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Canada

Upcoming Spectrum Releases in Canada

DSA Global Summit June 2021

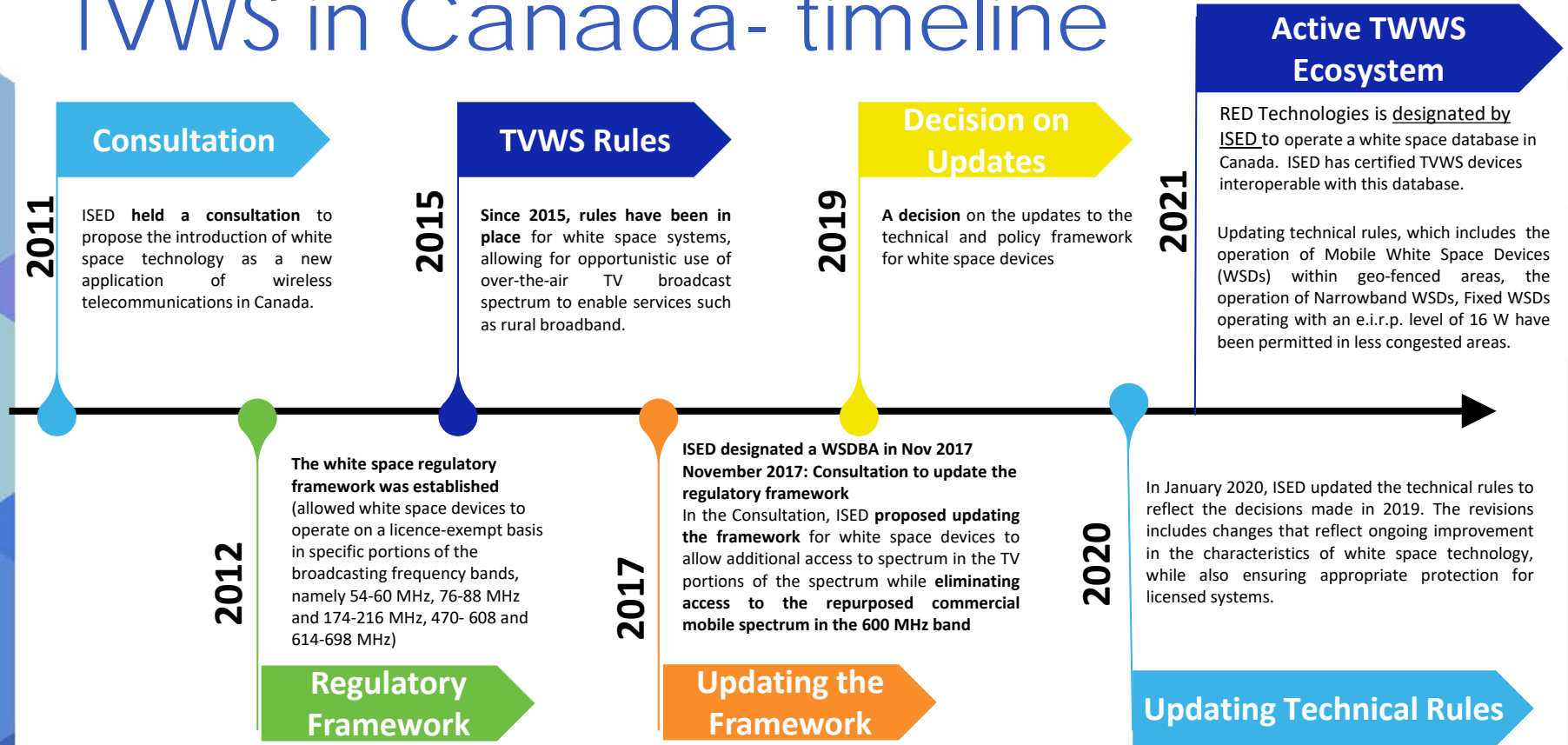
Spectrum Outlook 2018-22

- Subset of priority 1 bands in the [Spectrum Outlook](#)

