



Spectrum Sharing

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UK Government Statement of Strategic Priorities for Telecommunications, the management of and postal service

The key mission of the government is to drive growth in the UK economy

Ofcom must have regard to the statement when exercising its functions

Strategic Priority 1: Driving growth through world - class digital infrastructure

- **National Ambitions:**

- Widespread availability of high-quality, standalone **5G in all populated areas by 2030.**
- Near-universal (99%) access to gigabit-capable fixed connections by 2032.

- **Implication for Ofcom:** Ambitions require a forward-looking, investment-friendly, and efficient spectrum management strategy.

- Monitoring investment
- ALF framework to support optimal market outcomes
- Reporting on 4G and 5G coverage and performance metrics

Strategic Priority 2: Maximising access to spectrum

- **Spectrum Sharing:** Maintain and build on innovative approaches like the 2019 shared access framework (e.g., 3.8-4.2 GHz band).
- **Automation of licensing process:** Assess the potential for full automation of shared access licences.
- **Short-term licences:** Ensure shared bands continue to support occasional-use licensees, like the PMSE sector (Programme Making and Special Events)..
- **Evolution of spectrum access and sharing mechanisms:** Learnings from such as DSIT's spectrum sandboxes to inform future policy.

Strategic Priority 2: Maximising access to spectrum

- **Public sector spectrum access:** Ensuring the needs of critical users (e.g., defence) whilst "maximising opportunities to boost spectrum value and growth through sharing or release.
- **Emergency services, transport and utilities:** Ensure requirements are factored into spectrum allocation decisions.
- **Creative Industries (PMSE):** Review spectrum requirements and technological trends to ensure continued access for this crucial sector..
- **Future of Digital Terrestrial TV (DTT):** Ofcom to proactively engage with the government ensuring appropriate consideration to the potential value of the spectrum and the need to continue serving audiences.

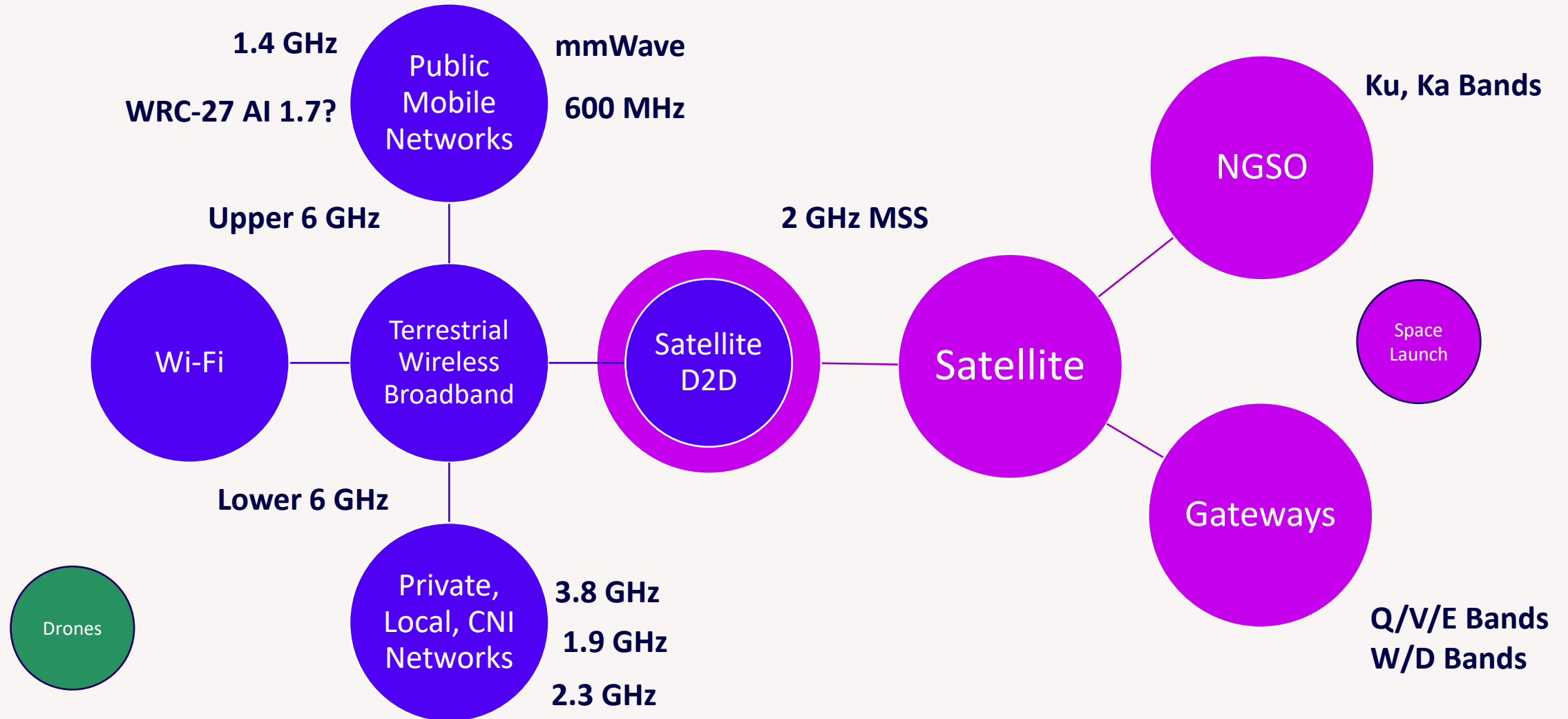
Strategic Priority 2: Maximising access to spectrum

