



# Spectrum Sandbox - Real Wireless led consortium

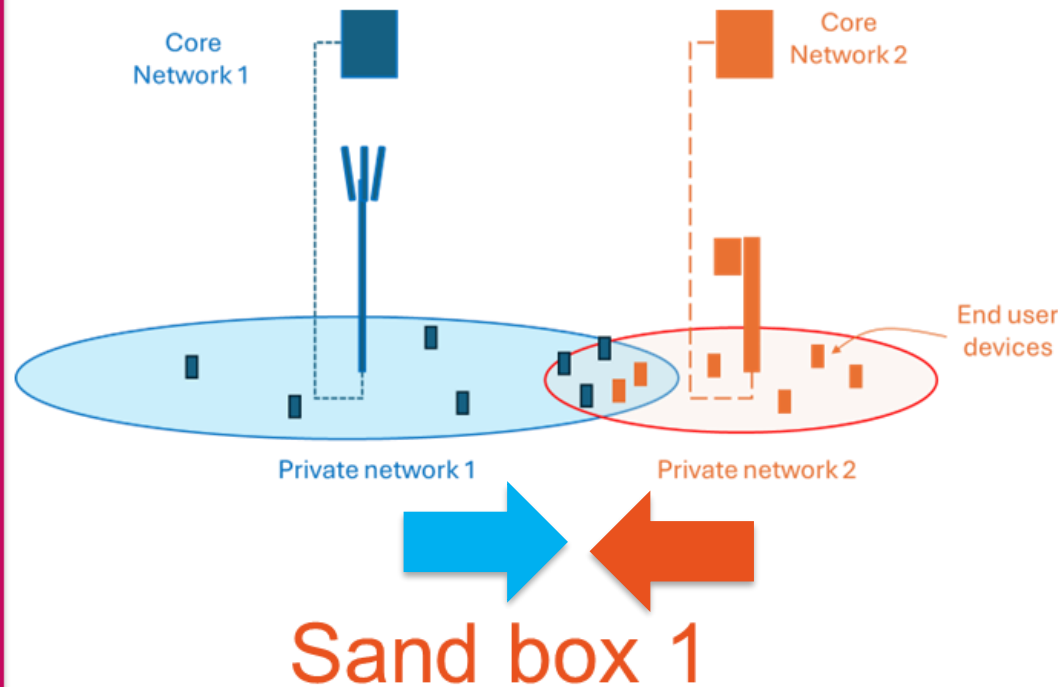
## Conclusions and Next steps

03 Jun 2025

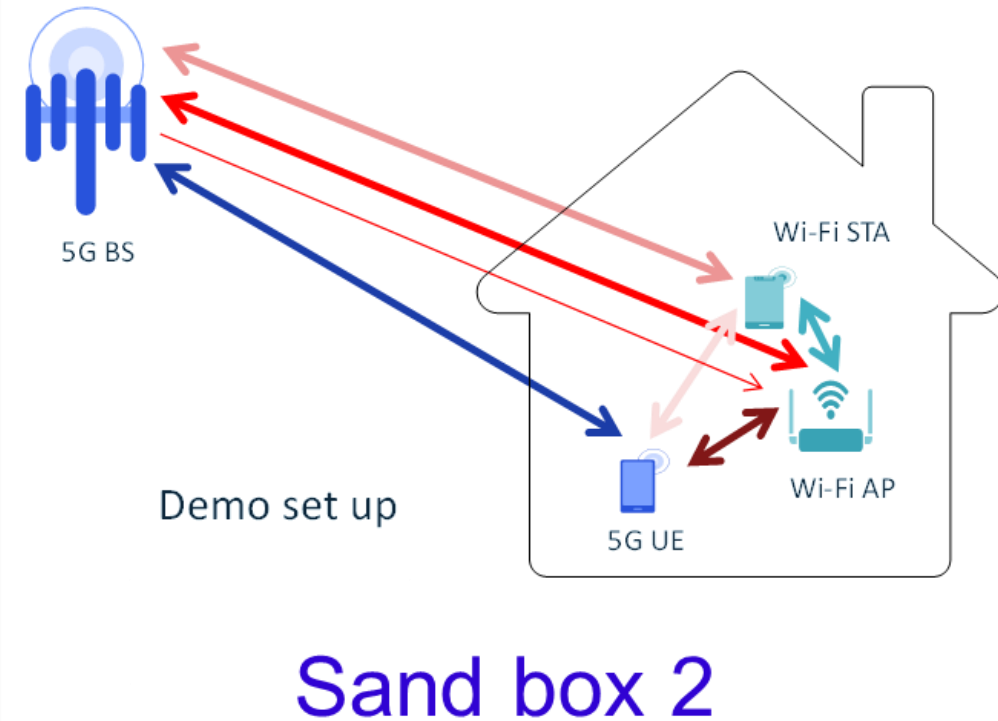


# Real Wireless led spectrum sandbox project – We implement 2 Sandboxes to conduct field trials

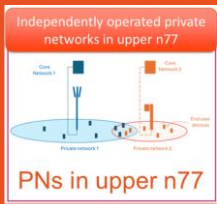
Independently operated private networks in upper n77



