



arqiva

5G Fixed Wireless Access

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Arqiva is UK #1 telecoms infrastructure provider

Mobile

Macro Sites

Street Infrastructure

Indoor Coverage (DAS)

M2M

Energy Smart Metering

Water Smart Metering

Internet of Things



23%
UK macro-site market

c.8,000+
Active cellular sites

One of the 2 UK Smart Metering leaders

Gas, electricity and water



exclusive licenses to use municipal street furniture in 14 London Boroughs; and other UK cities including Manchester and Southampton

300,000+
Small Cell street level assets

FWA is especially relevant in the UK due to the low FTTP access

The UK is lagging behind other fibre nations

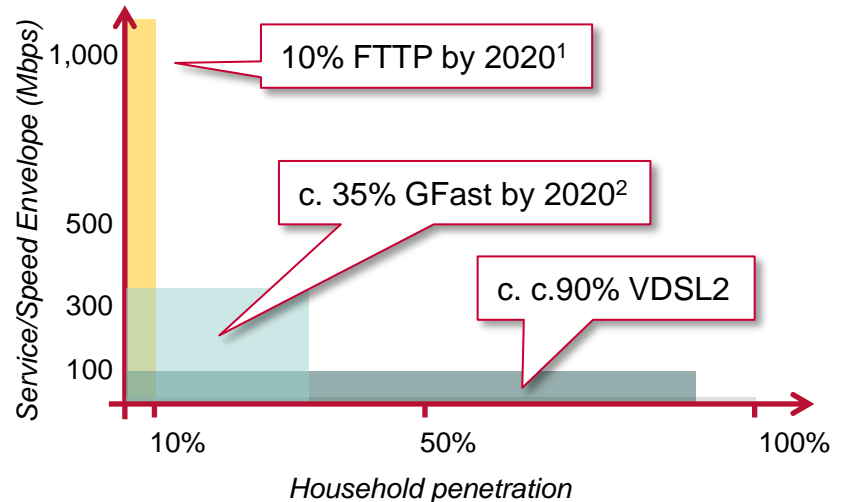
3% FTTP penetration
in UK

Current focus on copper
based technologies

FTTC will not deliver Gbps
speeds

5G FWA can provide gigabit
broadband service to the home
and office

UK Wholesale Broadband Provision



Sources: 1. Ofcom Connected Nations 2016, 2. BT / Ipsview, 3. Ipsview

Arqiva's assets provide a unique opportunity for wholesale FWA

c.8k+ macro sites



28Ghz
Spectrum



Arqiva is the #1 owner of 28GHz in the UK

- 40% Nationwide spectrum (2 x 224 MHz)
- 60% Greater London region spectrum (Additional 2 x 112 MHz)
- Both licences are in perpetuity

c.300k+ street assets

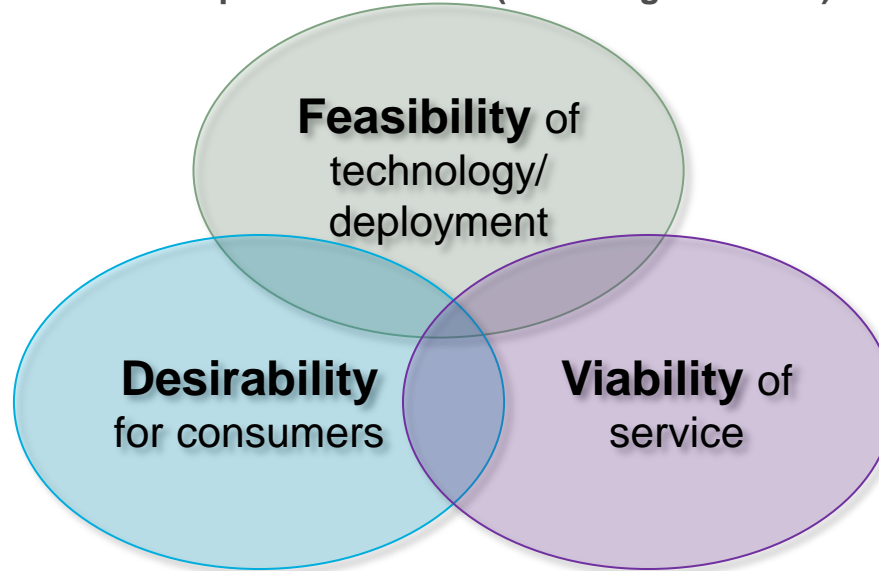
Arqiva & Samsung's London 5G FWA 28GHz trial - #1 in the UK

- ➔ ~ 1 Gbps per CPE
- ➔ Low latency
- ➔ Beam Forming Technology
- ➔ Multiple High Bandwidth Uses Case
- ➔ High stability over a 240m distance, despite UK summer weather!



A UK game changing FWA strategy requires key success factors

- Access to street infrastructure and 28Ghz
- Availability of dark fibre for backhaul at competitive T&Cs
- Cost competitive vs FTTP (including backhaul)



Versus FTTP/FTTH:

- Same retail price point
- Seamless sale process
- Same quality of service
- Easier to install

- Combined FTTP / FWA business case viable
- Critical mass to justify the investment for a consumer brand to integrate a new technology

Scale FWA rollout would complement a scale FTTP deployment, yet making a fair share of it

Next steps for FWA in the UK

**Address the UK
dark fibre conundrum**

**London street level trial
in CY18 to test
the performance in real
conditions**

**Build the business case
combining
FTTP and FWA**

**Continue to work with
DCMS and Ofcom
to strengthen
the regulation
framework**



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Thank you!

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