- **Space ambitions:** Shaping the international framework to support space services (including space science) to ensure UK space industry thrives.
- **International spectrum negotiations (CEPT and ITU):**
 - Maximise our influence in negotiations;
 - Work collaboratively with allies and global partners with common interests to ensure the international framework works for the UK, Europe and globally;
 - Ofcom to work closely with government to ensure priorities and strategic priorities (e.g. national security and resilience) are considered.
- **Fit for purpose regulatory regime:** Ofcom to update government on suitability of the current framework and scope for legislative updates to support advancements.

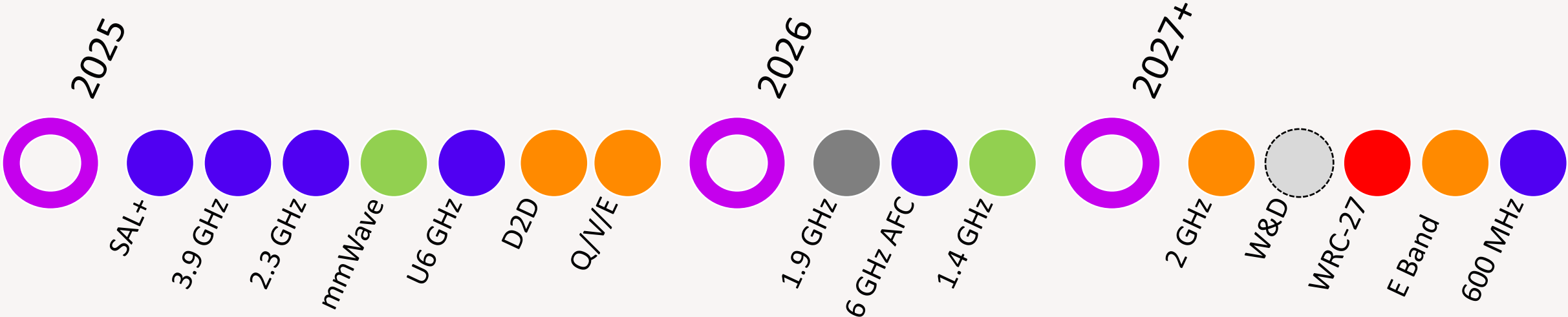
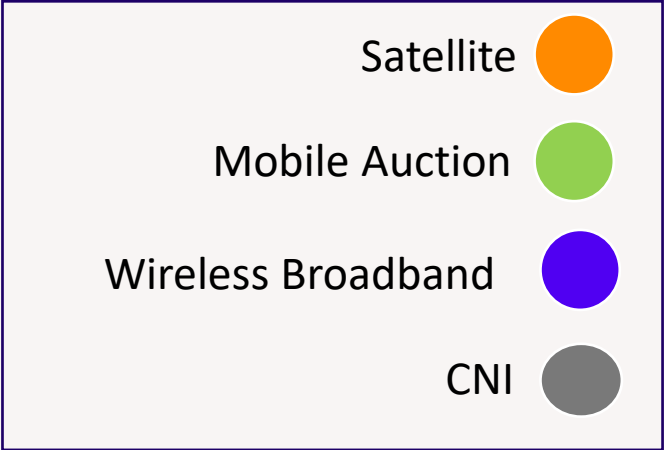
Spectrum pipeline



