

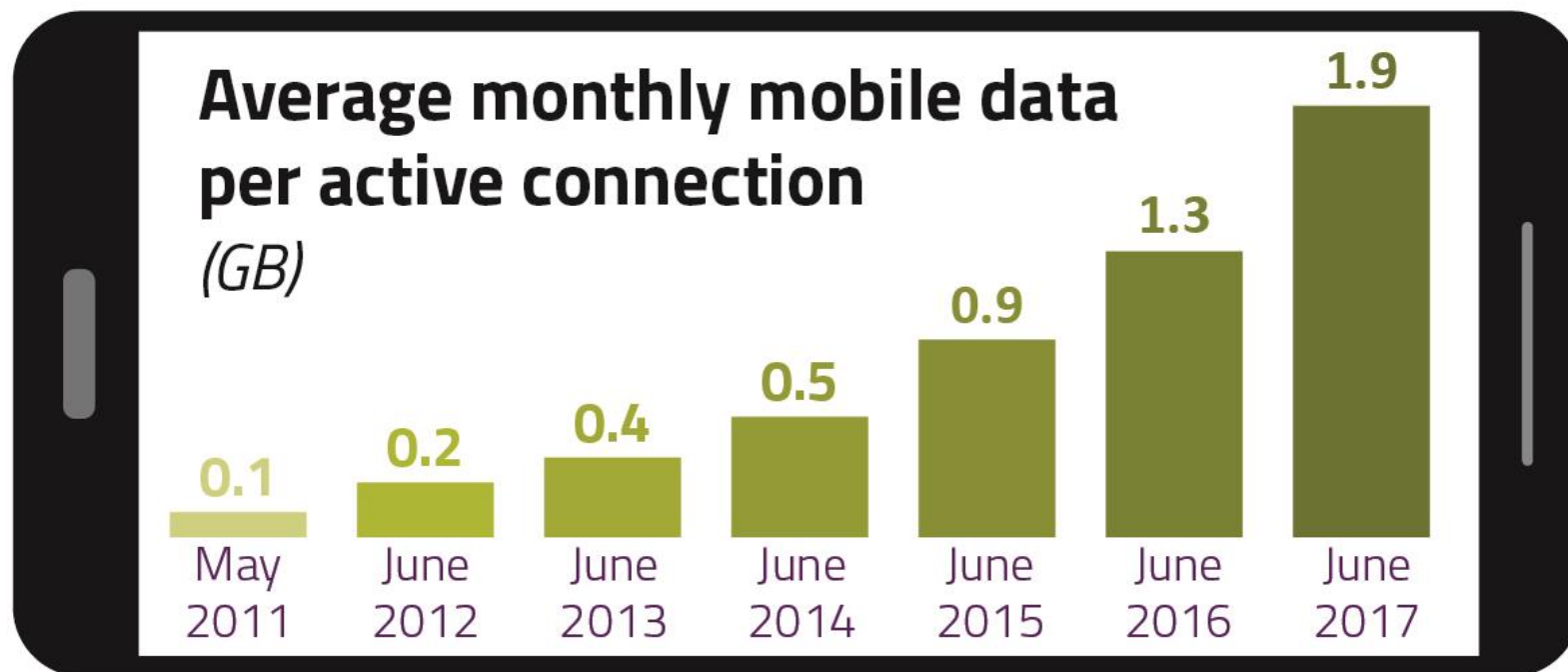
Enabling 5G in the UK

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UK context

Mobile services are becoming ever more important to UK people and businesses and they expect to be able to access them everywhere they live, work or travel



5G will enable different use cases across a broad range of industry sectors

Enhanced Mobile broadband **eMBB**



Improved consumer experience
More connected devices
Faster connection speeds
Virtual and Augmented Reality

