



Spectrum management with a user-centric approach

Enterprise & Industry

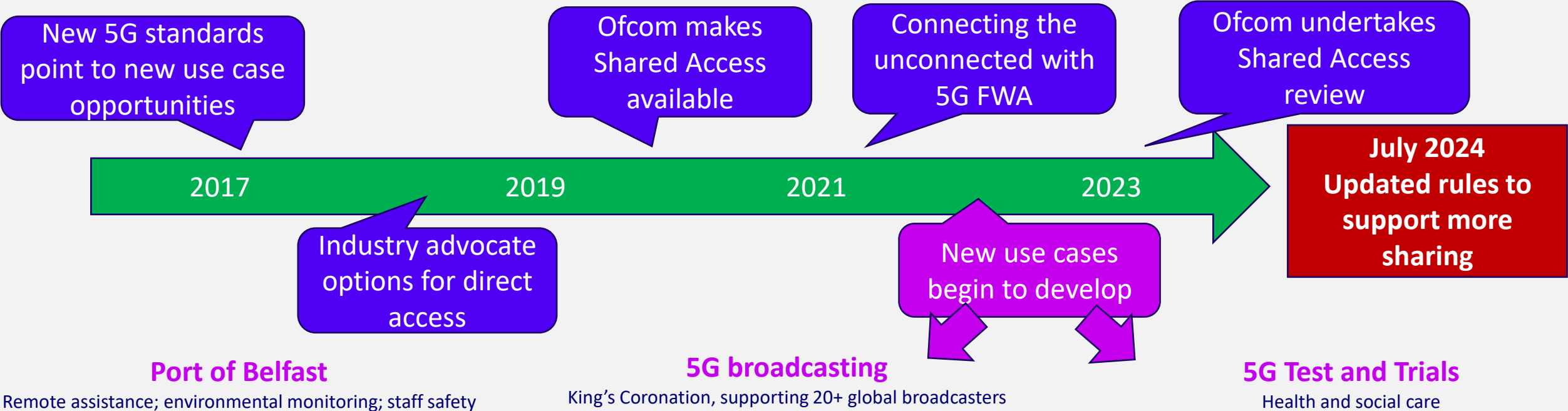
David Willis

Spectrum Group, Ofcom

23 September 2024



Spectrum for Industrial Verticals– Shared Access Journey



Port of Belfast

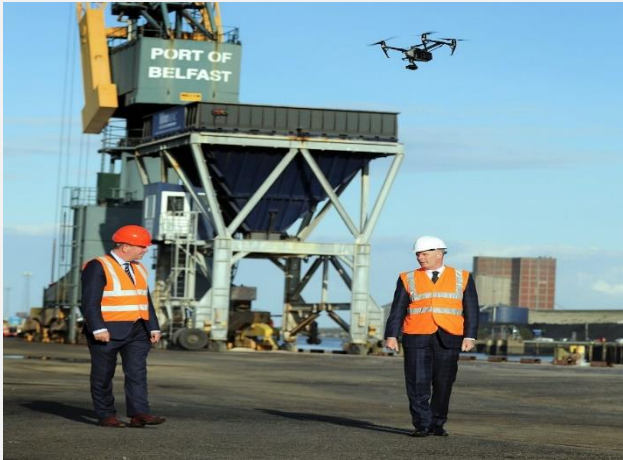
Remote assistance; environmental monitoring; staff safety