Spectrum Pipeline – sectoral view



Spectrum pipeline - timeline



Spectrum sharing is the key to our spectrum strategy

Shared Access for 5G

- Enabling local networks in 3.8-4.2 GHz for industry & enterprise
- Introducing 'pop up' networks in 2.3 GHz

mmWave (26 & 42 GHz)

- Local licences across the UK
- Auctions in areas of high population

1.4 GHz SDL

- Coexistence with adjacent channel satellite terminals

D2D in IMT bands

- Sharing between satellite and terrestrial networks

6 GHz

- AFC for Standard Power local networks
- Flexible sharing between Wi-Fi and Mobile in upper 6 GHz

Shared access



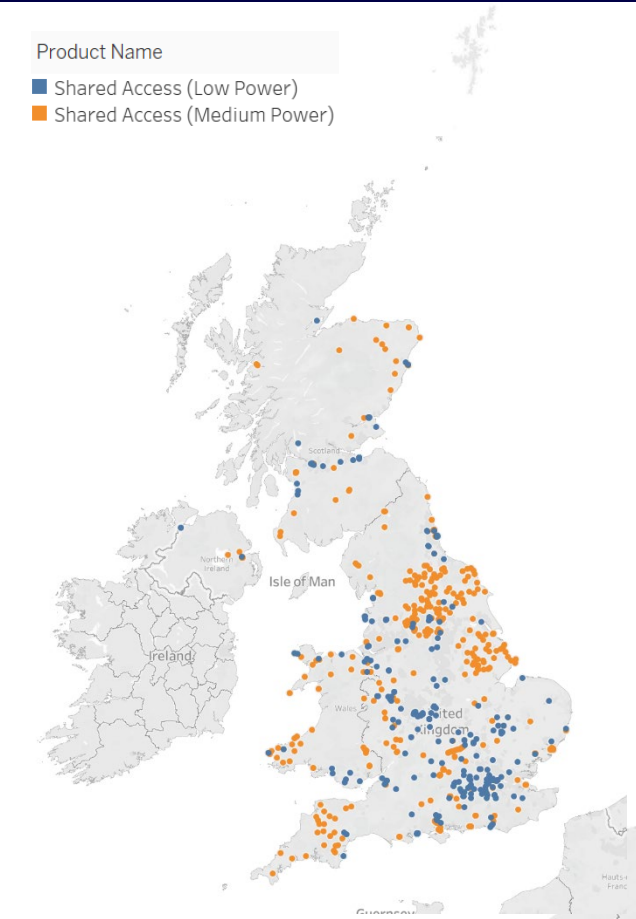
Shared access has evolved since its launch in 2019

Launched in 2019 to meet growing demand for various 5G industrial use cases that required low latency and large bandwidths

Provides localised access to spectrum to support new connectivity solutions + innovation and growth

Designed to be simple, low cost and support a mix of solutions, with Low and Medium Power products across a range of bands

Licence numbers in October 2025					
	1.8GHz	2.3GHz	3.8-4.2GHz	26GHz	Grand Total
Low Power	199	17	197		413
Medium Power	109		378	4	491
Total	308	17	575	4	904



Take up is spread across the UK...

...and spectrum supply may be shared with a mix of other incumbents

Our 2024 review took steps to support more use cases and growth

Spectrum supply and growth

- **Tighter packing of licensees** with base to terminal coordination

More use cases and innovation

- **Removal of Terminal Registration** for Low Power
- **Increase in Low Power transmit limit**
- **Permitting Medium Power in urban areas**

Speed of authorisation

- **Refined exception criteria**
- **Interactive spectrum map**

Spectrum efficiency and supply

- **New fees for Medium Power & 100 MHz limit**

Unsynchronised Coordination



Sterilised area = 28.4 km²

Assumed synchronised Coordination



Sterilised area = 2.9 km²

Sharing Trade Offs



6 GHz

Lower 6 GHz – expanding access to outdoor and standard power use through AFC

- **Proposed** allowing outdoor and standard power licence exempt use (up to 4W) in 5925–6425 MHz, as long as it is **under the control of an AFC database** (to protect incumbents).
- Proposal is subject to **clear demand from industry** for outdoor and standard power use in Lower 6GHz *and* indication that there are **parties interested in becoming AFC providers**.
- This has already been introduced in USA and Canada. **We intend to leverage these existing systems** as much as possible to accelerate implementation in the UK.
- **Potential** for AFC use to be **extended to Upper 6 GHz** in future.