Massive Machine type communications **mMTC**



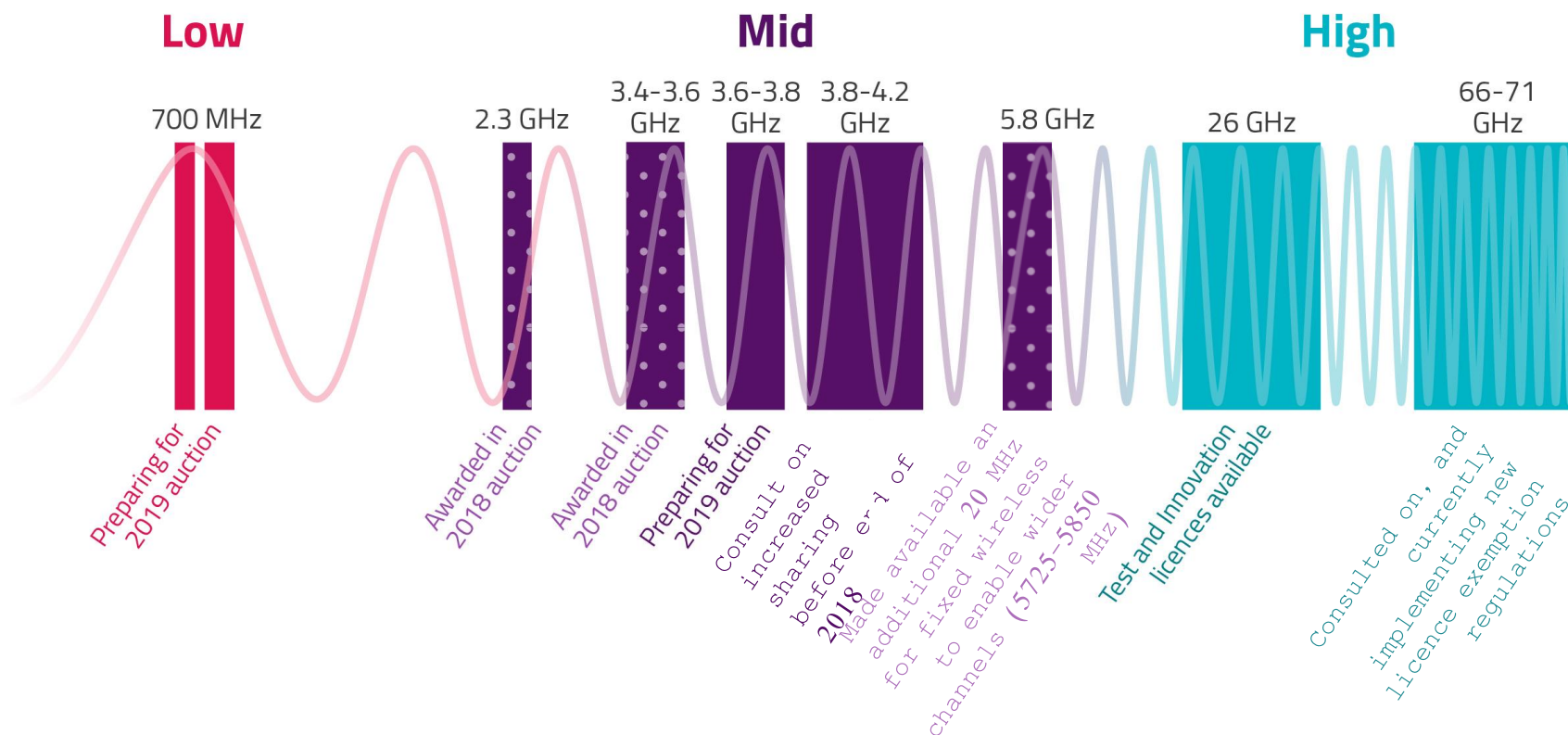
e-health
Transport & logistics
Environmental monitoring
Smart energy networks
Smart agriculture, smart retail

Ultra-reliable and low latency communications **uRLLC**



Vehicle-to-everything communication
Drone delivery
Autonomous monitoring
Smart manufacturing

We are making spectrum available using a range of different authorisation options, to enable different types of users and business models



Low and mid range spectrum for 5G and other services: clearance and award

700 MHz

- Provide wide area coverage
- Clearance well under way
- **Award in 2019**



3.4-3.8 GHz – “primary” band for 5G

- Large bandwidth can support higher data rates, provide increased capacity, and enable higher speeds
- **3.4-3.6 GHz - awarded**
- **Intention to award 3.6-3.8 GHz in 2019**

We also plan to consult on measures to enhance sharing in the adjacent **3.8-4.2 GHz** band

- We are exploring the potential for further sharing between existing and new users
- **Will consult by end 2018**

Our roadmap for 5G mmWave spectrum

- **26 GHz:** Trial and Innovation licences available.
- **66-71 GHz:** We are currently implementing new licence exemption regulation
- **40 GHz:** Support internationally as part of wider band for harmonisation of equipment (37-43.5 GHz)



Enabling 5G in the UK – wider enablers

What we are doing to make 5G available in the UK:

- making **spectrum** available for 5G and other wireless services;
- working with Government and policy-makers to **ensure access to sites** is not a barrier to 5G;
- ensuring access to appropriate **backhaul** connectivity;
- ensuring **net neutrality** regulation is not a barrier to deployment;
- **acting as a facilitator**, working with Government, different industry sectors and other countries to further understand potential applications of 5G.

