



Spectrum Sharing in Canada

ISART 2022

Innovation Science and Economic Development (ISED)

Spectrum and Telecom Sector (STS)



Applied Research

Federal lead for applied communications research, and centre of excellence in advanced telecommunications

Communications Research Center (CRC)

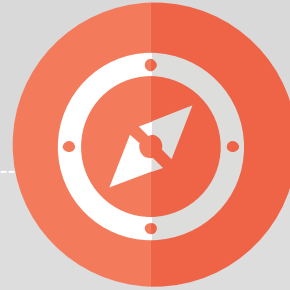


International Negotiations

International spectrum negotiations

Mutual Recognition Agreements

Cross Border Negotiations



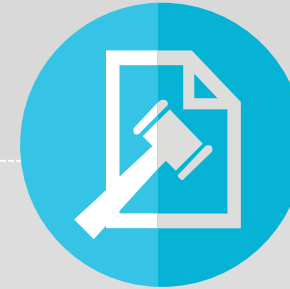
Policy

Spectrum Policies

Assignment of spectrum

Assignment of Band Plans

Auction and Licensing



Legislation/ Regulation & Implementation

Regulations, standards, conditions of licence

Certification of Equipment

Spectrum operations

Compliance and enforcement activities




Programs

Digital Skills and Literacy, Broadband Availability and Affordability, Technology Accessibility and Availability, Cyber Security and Certification, Prime Ministers Teaching Awards.

Responsible for both federal and non-federal use of spectrum

Collaborate with other government entities: Dept of Defence, Public Safety, Transport, Environment, etc

Spectrum Sharing – Lessons Learned



Be a fast follower, ensure ecosystem availability, keep standards harmonized (as close as possible) with bigger markets

TVWS introduced in 2011, operational in 2022

Spectrum sharing technology is not a one-size fits all solution

Various tools in the regulatory toolbox

Database driven sharing, automated spectrum management, data-centric decision making

High quality data is crucial for efficient spectrum management

Improving data quality (adequate, accurate, up-to-date) is an ongoing task to minimize interference issues and optimize use of the band

Leveraging complementary datasets that inform spectrum policy and standards setting

Rural use cases

Rural Internet to
the Home

Legend

- Tier-5
- Rural operator
- Forestry
- Agriculture
- Oil and Gas
- Mines

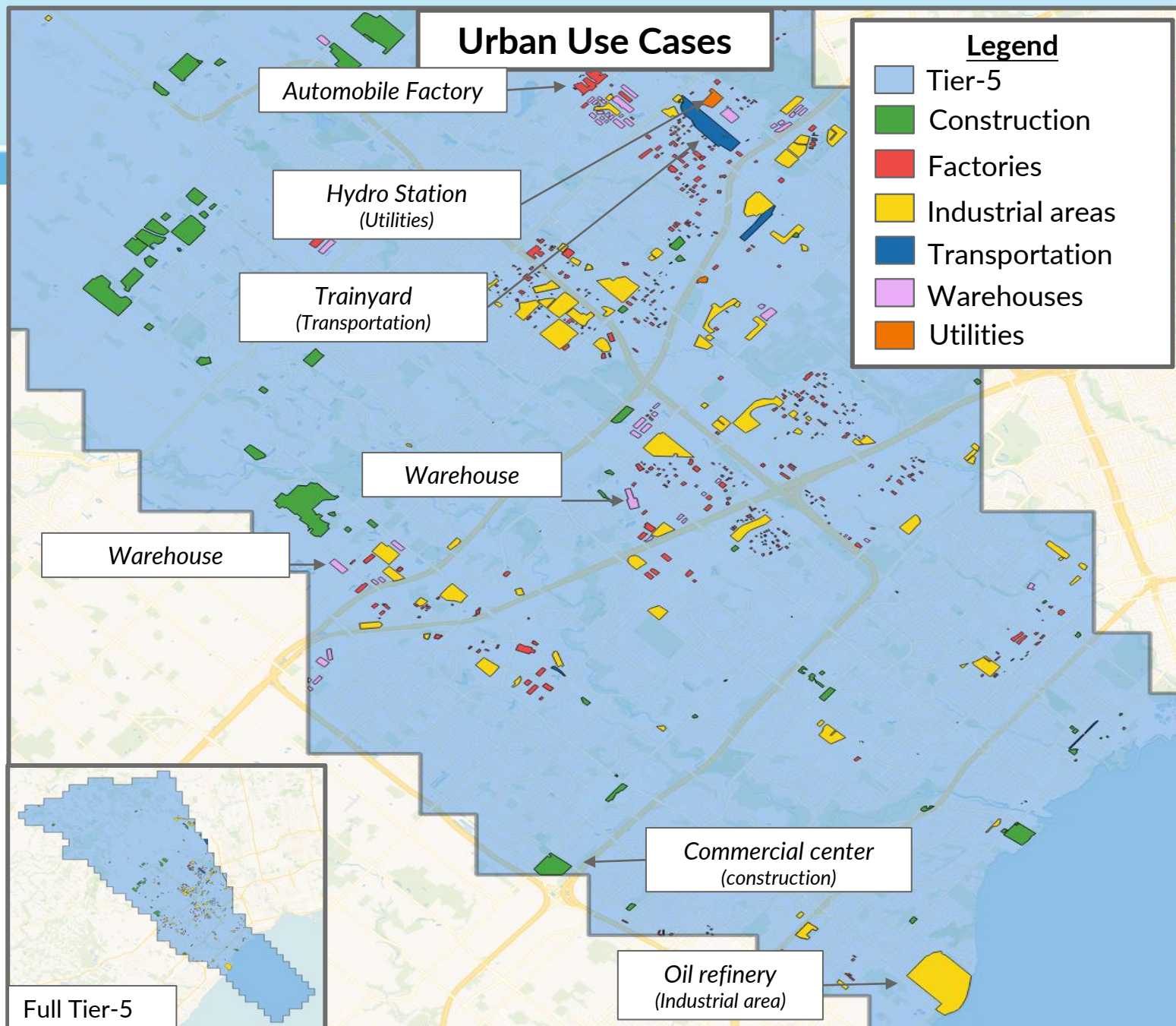
Agriculture
fields

Oil and Gas Fields

Forestry Harvesting

Mine

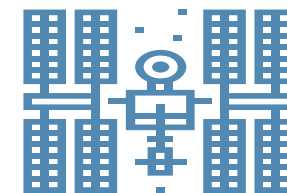
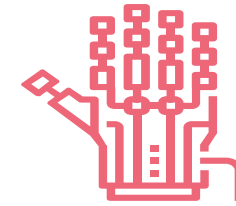
- Possibly a mix of business cases
- Customized private use and community service needs
- Traditional mobile operators, fixed wireless access system operators, and private networks operators



- High demand for services
- Expect to be well covered with 5G
- However, hearing demand for a mix of traditional mobile services and interest from other stakeholders for wireless private network services

What's next...

- More spectrum for database driven spectrum sharing
 - Implementation of 6 GHz standard power use with AFC in 950 MHz of the band (5875-6825 MHz)
- Greater use of data-centric approaches to spectrum sharing
- Policies and mechanisms designed for 5G small and private network operations
 - Unused commercial licenced spectrum
 - New licensing model for 3900-3980 MHz (80 MHz) and the proposed non-auctioned 1.05 GHz of spectrum in mmWave bands (26/28/38 GHz)





THANK YOU