5G broadcasting

King’s Coronation, supporting 20+ global broadcasters

5G Test and Trials

Health and social care



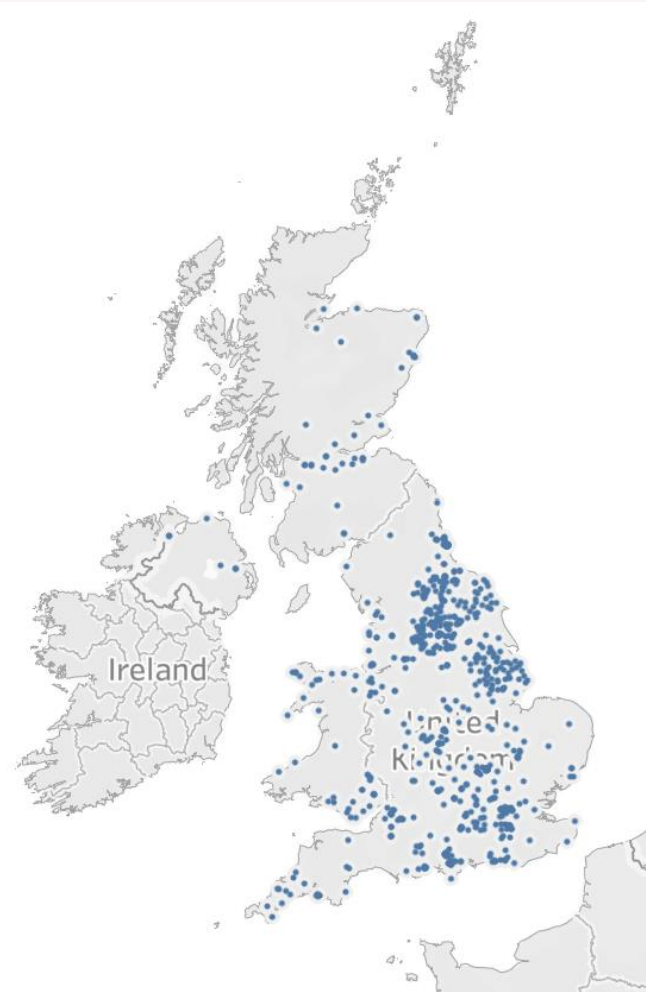
Shared Access bands, options and take up (as of June 2024)

	1800 MHz	2.3 GHz	3.8-4.2 GHz	26 GHz	Total
Low Power	227	29	176	1	433
Medium Power	122	-	320	-	442
Total Live Licences	349	29	496	1	875

Overview of current monthly demand (in issued licences) across Shared Access bands

	1800 MHz	2.3 GHz	3.8-4.2 GHz	26 GHz	Total
Average Issued Monthly ¹²	14	1	24	0	39

Mix of all Shared Access Licence Locations

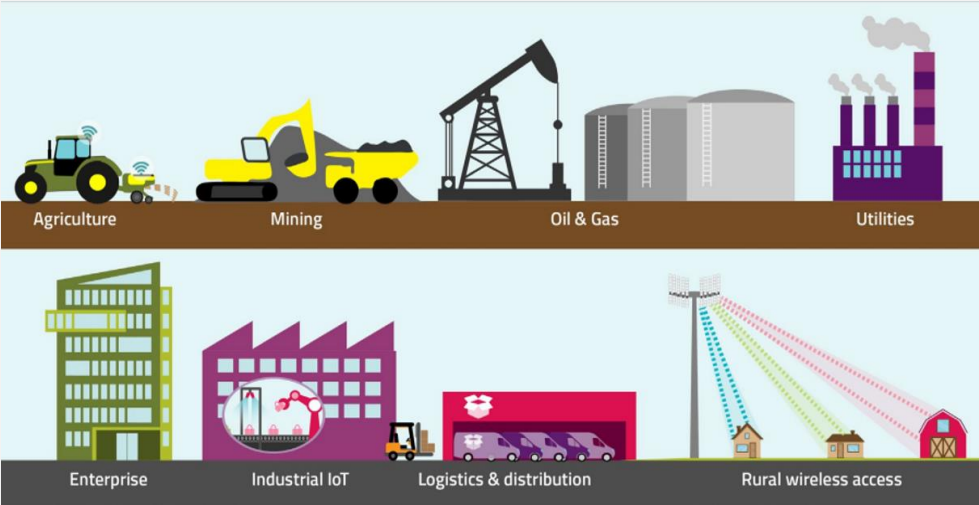


Spectrum Availability in 3.8-4.2 GHz



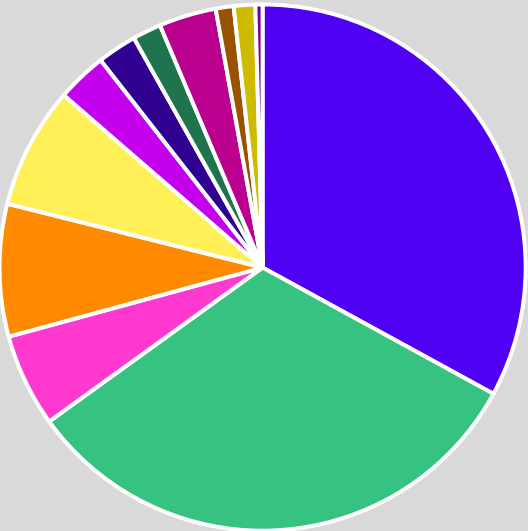
Use cases driving demand in our review (2023-24)

In 2019, we envisaged a broad mix of potential users....