600 MHz auction completed	3500 MHz	26 GHz
	3800 MHz	28 GHz
	6 GHz	37-40 GHz

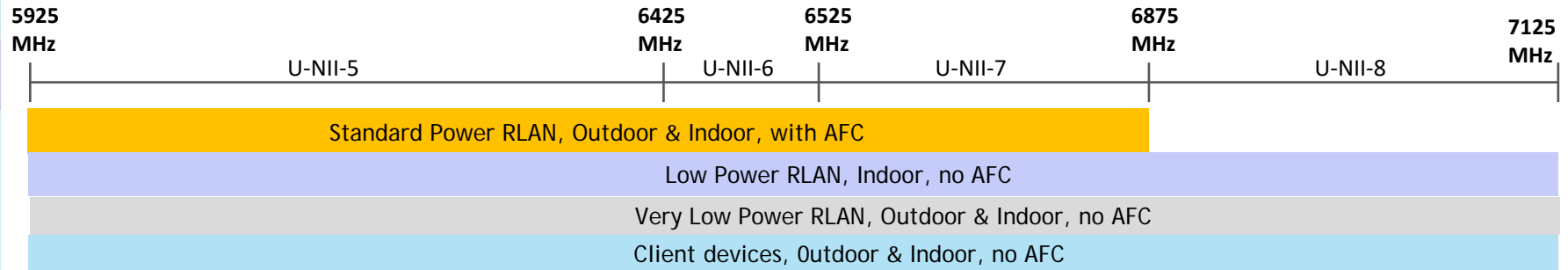
Low Band	Mid Band	High Band
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TVWS in Canada- timeline



6 GHz (5925-7125 MHz) for LE RLANs

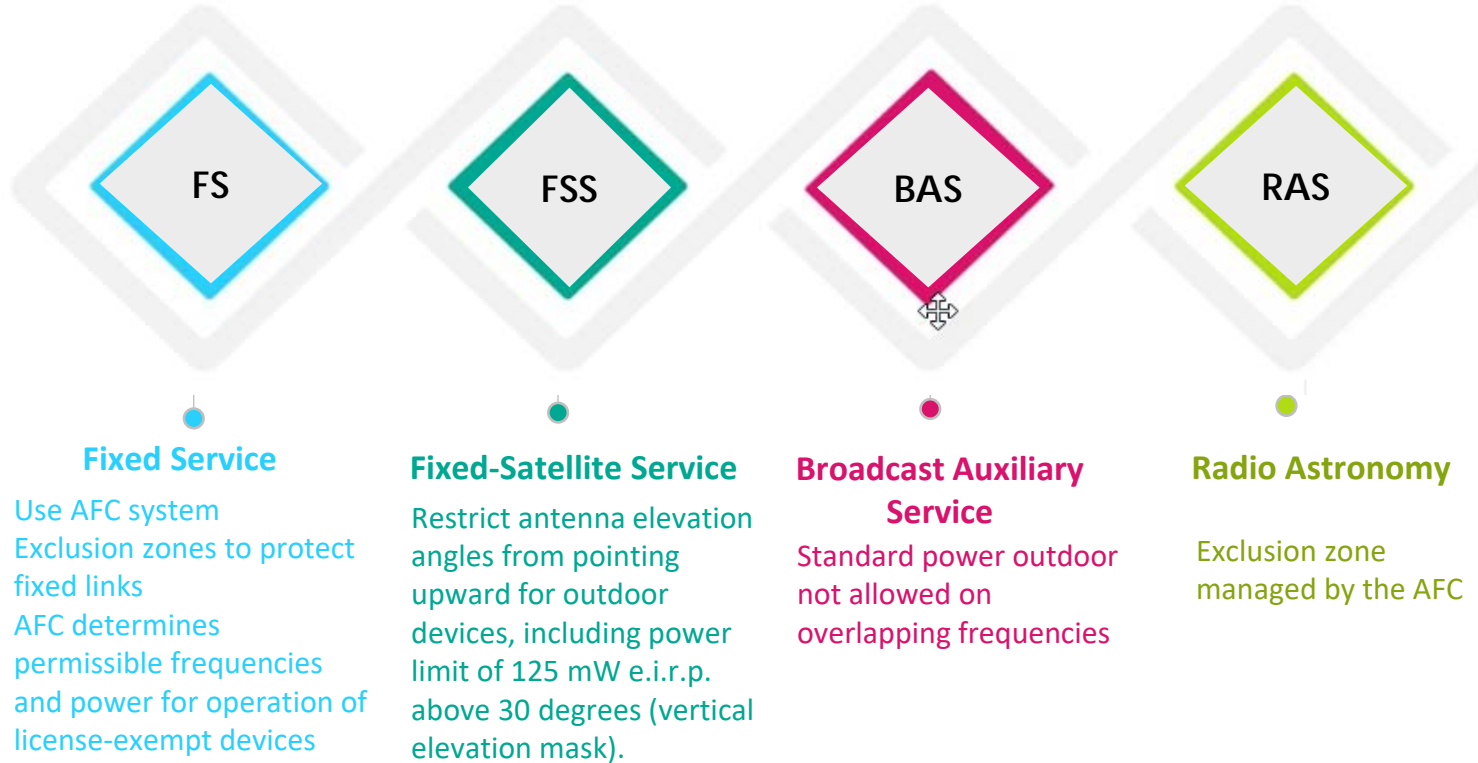
- Consultation Nov 2020
- [Decision](#) May 19, 2021



