



Spectrum Management with a User-Centric Approach



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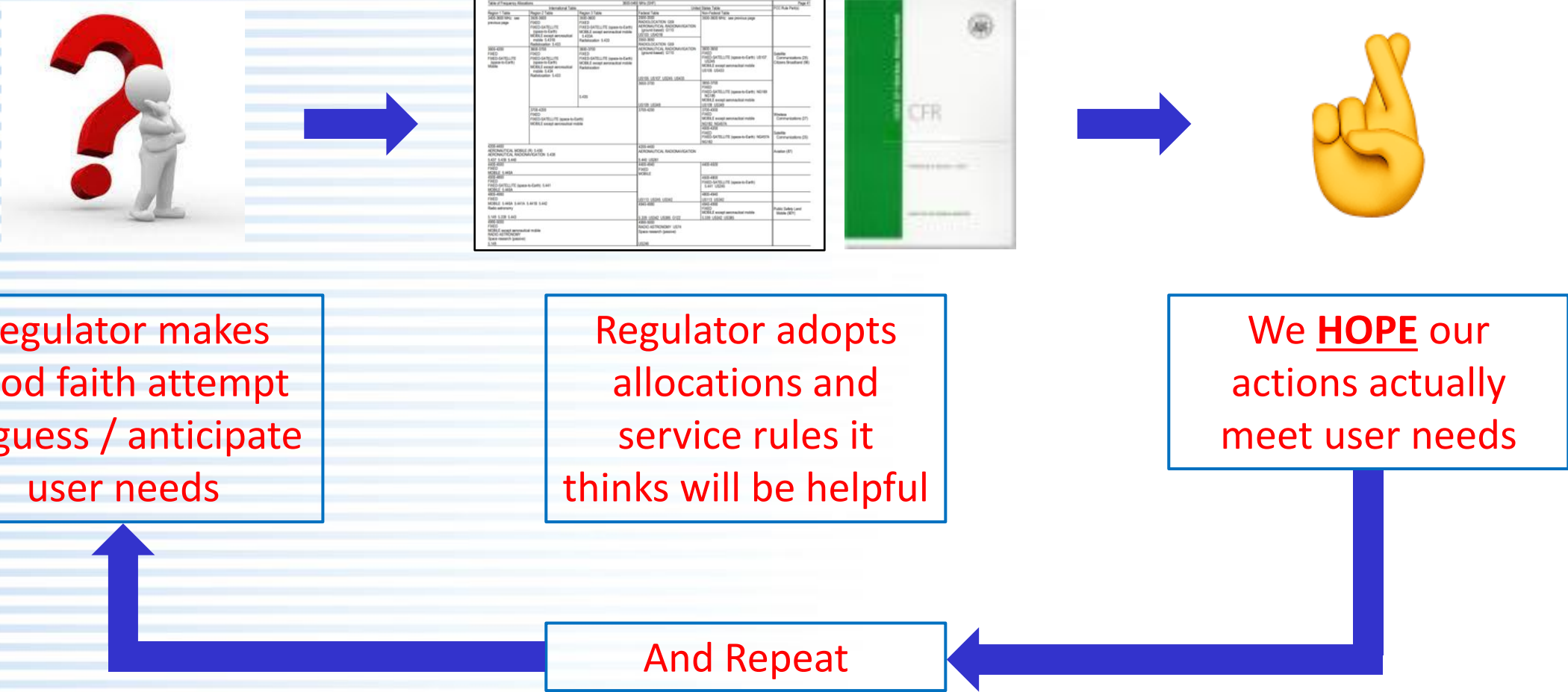
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Note: The views expressed in this presentation are those of the author and may not necessarily represent the views of the Federal Communications Commission



The Pitfall of Past Practice





User-Centric Approach



Source: <https://www.nokia.com/about-us/newsroom/articles/private-wireless-explained/>



Users come in all shapes and sizes and have their own unique needs

Needs Include:
Wide-area broadband
Local broadband
Internet of Things
Backhaul
And more!

