

## SPECTRUM 101:

# THE FUTURE OF TECH

**What is spectrum?** Spectrum are the radio frequencies that transmit wireless signals to and from antenna and other infrastructure so that we can:



Complete Mobile Phone Calls



Access the Internet Wirelessly



Precision Agriculture



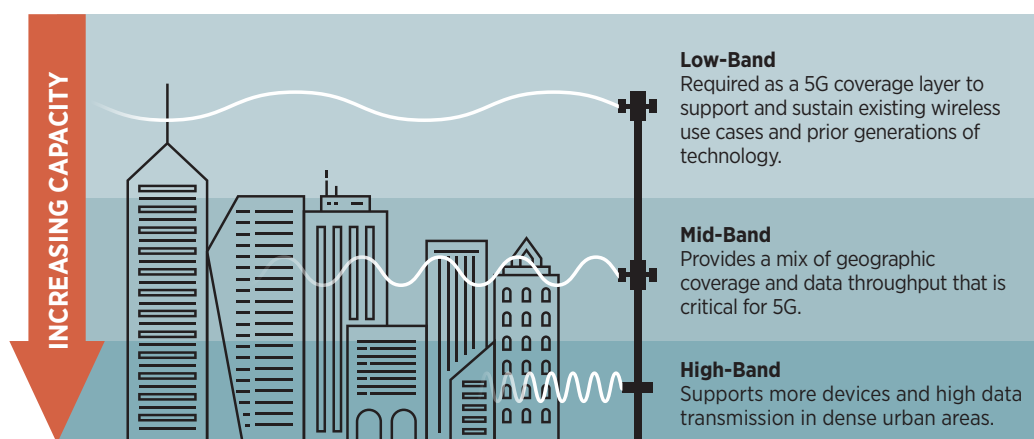
Powering Radar

### Who controls spectrum?

The federal government controls who has access to what spectrum and under what terms. The FCC oversees private industry access to spectrum, and NTIA oversees government access to spectrum.

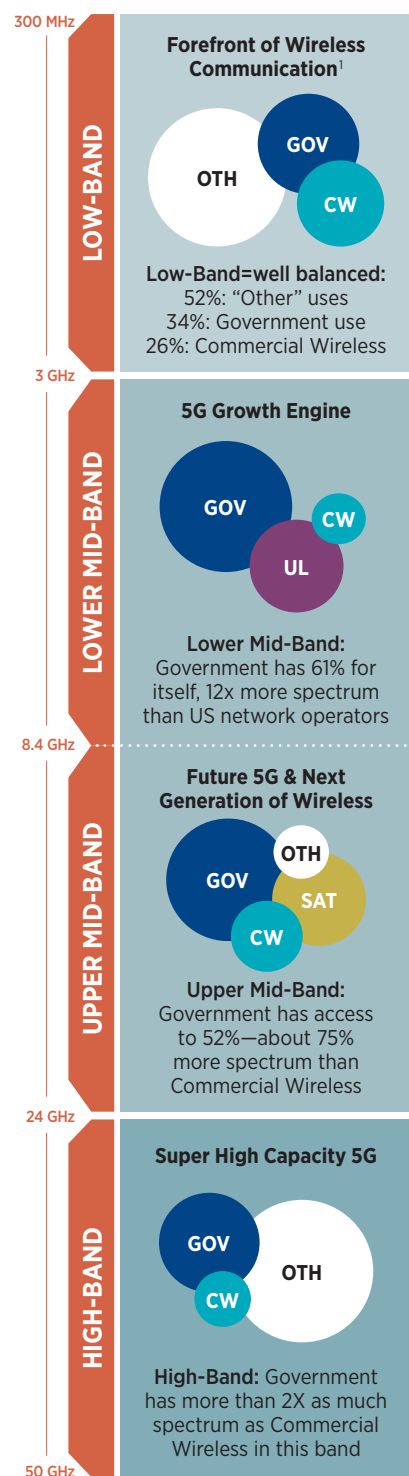
### What are spectrum “bands”?

Portions of spectrum are grouped in “bands” based on their wavelengths.



### What’s the difference between licensed, exclusive use spectrum and “unlicensed” spectrum?

- » **Licensed**, exclusive use spectrum means the holder—whether government, commercial, or individual—has the protected right to use that airwave band free of interference by others.
- » **Unlicensed** spectrum is accessible to the general public but is subject to interference by anyone else. Think WiFi, Bluetooth and garage door openers.



<sup>1</sup> “Spectrum Allocation in the United States,” Accenture, September 2022