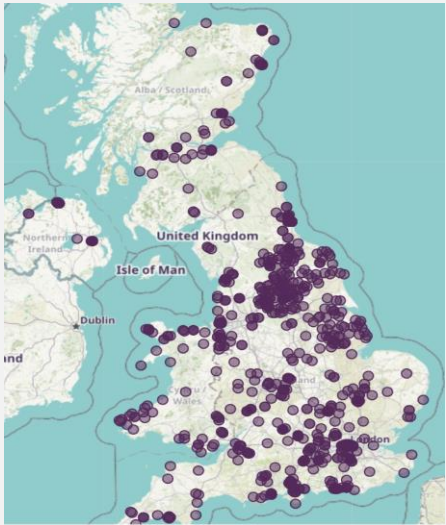
....While we have a mix, actual use is dominated by FWA + a small number of neutral/private network players....

Shared Access Licence Distribution by Sector



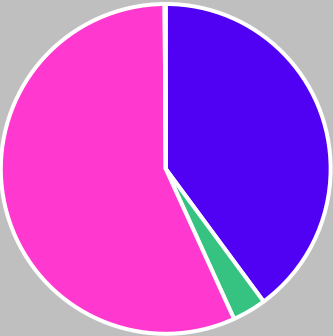
- FWA
- 3rd Party Infrastructure
- Public Sector
- MNO
- Port + Logistics
- Manufacturing
- Neutral Host
- Local Telecoms
- University
- PMSE
- International Telecoms
- Business

Take up has emerged across the UK...



...But focussed on 2 popular bands...

Shared Access Share by Band



- 1800 MHz
- 2.3 GHz
- 3.8-4.2 GHz
- 26 GHz

Our 2023/24 review focused on improving spectrum supply and relaxing restrictions to increase opportunities for users