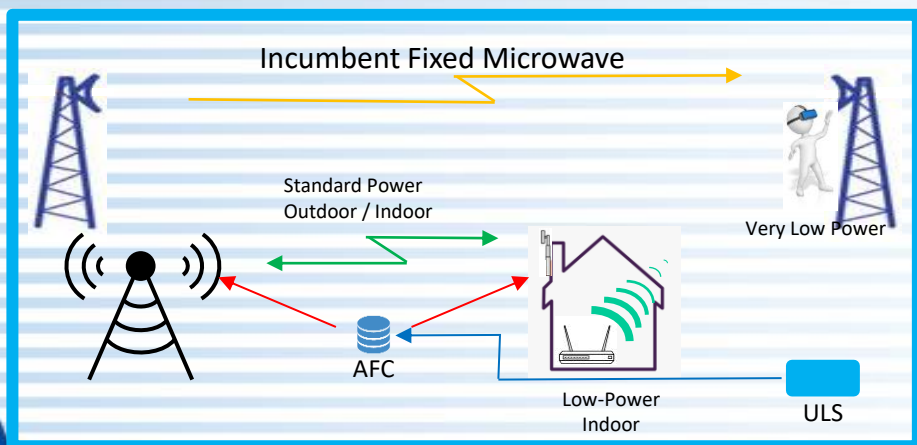
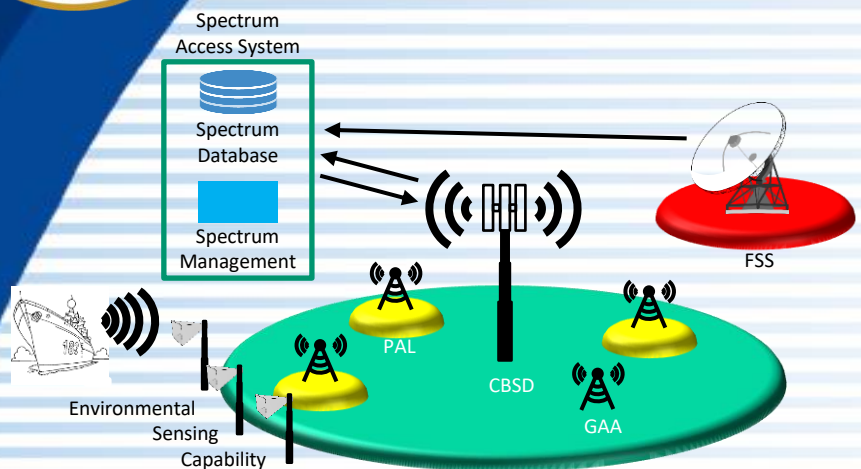
Needs are met using:
Licensed networks
Licensed-lite networks
Shared Spectrum
Unlicensed Networks/Devices
Personal networks
Enterprise networks
Private/campus-wide networks
Commercial mobile broadband

Users make their own decisions to meet their needs



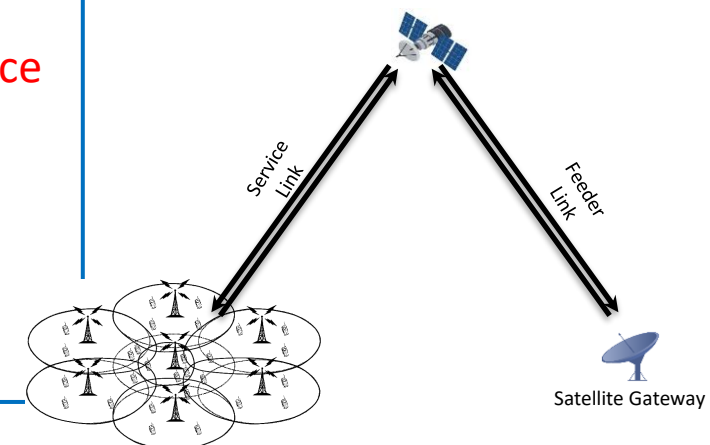
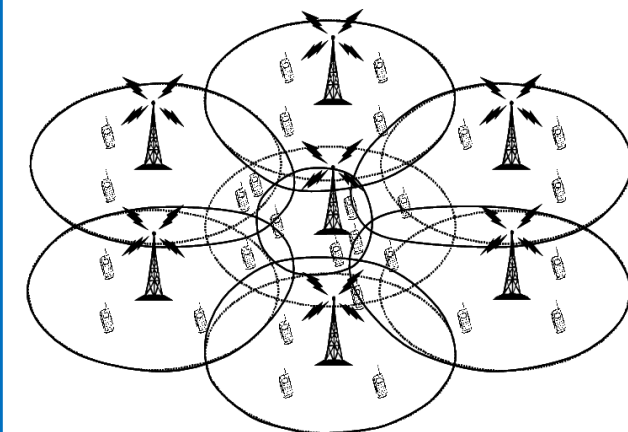
It's All About the Choices

Allocations and rules need to evolve to meet changing needs and optimize user experience



Needs are met using:

- CBRS
 - Protected access
 - General authorized access
 - Supports private and commercial access; IoT
- Unlicensed
 - 6 GHz (Std. power, LPI, VLP)
 - 5 GHz
 - 60 GHz
- Commercial mobile broadband
- Supplemental coverage from space
- 5 GHz band for UAS
- Millimeter wave
 - Fixed wireless access
- Low, Mid, High band options





Thank You!