

IMT-2020 Spectrum Identification and Technology Standardization

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The author is solely responsible for the opinions expressed in this presentation

International Mobile Telecommunications (IMT)



“The ITU is currently working on systems standards for third generation mobile telecommunications...coined IMT-2000, it will make it possible to communicate anywhere-anytime”

The fifteenth Plenipotentiary Conference of the ITU, 1998.

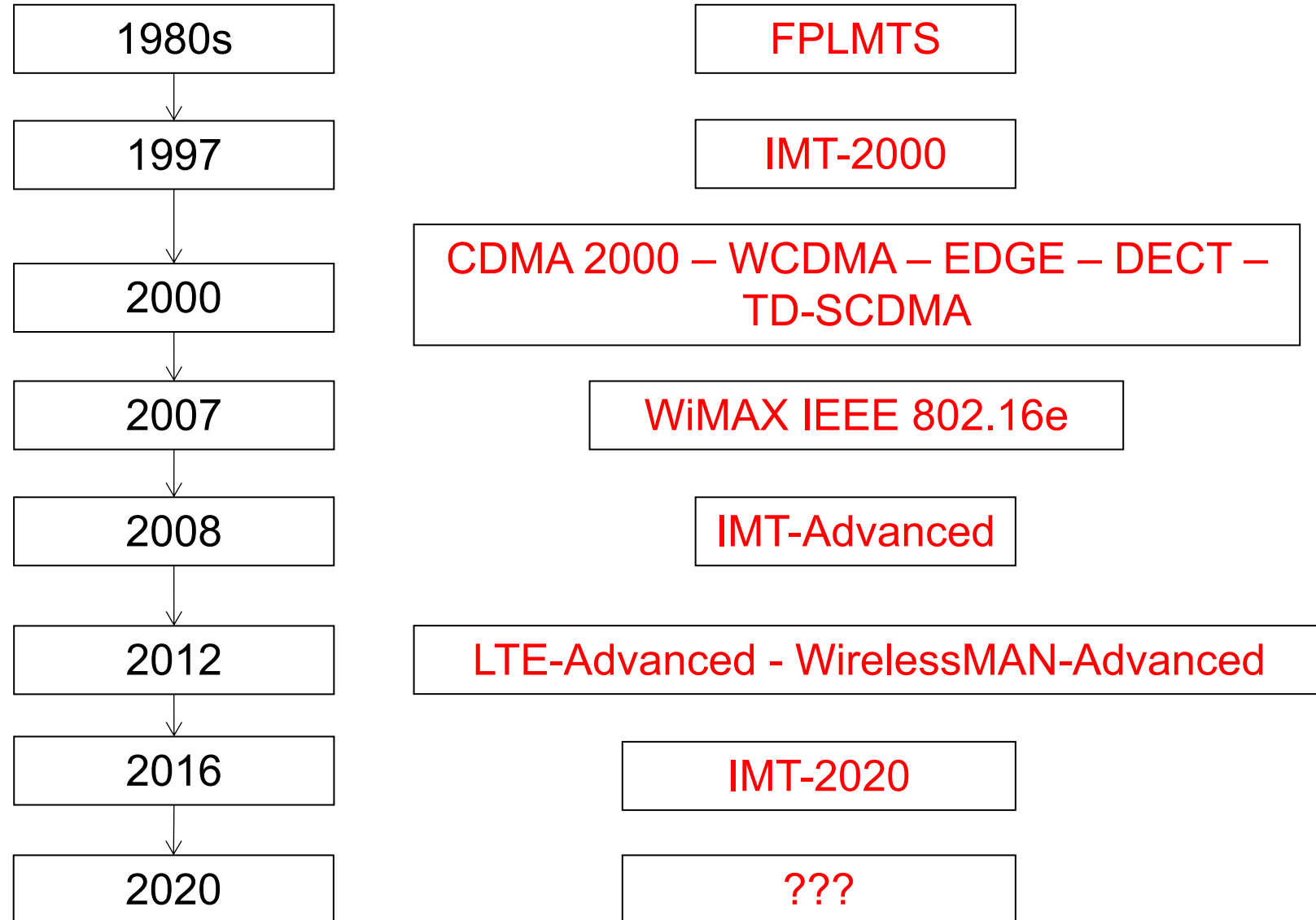
IMT Standardisation

3G – IMT-2000
4G – IMT-Advanced
5G- IMT-2020

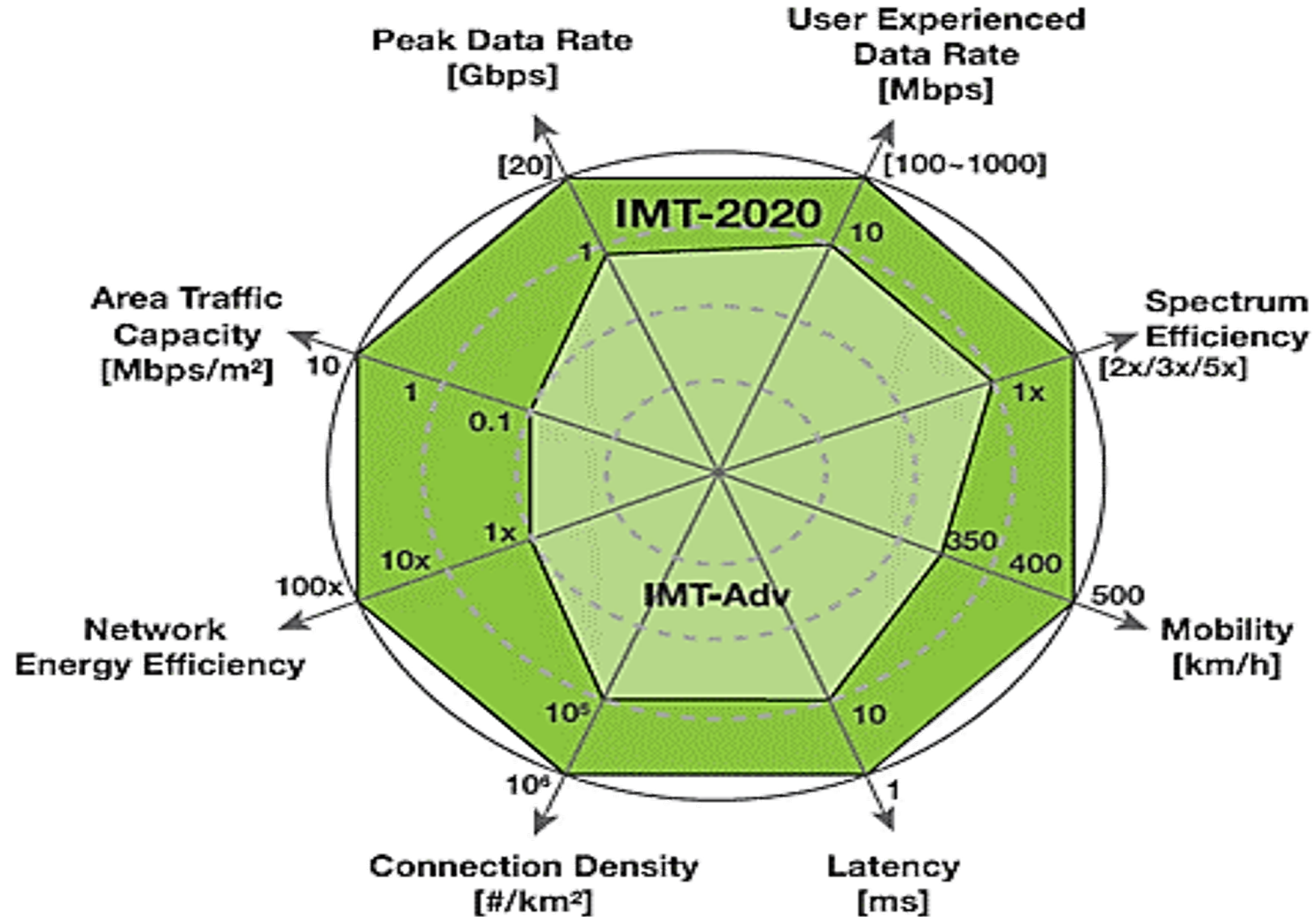
IMT Spectrum Identification