- Standard Power AP (36 dBm EIRP, PSD of 23 dBm/MHz)
- Low Power AP (30 dBm EIRP, PSD of 5 dBm/MHz)
- Very Low Power AP (14 dBm EIRP, PSD of -8 dBm/MHz)
- Client Devices Under AP Control (Power limited to 6 dB below limit of its associated AP)

- Technical rules: [Consultation](#) underway for low-power devices, rest to follow

Standard Power RLANs: Protecting incumbents



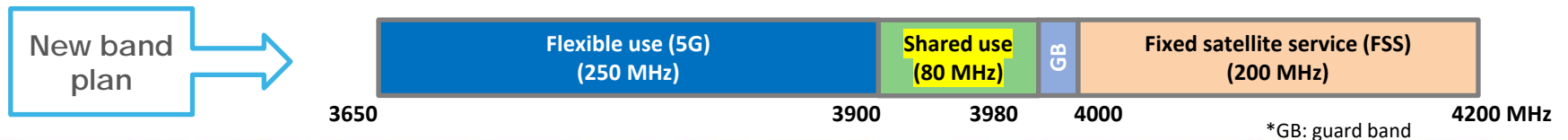
3800 MHz Band

On May 21, 2021, ISED released the **Decision on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band** ([the 3800 MHz Decision](#))

- Current uses include:
 - Wireless Broadband Services (WBS)
 - Downlink earth stations for FSS in C-band, both licensed and licence-exempt

Key Decisions

- Make a total of 330 MHz of spectrum available for 5G services with 20 MHz guard band
- Move satellite services from 3700-4200 MHz to 4000-4200 MHz, except in “satellite-dependent areas” where satellite services will be able to continue using full 500 MHz in remote and northern communities
- Displace WBS from 3650-3700 MHz and make **3900-3980 MHz available for shared use**
- Transition Timing:
 - FSS to transition by March 2025
 - WBS to transition by March 2025 in urban areas, and March 2027 in rural areas on Tier 5 basis



Shared Use in 3900 MHz band

- The 3800 MHz Decision designated 80 MHz for shared use in 3900 MHz band (3900-3980 MHz)
- Response to current WBS licensees like rural WISPS needs for more spectrum to meet demands of their customers
 - WBS licensed on all-come, all-served basis
 - Coordination required among licensees in given licence area (i.e. Tier 4 area)
 - In highly congested areas, licensees cannot use full 50 MHz of WBS spectrum (3650-3700)
 - Current WBS licensees mainly using older technologies (e.g. WiMAX)
- New 3900 MHz band will provide 30 MHz of additional spectrum for rural WISPS for total of 80 MHz (up from 50 MHz)
- Allow users to provide services using 5G equipment
- Intended for private networks, vertical industries, industrial users like mines, utilities and factories, rural WISPs and other new 5G uses
- ISED will consult on new licensing process in future
 - Including licensing approach, licence area, conditions of licence, etc.