Upper 6 GHz – Phased approach to shared use

Phase 1 – Wi-Fi: Consultation Feb 2025

- **Proposed** opening the entire band for indoor Wi-Fi (up to 250 mW) as soon as possible – based on existing Wi-Fi technical standards.
 - with the expectation that some additional enhancements or restrictions to Wi-Fi will be needed to enable future sharing with mobile
- **Outlined our options** for future sharing approach (pending harmonisation outcome), likely either:
 - Prioritised spectrum split (slight preference), or
 - Indoor/outdoor split
- **We are exploring possible mobile authorisation options** (e.g., auction in high density areas)

Phase 2 – Mobile: Linked to Harmonisation process

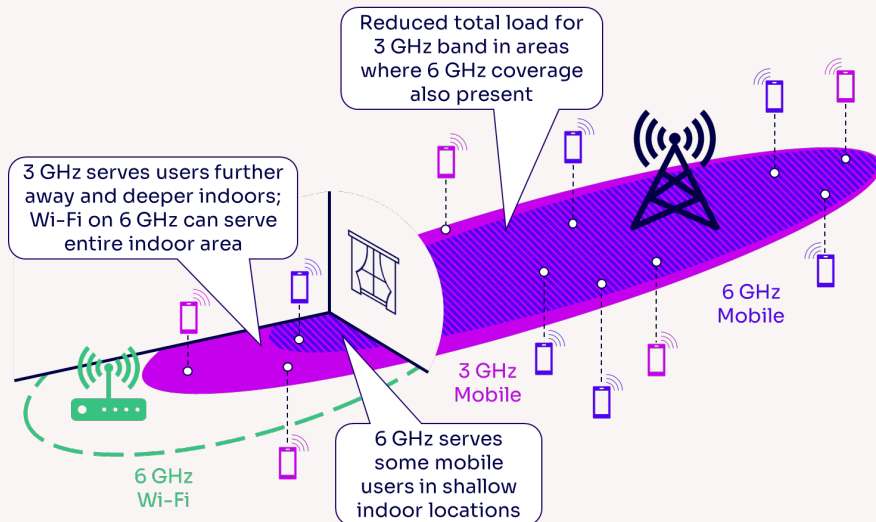
- **Implement enhancements to Wi-Fi** to facilitate sharing with mobile (once harmonised)
- **Confirm sharing approach**, likely either
 - Indoor/outdoor split, or
 - Prioritised spectrum split (slight preference)
- **Open access to mobile** post harmonisation on a shared basis with Wi-Fi
- Mobile access will be focused on **high density areas** covering largest towns, cities and key transport hubs with options for mobile in low density areas to be decided.

Aim is to provide **certainty of (some) access to Wi-Fi and mobile** and incentivise industry to progress harmonisation