Identification vs. Allocation

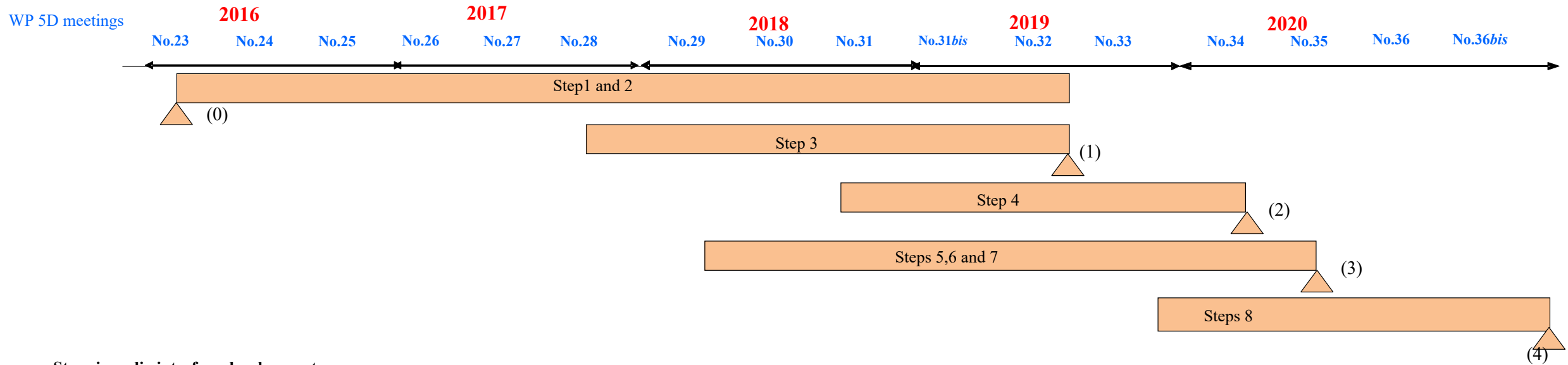
IMT Standardisation



IMT-2020 Performance



IMT-2020 Timeline



Steps in radio interface development process:

- | | | | |
|---------|---|---------|--|
| Step 1: | Issuance of the circular letter | Step 5: | Review and coordination of outside evaluation activities |
| Step 2: | Development of candidate RITs and SRITs | Step 6: | Review to assess compliance with minimum requirements |
| Step 3: | Submission/Reception of the RIT and SRIT proposals and acknowledgement of receipt | Step 7: | Consideration of evaluation results, consensus building and decision |
| Step 4: | Evaluation of candidate RITs and SRITs by Independent Evaluation Groups | Step 8: | Development of radio interface Recommendation(s) |

Critical milestones in radio interface development process:

- | | | | |
|--|------------|---|---------------|
| (0): Issue an invitation to propose RITs | March 2016 | (2): Cut off for evaluation report to ITU | February 2020 |
| (1): ITU proposed cut off for submission of candidate RIT and SRIT proposals | July 2019 | (3): WP 5D decides framework and key characteristics of IMT-2020 RIT and SRIT | June 2020 |
| | | (4): WP 5D completes development of radio interface specification Recommendations | November 2020 |