Foundational Work – Spectrum Sharing

Foundational requirements for spectrum sharing and evolving needs	Activity
Access to high quality incumbent data	<ul style="list-style-type: none">• Examining new datasets and improvements to existing incumbent data required to support spectrum sharing
Regulatory technology and processes are current	<ul style="list-style-type: none">• Enhancing regulatory processes and technology - cloud computing, spectrum monitoring, etc to support new and emerging needs of spectrum users
Ensuring legal and regulatory framework can support current and future forms of spectrum sharing	<ul style="list-style-type: none">• Reviewing the legal and regulatory framework to ensure it is DSA-ready and future-proof
Right business case for all stakeholders	<ul style="list-style-type: none">• Considering the potential business case for database operators and equipment vendors, and potentially new spectrum users in Canada

REVIEWING OUR REGULATORY ENVIRONMENT TO IDENTIFY ANY IMPROVEMENTS/TWEAKS, IF NEEDED, FOR ENABLING DYNAMIC SPECTRUM SHARING

Recommendations related to spectrum sharing in the [broadcasting and telecom legislative review](#) to improve the related legislative tools



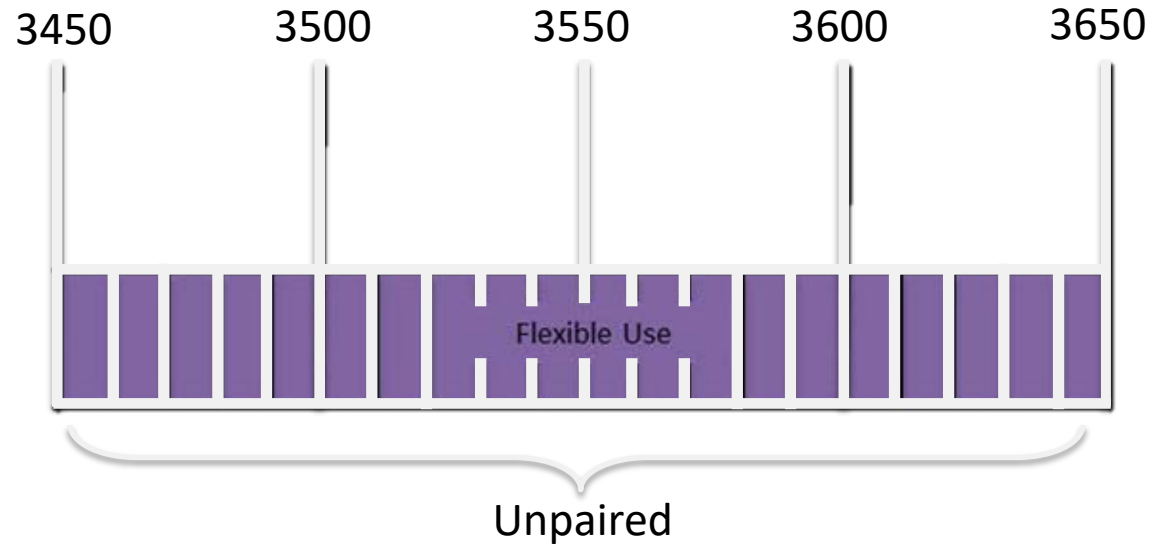
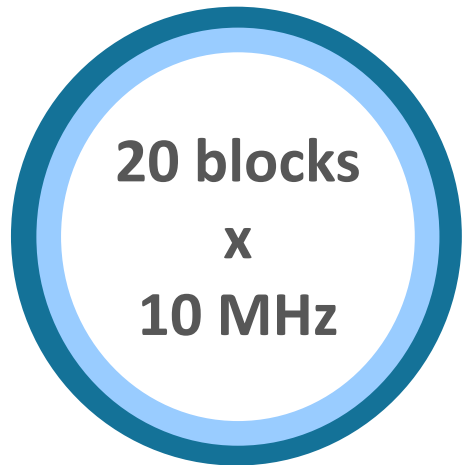
LEGAL FRAMEWORK