Wi-Fi and mobile in the upper 6 GHz



# Independently operated private networks in 3.8-4.2 GHz - Our roadmap of solution development includes two steps

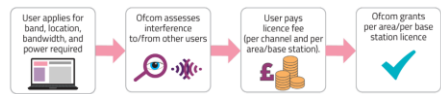


Today's framework

Step 1:  
Improve prediction

Step 2:  
Interference tolerance

Licence process amendment

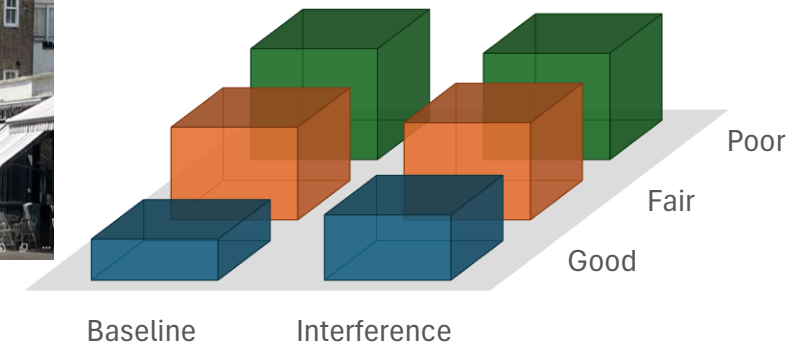


Comparison of existing (red) and project model (blue) predictions of sterilised areas

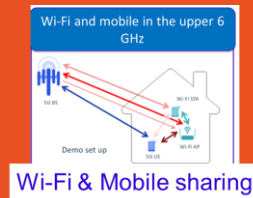


IIM for TCP Downlink

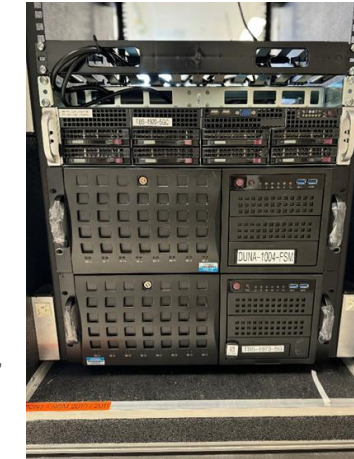
■ Good ■ Fair ■ Poor



# Wi-Fi and mobile in the upper 6 GHz band



- The results demonstrate that the transmission of Cross Technology Signalling (**XTS**) by **5G BS** and UE and reception by Wi-Fi AP and STA could be an **effective** technique to **identify** potential service **degradation** and **trigger interference management** procedure, (e.g. Wi-Fi equipment selects a different channel)
- **Opportunities:**
  - The study provides useful **PoC** options for the UK to **contribute** and **influence** the **CEPT** activities
  - The evaluated **IEEE 802.11bc framework** as XTS option ensures that **all Wi-Fi 6E** hardware is **suitable to implement**, allowing the **leverage economy of scale**, as the IEEE 802.11bc feature can be **enabled through software** without hardware changes. Generation of IEEE 802.11bc waveform may also be implemented in software on the 5G side.
- **Risks:**
  - Addressing **standardisation** of technical solutions, vendor support, and user costs is **crucial**, as delays may hinder market introduction.
  - The **effectiveness** of **XTS** relies on its range, receiver sensitivity, and the maximum EIRP of the receiving technology.
- **Next steps:**
  - both the **regulatory framework** and required **standards** are in place before any device enters the market. The **standards** need to cover both technical **minimum requirements** and associated **conformance testing**.
  - The **enforcement framework** in place to provide enough confidence for MNOs to invest in the band. Whatever the standardised sharing approach, there should be a **mechanism** to **ensure** that **devices sold** after the market **cannot alter** their **behaviour** through software and/or firmware modifications.



Test equipment set up



## Contact:

**Dr. Abhaya Sumanasena, Spectrum Sandbox Lead  
& Head of Policy and Regulation, Real Wireless**  
e: [abhaya.sumanasena@real-wireless.com](mailto:abhaya.sumanasena@real-wireless.com)



## For details contact us at:

e [info@real-wireless.com](mailto:info@real-wireless.com)  
w [real-wireless.com](http://real-wireless.com)  
in [linkedin.com/company/real-wireless](https://www.linkedin.com/company/real-wireless)

Real Wireless Limited  
PO Box 2218, Pulborough  
West Sussex RH20 4XB, UK