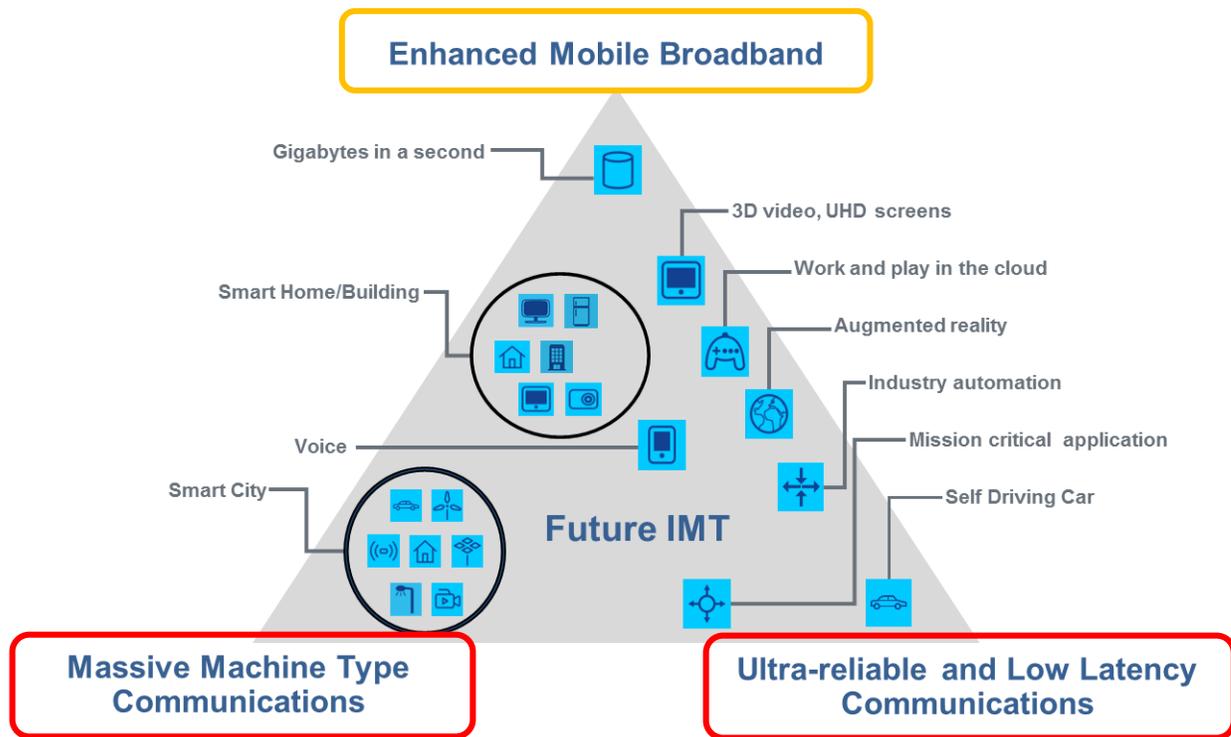


Views on 5G New RAT in 3GPP

**CATR, CATT, CMCC, China Telecom, China Unicom, Coolpad, HiSilicon,
Huawei, OPPO, Potevio, ZTE**

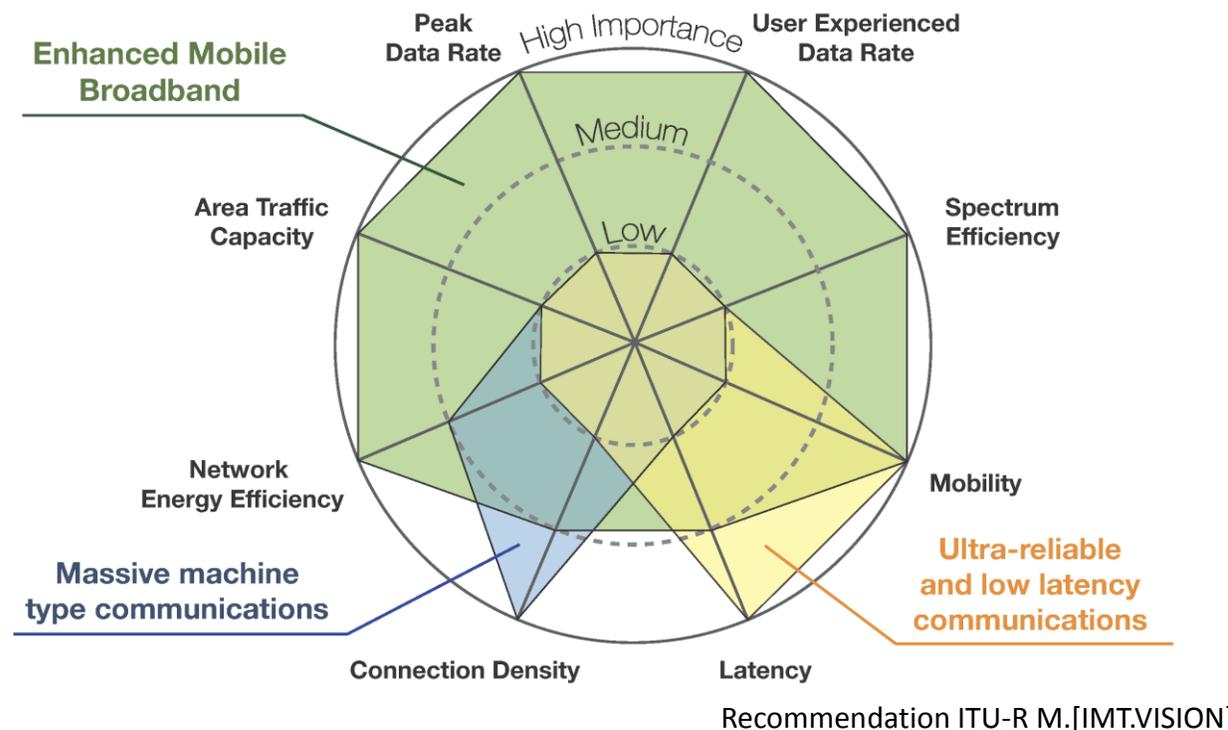
ITU 5G vision

IMT-2020 (“5G”) usage scenario



Usage scenarios extend from MBB to Internet of Things.

IMT-2020 (“5G”) Key capabilities



Different usage scenarios have quite different capability requirements.