Key Objectives

- 1

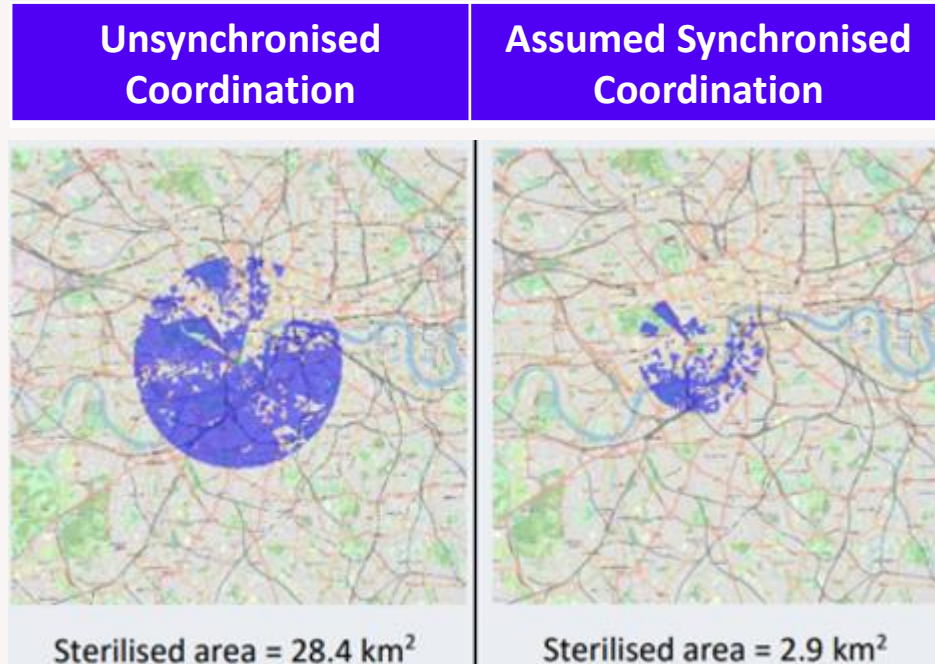
Supporting innovation and growth
- 2

Improving user experience based on 4 years of learnings
- 3

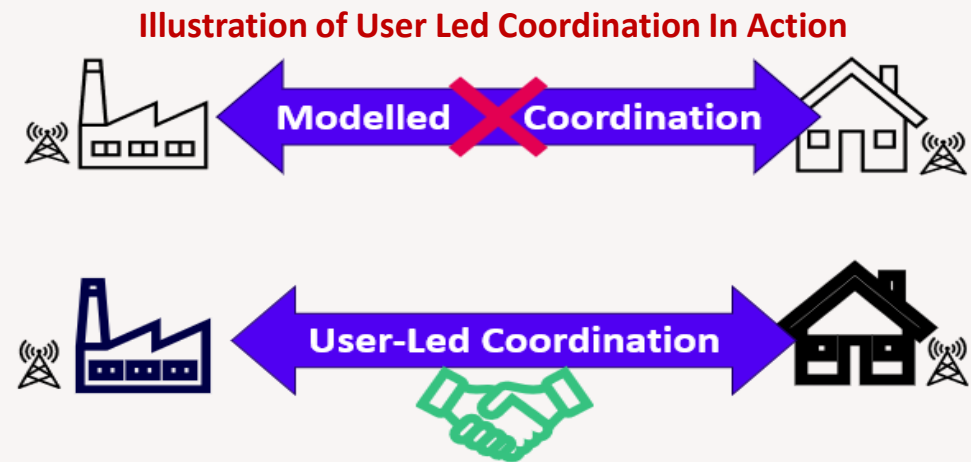
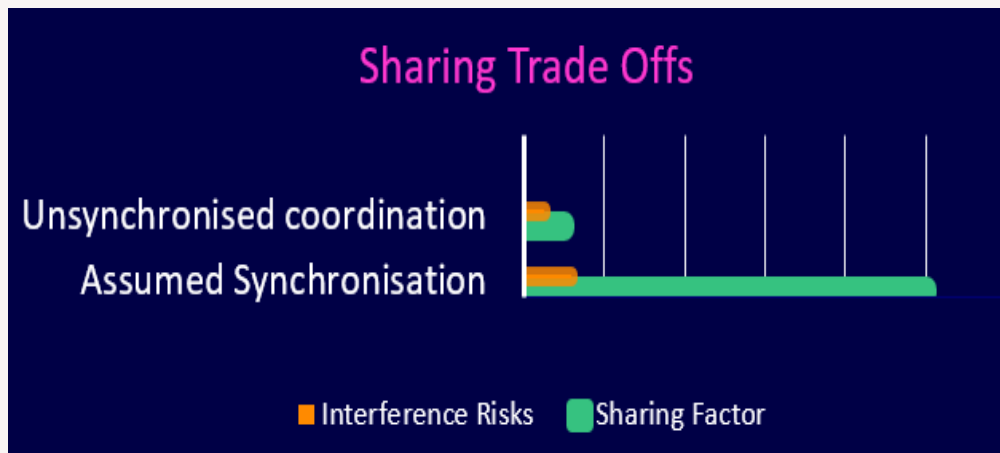
Ensuring that we are making efficient use of this valuable spectrum

Consultation Proposals and Decisions	Innovation and Growth Outcomes
Increasing spectrum supply in the most popular 3.8-4.2GHz band (by more flexible sharing rules)	➤ More spectrum available to share ➤ More new users and innovation ➤ Quicker turnaround process
Liberalising our rules to enable new use cases (low power increase and removal of terminal registration)	➤ Support for new neutral host models ➤ More power and capacity, reducing user deployment costs
Consulting on wider access to medium power in urban areas	➤ Enabling more economical deployments and streamlining access to medium power for users

Moving to more flexible coordination in Shared Access

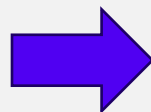


- Simple steps towards more pragmatic sharing can significantly improve spectrum supply
- In 3.8-4.2 GHz, we have consulted on adopting an assumption that users are synchronised:
 - moving away from over-protection means trusting users to take practical steps to mitigate risks
 - more difficult with different technologies and user types
- We're also looking to bring user knowledge into our licensing process, knowing more data is available at local level

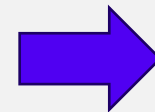


Outcomes and questions for the future

By taking a less conservative approach in coordination, we will radically improve spectrum supply in 3.8-4.2 GHz.