Upper 6 GHz sharing mechanisms – 2 options

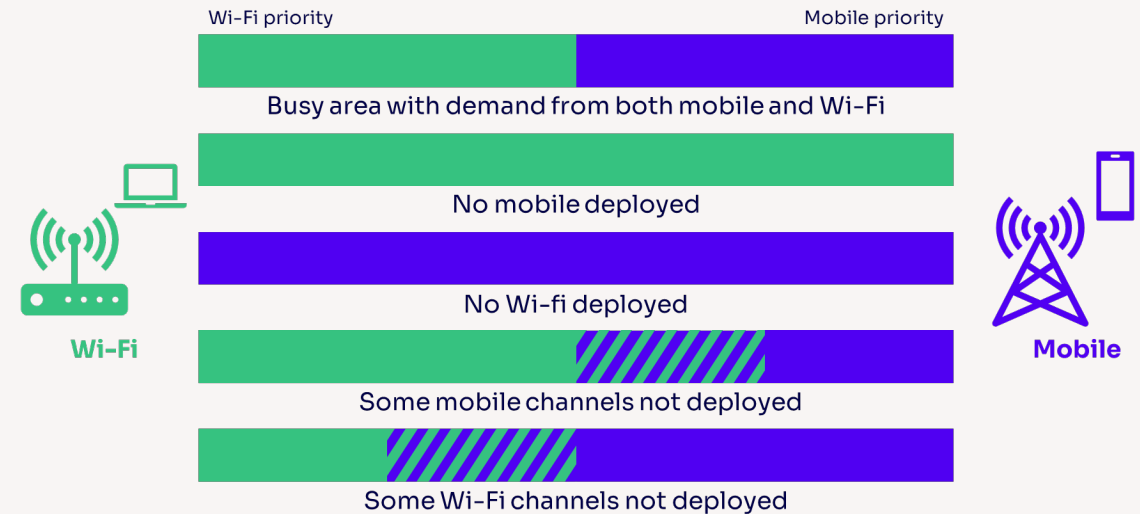
Indoor/outdoor split

- Low power Wi-Fi indoors.
- Mobile outdoors with restricted power (not providing indoor service).



Prioritised spectrum split

- Mobile priority in upper portion, Wi-Fi priority in lower.
- Where to split the band open to debate in Europe (160 – 400 MHz out of 700 MHz prioritised for Wi-Fi).
- We have a slight preference for this option.