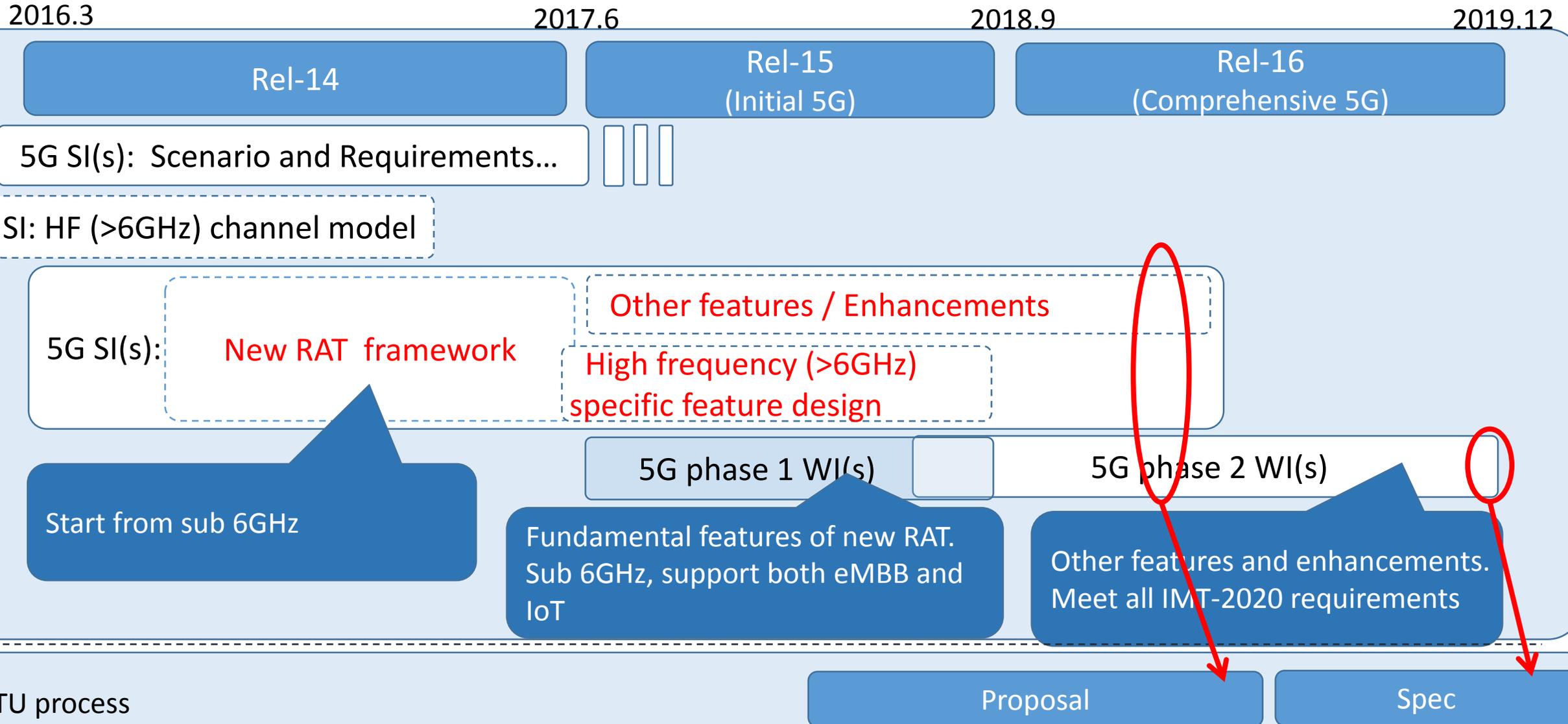
5G overview in 3GPP

- Target: Highly flexible and capable 5G system to meet diverse requirements for 3 usage scenarios envisaged for 2020 and beyond.
- New RAT for 5G without considering backward compatible to LTE needs to be studied to fulfill all the requirements.
 - needs to enable new service using the same air interface framework to fulfill all IMT-2020 requirements. Flexible design to support 3 usage scenarios.
 - supports scalable numerology and flexible frame structure.
 - considers new waveform, coding scheme, and multiple access.
- The 5G new RAT will tightly integrate with LTE-A evolution.
- 3GPP will take three releases (Rel-14, 15, and 16) to accomplish air interface for ITU IMT-2020 submission.

Considerations for new RAT

- 5G new RAT shall apply at both low and high frequency band. However low frequency market is more urgent and has higher priority.
 - Vertical market is very important for mobile industry and is mainly deployed in sub 6GHz.
 - New sub 6GHz IMT spectrum will be identified in WRC15.
 - Air interface design for high frequency is based on high frequency channel model which is not ready.
 - High frequency spectrum for IMT will be identified in WRC19.

Organize 5G RAN SIs and WIs and Time Plan



Summary

- Highly flexible and capable 5G system is required to fulfill all diverse requirements for usage scenarios envisaged for 2020 and beyond.
- A new RAT needs to be specified in 3GPP to fulfill all IMT-2020 requirements.
- 5G new RAT shall apply at both low and high frequency band. However low frequency has higher priority.
- Phased WIs will be accomplished in Rel-15 and 16, respectively.
 - Rel-15 (to 2018.09): Phase 1 specification, fundamental features of new RAT, both eMBB and IoT at sub 6GHz.
 - Rel-16 (to 2019.12): Phase 2 specification, covering all scenarios and bands, fulfilling all IMT-2020 requirements.

Thank You

3GPP RAN workshop on 5G
Phoenix, AZ, USA, September 17-18, 2015.