

Spectrum for wireless connectivity in rural areas

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18 October 2021

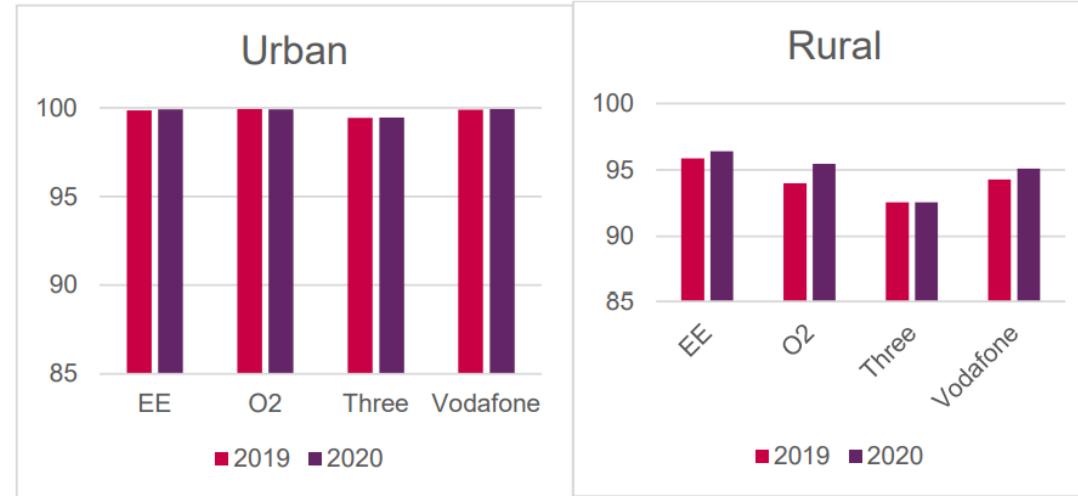
Making sure people and businesses have connectivity where and when they need it



Current mobile connectivity in UK

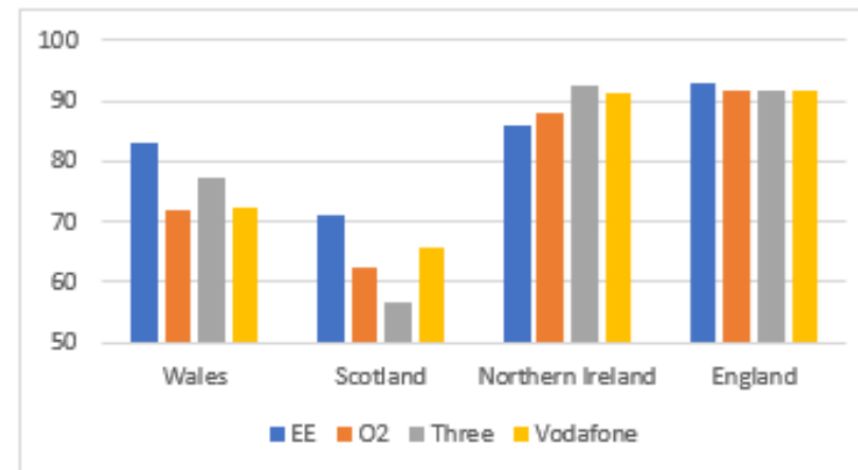
Ofcom's 2020 Connected Nations reported that

- 4G outdoor coverage is available in the majority of the places where people live and work
- The commercial rollout of 4G is approaching maturity: only small improvements have been seen since 2018
- Coverage of the UK landmass remains patchy, in particular in rural areas
- There are differences in coverage between Nations



