4] UK Ofcom, *Annex 5 AFC System Specification*, https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-3-4-weeks/automated-frequency-coordination-afc-for-the-6-ghz-frequency-band/main-docs/annex-5_automated-frequency-coordination-framework_v1.0.pdf?v=410446.
- [5] UK Ofcom, *Voluntary National Specification (VNS)*, https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-3-4-weeks/automated-frequency-coordination-afc-for-the-6-ghz-frequency-band/main-docs/annex-8_6-ghz-voluntary-national-specification_v1.0.pdf?v=410327.
- [6] European Union, Europe's Digital Decade, <https://digital-strategy.ec.europa.eu/en/policies/europes-digital-decade>.