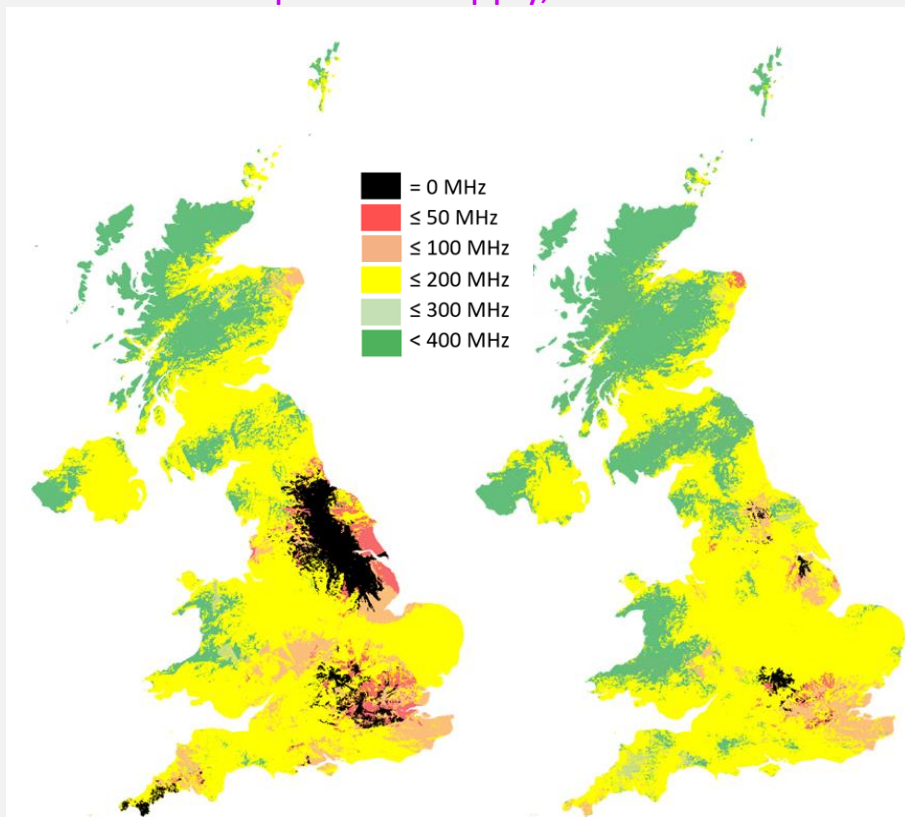


This opens up new opportunities we are now considering:

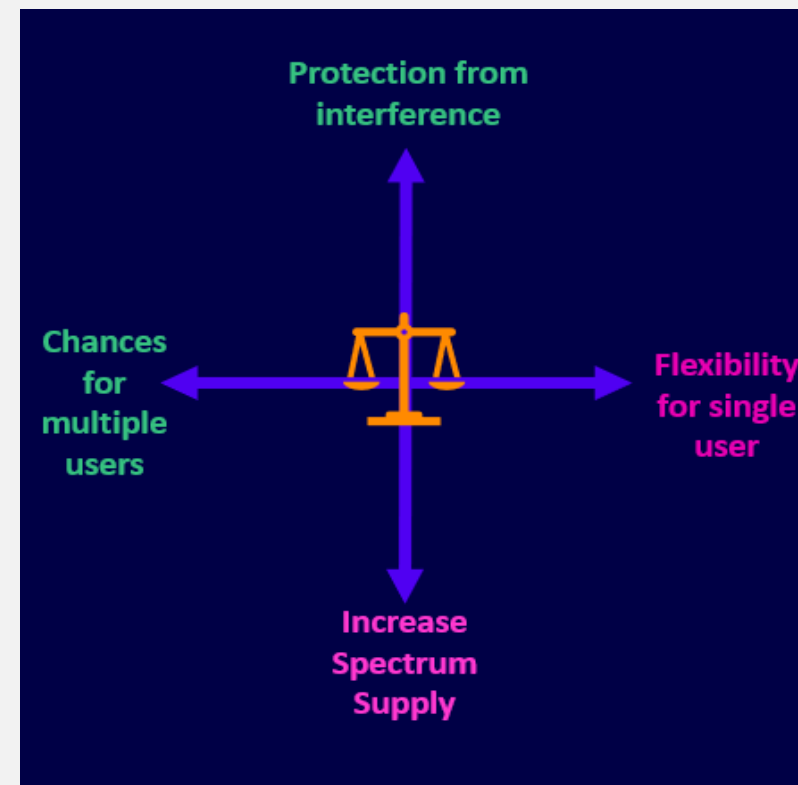


But there remains a balance between freedom for individuals & flexibility for wider sharing ecosystem

3.8-4.2 GHz spectrum supply, old vs new rules



- More flexibility on Medium Power in urban areas
- Allowing more neutral host activity outdoors



Collaboration

Excellence

Agility

Empowerment

Respect