



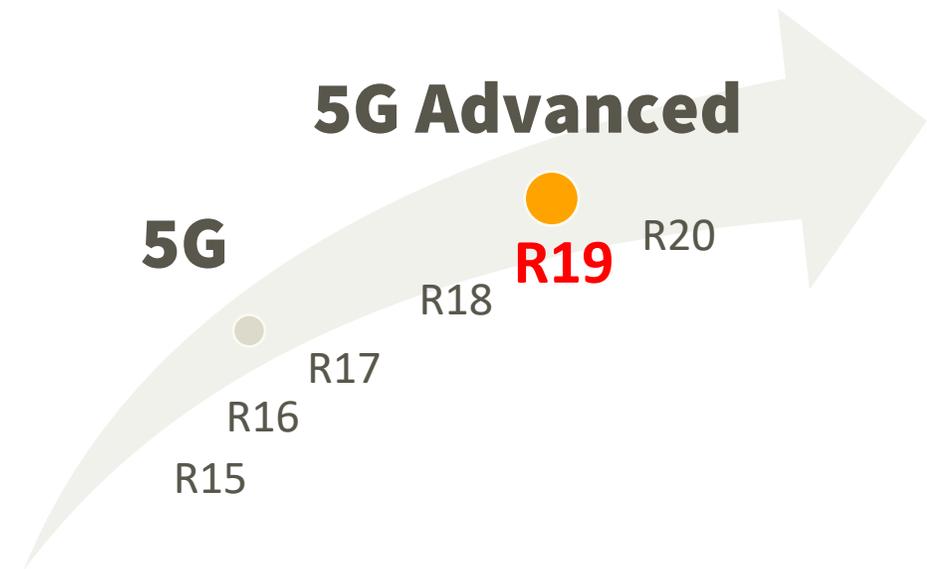
Views on Release-19

SHARP Corporation

5G Advanced and R18 provides:

- ✓ Enhanced system capacity and network coverage
- ✓ Performance improvements for both network operations and radio access technologies

R19 should focus on enhancements that provide improved **capacity, coverage and operations in support of** new use cases for both consumer and industry.



TN and NTN convergence

Universal Coverage



EDUCATION



ENTER-
TAINMENT



HEALTH-
CARE



INDUSTRY



MOBILITY



SECURITY



SMART
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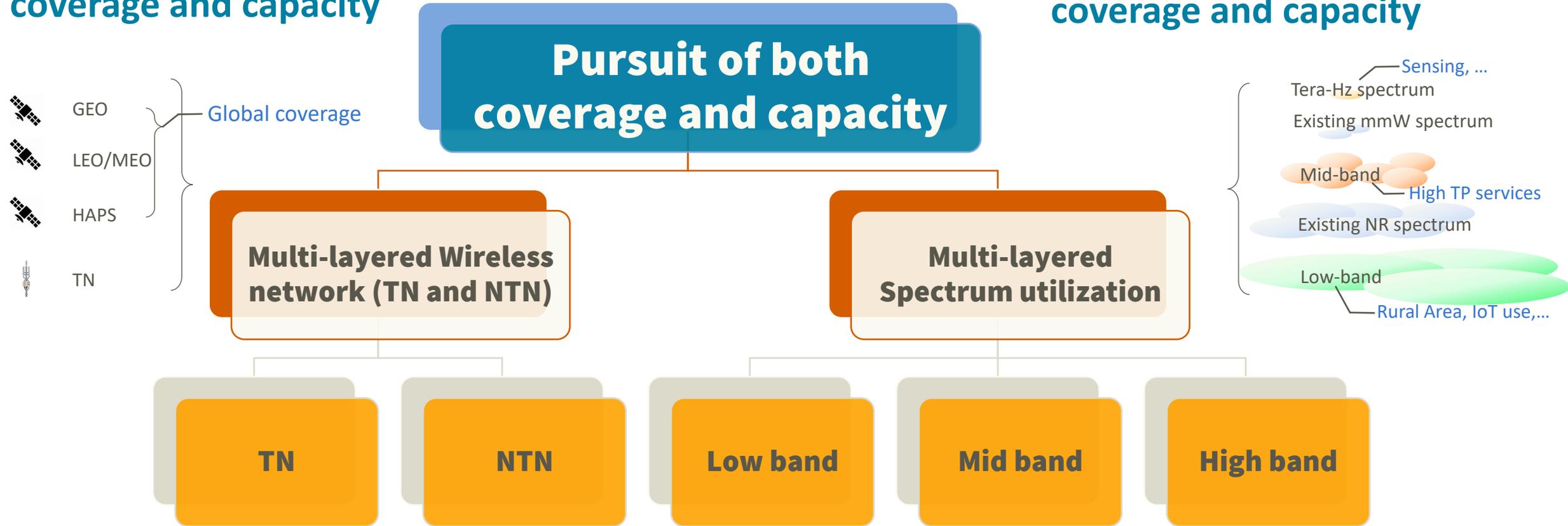
Extended spectrum use

Real-Time Video Streaming

Enhancements to pursue both capacity and coverage

TN-NTN convergence to cover gaps in coverage and capacity

Spectrum diversity to cover gaps in coverage and capacity



NTN enhancement

- ✓ Support new capabilities related to satellite operations with market relevance
- ✓ Facilitating convergence between NTN and TN
- ✓ Enabling advanced use cases (e.g., vehicle-mounted NTN devices)

Support of new frequency range

Middle band

- ✓ Facilitating deployments by providing more coverage than the current mmW spectrum
- ✓ Investigating co-existence between different types of radio access technologies

High band

- ✓ Investigating the potential for integrated sensing service and communication technology to enable new services and use cases for industrial applications

Potential scopes of NTN enhancement

- ✓ Support new capabilities related to satellite operations with market relevance
- ✓ Facilitating convergence between NTN and TN
- ✓ Enabling advanced use cases (e.g., vehicle-mounted NTN devices)

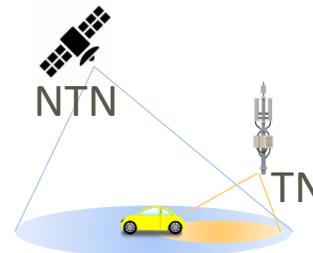
DL coverage enhancement

- E.g., PDCCH, PDSCH



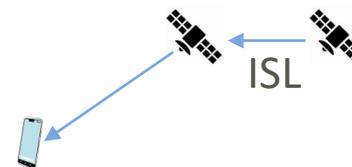
Mobility enhancement

- E.g., CHO between NTN and TN



Regenerative payload

- E.g., on-satellite DU/CU, Store-Forward connectivity, Inter-Satellite Link



Multi-connectivity

- E.g., between different orbits, between NTN and TN



- ✓ Facilitating deployments by more coverage than the current mmW spectrum
- ✓ Investigating co-existence between different types of radio access technologies

7-24 GHz

- Channel models
- Support Ku-band for NTN
- Co-existence of TN and NTN

- ✓ Investigating the potential of integrated sensing and communication technology for enabling new services and use cases for various industries

Above 71 GHz

- Sensing mechanisms and procedures
- Channel models

Other potential topics for Release-19

New topics

- Ambient IoT
- Sensing

Work Items based on Rel-18 study

- Duplex
- SL evolution (FR2 support)

Further enhancements from Rel-18

- NR MIMO evolution
- SL evolution
- SL Positioning
- Mobility enhancement
- SL Relay

Further study over Rel-18 study

- AI/ML

SHARP

Be Original.