IMT-2020 Evaluation

Proponents

3GPP SRIT

3GPP RIT

Korea

China

TSDSI

DECT Forum & ETSI

Nufront

Proceed to Step 8

3GPP SRIT

3GPP RIT

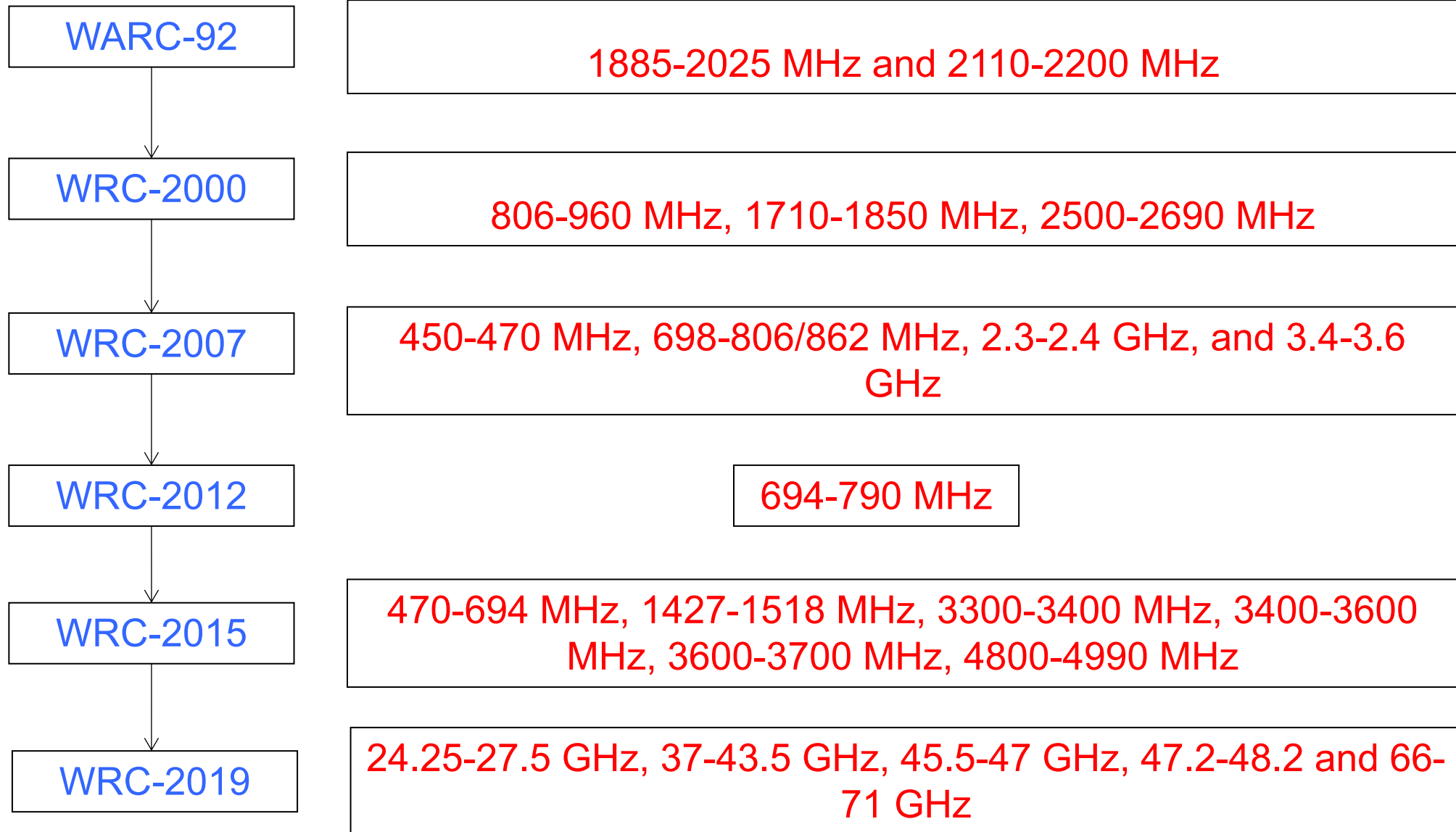
TSDSI

Rewind to Step 4

DECT Forum & ETSI

Nufront

IMT Spectrum Identification



IMT Spectrum Identification

Band GHz	L-Band 1.452-1.492	C-Band 3.6-3.8	26 GHz 24.25 -27.5	28 GHz 27.5-29.5
5G Band	Yes	Yes	Yes	Yes
IMT Identification	No	No	No	No
Mobile Allocation	Primary	Secondary	Primary	Primary
Region	CEPT	CEPT ASMG	CEPT ASMG	5G 28GHz Frontiers
Future WRC	No	WRC-23	WRC-19	No

World Radiocommunication Conference (WRC-23)

A.I. 1.2: to consider identification of the frequency bands 3600-3800 MHz and 3300-3400 MHz (Region 2), 3300-3400 MHz (amend footnote in Region 1), *7025-7125 MHz (globally)*, *6425-7025 MHz (Region 1)*, 10.0-10.5 GHz (Region 2) for IMT.

A.I. 1.4: to consider the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level.

A.I. 1.5: to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review.

A.I. 9.1.C: to study the use of IMT system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis.

References

IMT-2020 submission and evaluation process:

<https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/imt-2020/Pages/submission-eval.aspx>

CPM-23:

<https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/cpm-23.aspx>