Examining opportunities for automated spectrum management for ensuring high data quality and leveraging complementary datasets to support DSA and local licensing mechanisms



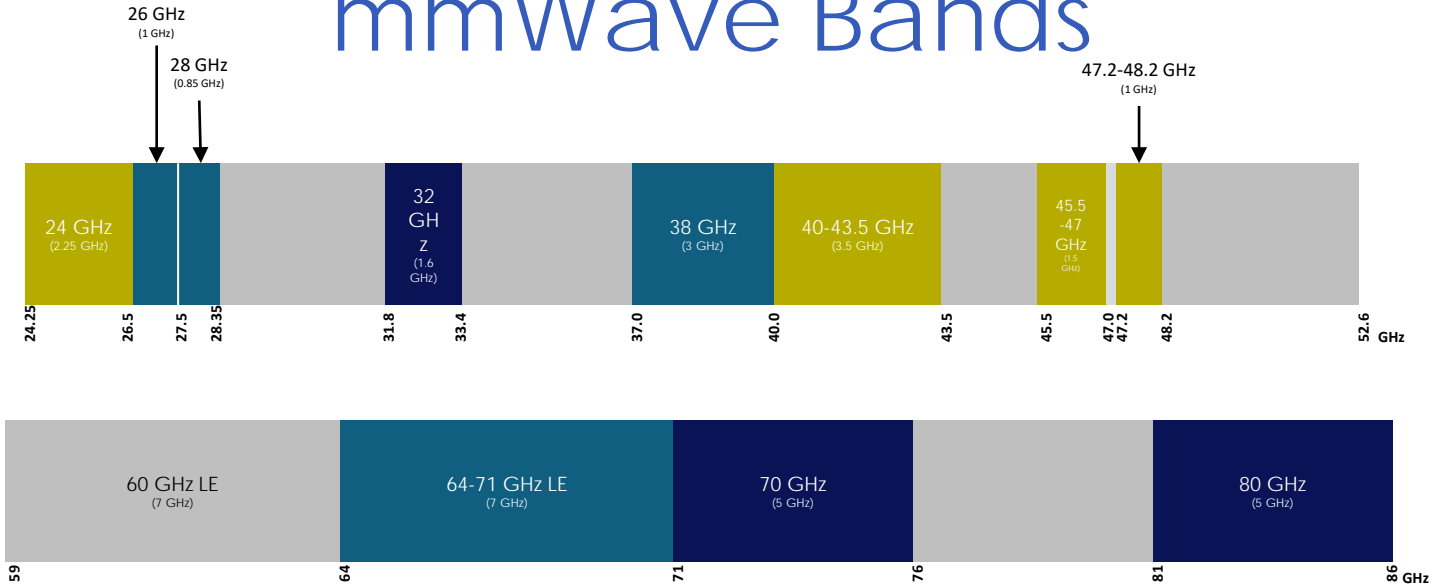
SOFTWARE REQUIREMENTS

3500 MHz Auction for 5G Flexible Use



The auction will begin on **June 15th, 2021.**

mmWave Bands



- mmWave 1 – 64-71 GHz available now for LE and 2024 for auction bands
- Potential mmWave 2 – likely after 2024
- Backhaul – available now
- Other use

Timing based on Outlook and amounts of mmWave 2 based on WRC-19

Summary

- Spectrum Outlook 2018-22 that addresses priorities for low band, mid band and high band spectrum
- Database-driven spectrum sharing introduced in two bands to allow licence-exempt shared use with incumbents
 - Active TVWS ecosystem in Canada as of April 2021
 - 6 GHz band decision - May 2021
- 3900-3980 MHz - shared use of the band - mechanism to be determined
- Reviewing our regulatory environment to identify any improvements, if needed, for enabling dynamic spectrum sharing and automated spectrum management
- 3500 MHz, 3800 MHz, 26 GHz, 28 GHz and 37 GHz bands via auction



QUESTIONS?