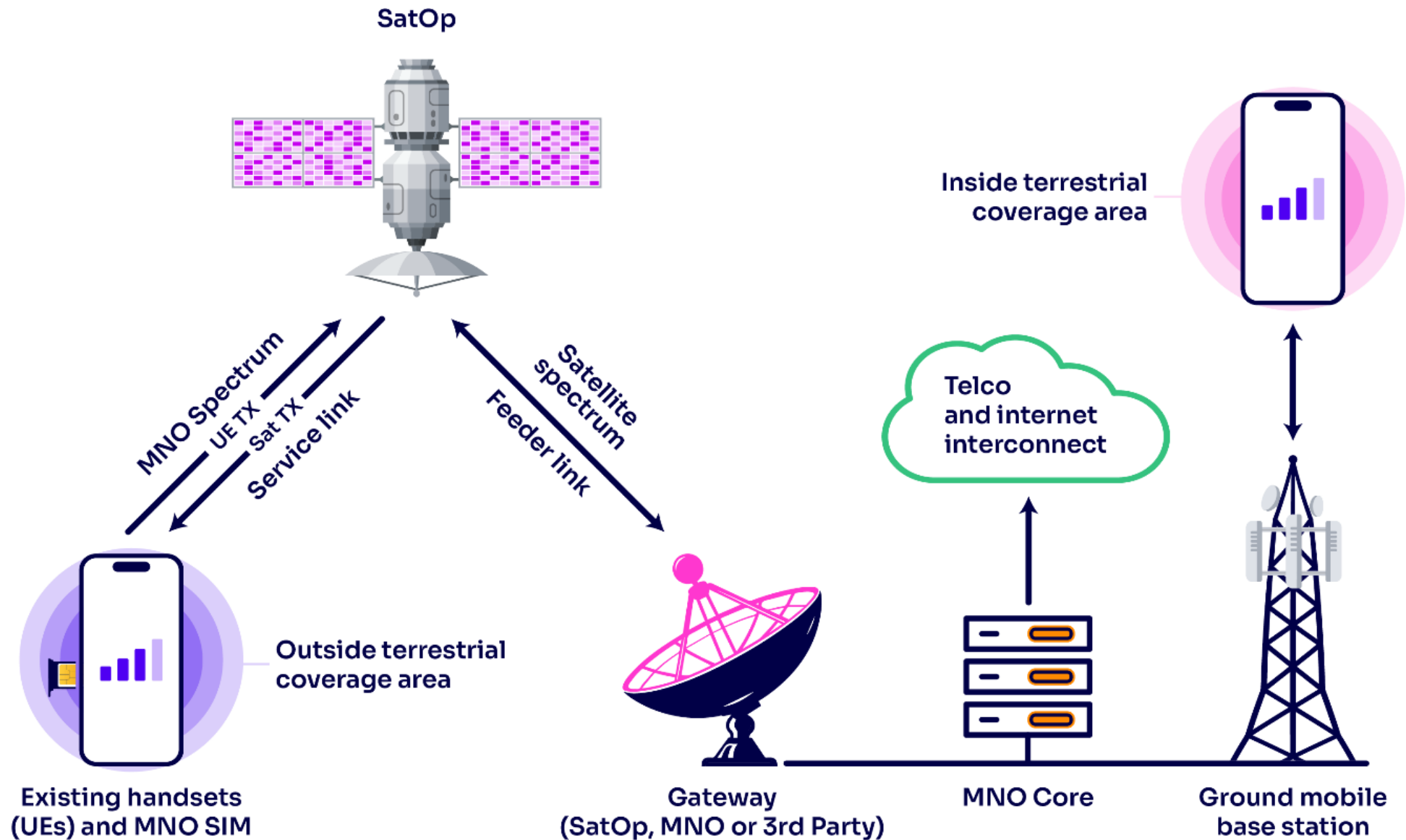


Enhanced sensing (required by both options) – we **propose** mobile base stations transmit a Wi-Fi control frame to improve Wi-Fi “sense-and-avoid” mechanism.

Satellite Direct to Device (D2D)

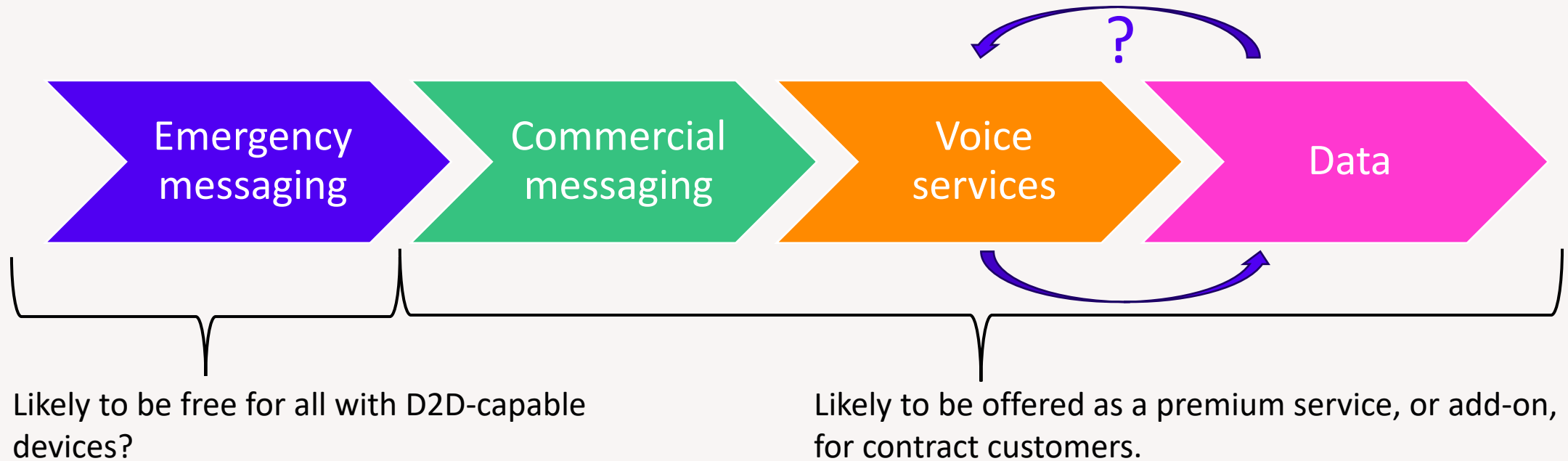


D2D Network components



Expected evolution of D2D consumer services

We expect to see the provision of D2D services develop overtime as constellations mature.



Initial services may not reach the most northern points of Scotland or be available 24/7. Indoor coverage and overall capacity will be limited. But as constellations grow, we expect to see availability and performance improve.

September decisions

- We will accept applications for D2D deployments in FDD & SDL bands below 3 GHz
- We've set PFD limits for each band to protect co-channel, cross border and adjacent channels spectrum users
- We set a minimum elevation angle of 10 degrees
- Our authorisation framework requires a variation to an MNO's existing licence and new exemption regulations that will enable end users to lawfully connect to D2D services

Link to [statement and further consultation](#)

600 MHz

470 – 694 MHz – Three possible versions of the future



Each of these options could take 8 - 10 years of planning

Government needs to set a vision in the next year