4G coverage outside premises
Sept. 2020, UK

All operators: 97%
At least one: almost all premises



4G geographic coverage
Sept. 2020, Nations

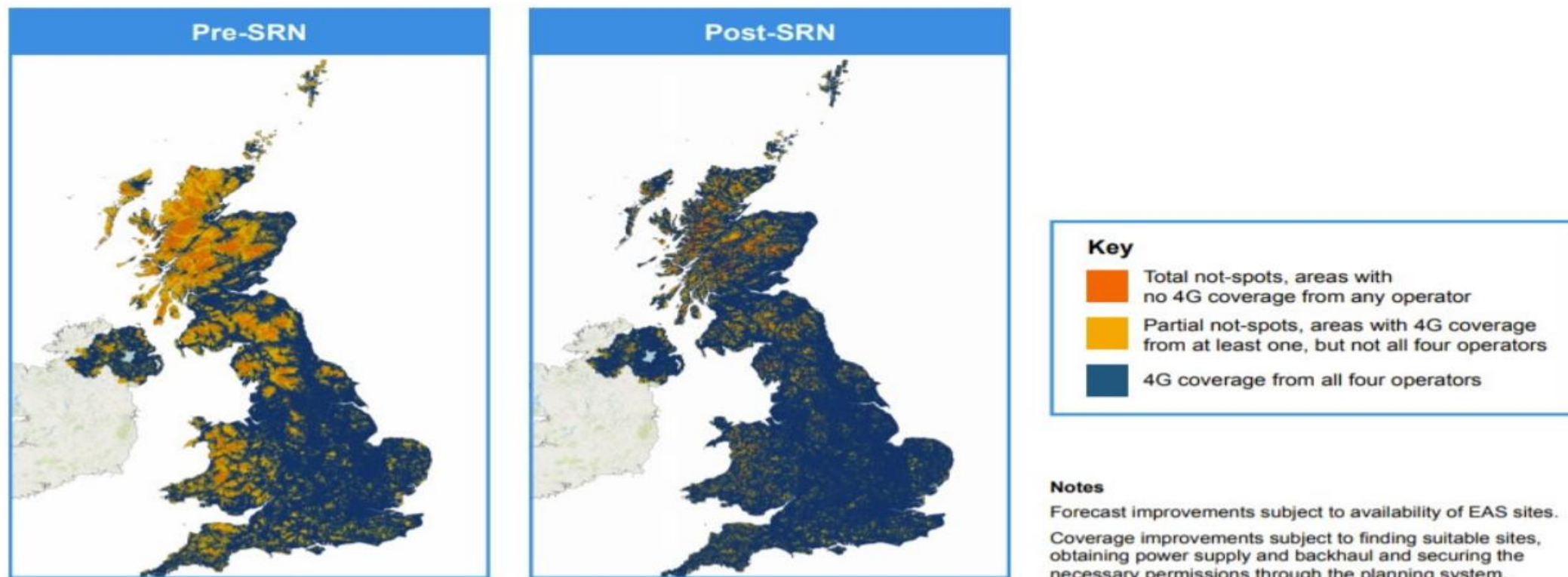
All operators: 69%
At least one: 91%

The Shared Rural Network was developed to address key coverage challenges and should make a significant impact on rural coverage

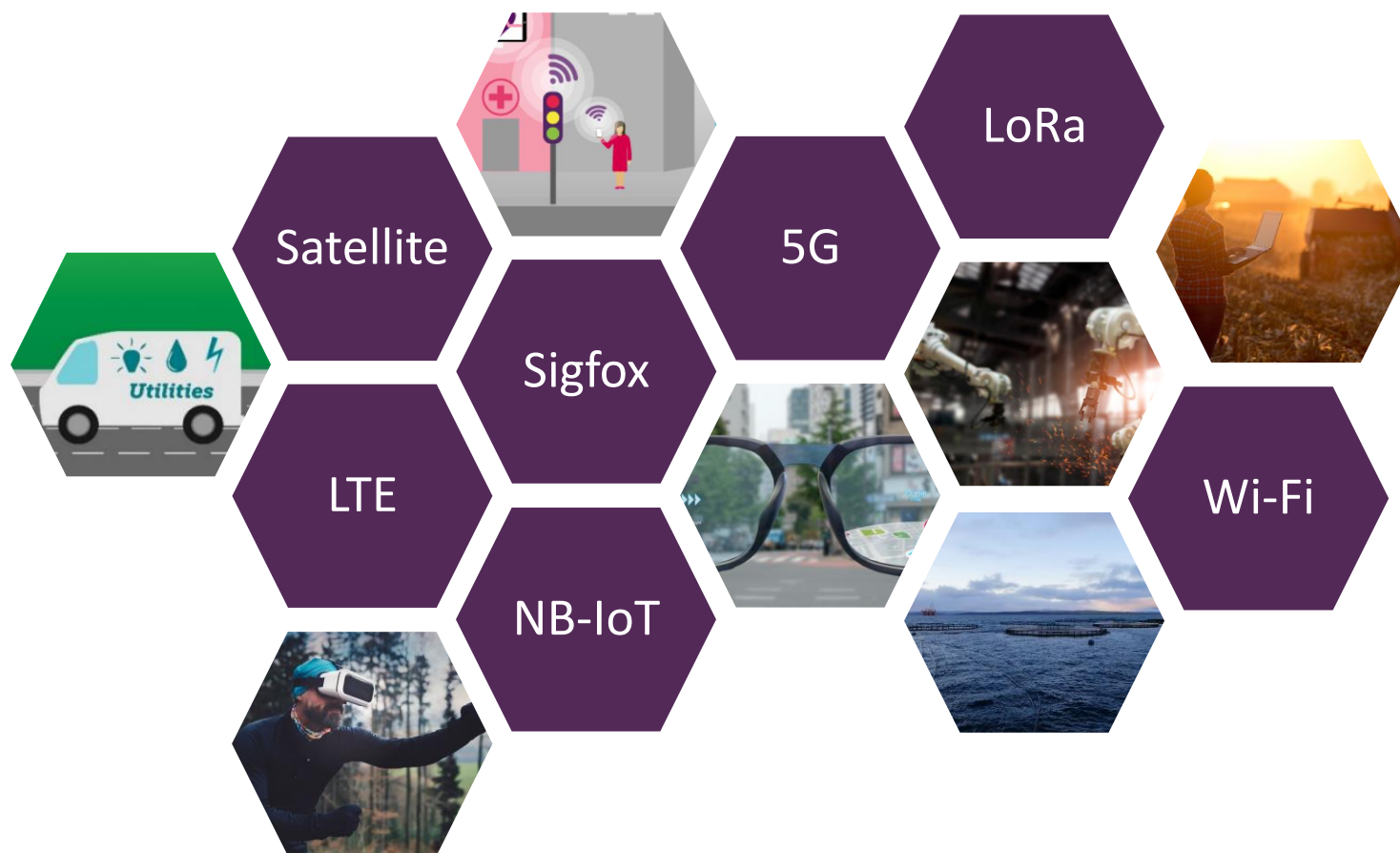


Department for
Digital, Culture,
Media & Sport

Shared Rural Network Coverage Forecast Improvements in the UK



Mobile is one part of the wireless connectivity picture: a range of different technologies and business models will be needed to meet different requirements



Improving fixed/FWA connectivity can support wireless connectivity

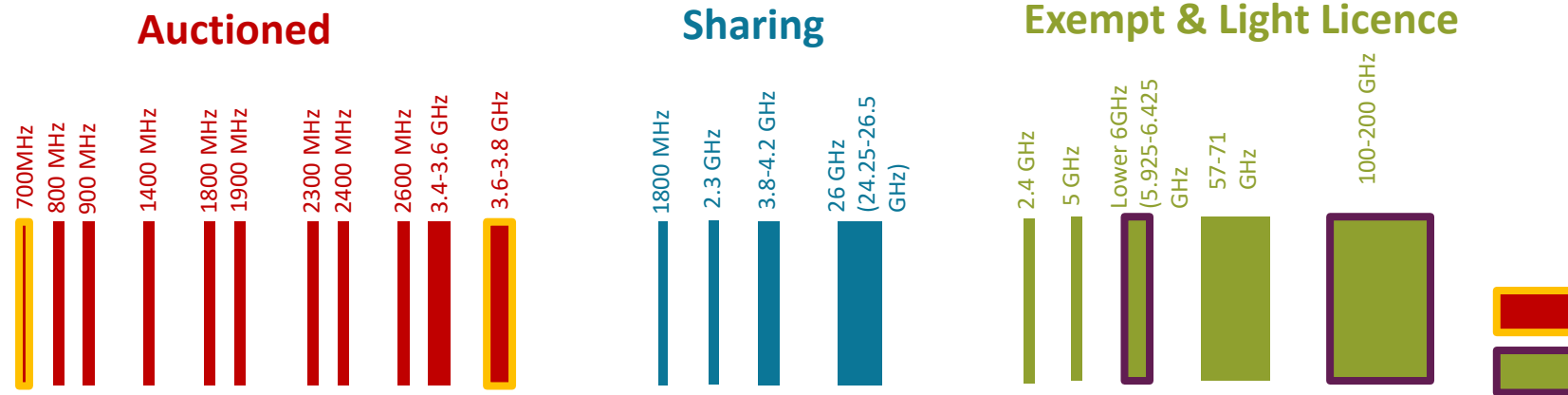
- The vast majority of properties now have access to decent broadband (10 Mbit/s download and 1 Mbit/s upload speed) via a fixed or FWA connection. Remaining premises can access USO
- 96% of homes have access to superfast broadband¹, 62% to ultrafast²
- We expect gigabit capable fixed broadband to be available to most UK premises in the coming years
- Improvements to Wi-Fi technology will enable broadly 5G-equivalent services for many indoor applications, and improved outdoor services
- Satellite connectivity may also offer new opportunities



¹ download speeds of at least 30 Mbit/s ² download speeds of at least 300 Mbit/s

We enable a range of spectrum access options for wireless connectivity

Spectrum is critical for wireless. We have sought to make sure that spectrum bands, with different characteristics, can be accessed by a wide range of players, including MNOs, system integrators and directly by businesses to deploy the connectivity solutions that meet their requirements



Auction: Spectrum mostly authorised on a nationwide basis. MNOs can offer slices of their network to meet business requirements.

Sharing: Low-cost licences enabling localised access to spectrum. Can be used for private networks and to extend coverage.

Exempt and light licence: Access to spectrum with low barriers is an important enabler of innovation. Wi-Fi technology is currently common across many businesses.

Ofcom's spectrum work is considering future needs

Mobile Spectrum demand project will assess whether there is potential for additional mobile spectrum requirements in the period to 2035. Part of a broader **strategic spectrum roadmap**

Improving indoor mobile coverage – forthcoming statement on our proposals to allow greater use of mobile phone repeaters

26 GHz – planned consultation on authorisation approach

Localised licensing – improving our systems to enable more efficient access to spectrum in specific locations

Drones - exploring spectrum and authorisation options to support growing demand for beyond-line-of-sight drone use

Verticals – working with stakeholders to understand future demand

Upper 6 GHz - looking at how to enable additional shared use of this band

Mobile coverage – reporting on progress made to improve coverage under the Shared Rural Network programme; working to establish how we should report on the availability and quality of mobile coverage

