

Views to 5G Standard

5G Workshop Between Regional Initiatives In Conjunction with ICT 2015 Lisbon, Portugal 20. Oct. 2015

Prof. LEE, HyeonWoo
(woojaa@dankook.ac.kr)

Chair, Global Strategy Committee
5G Forum, Korea

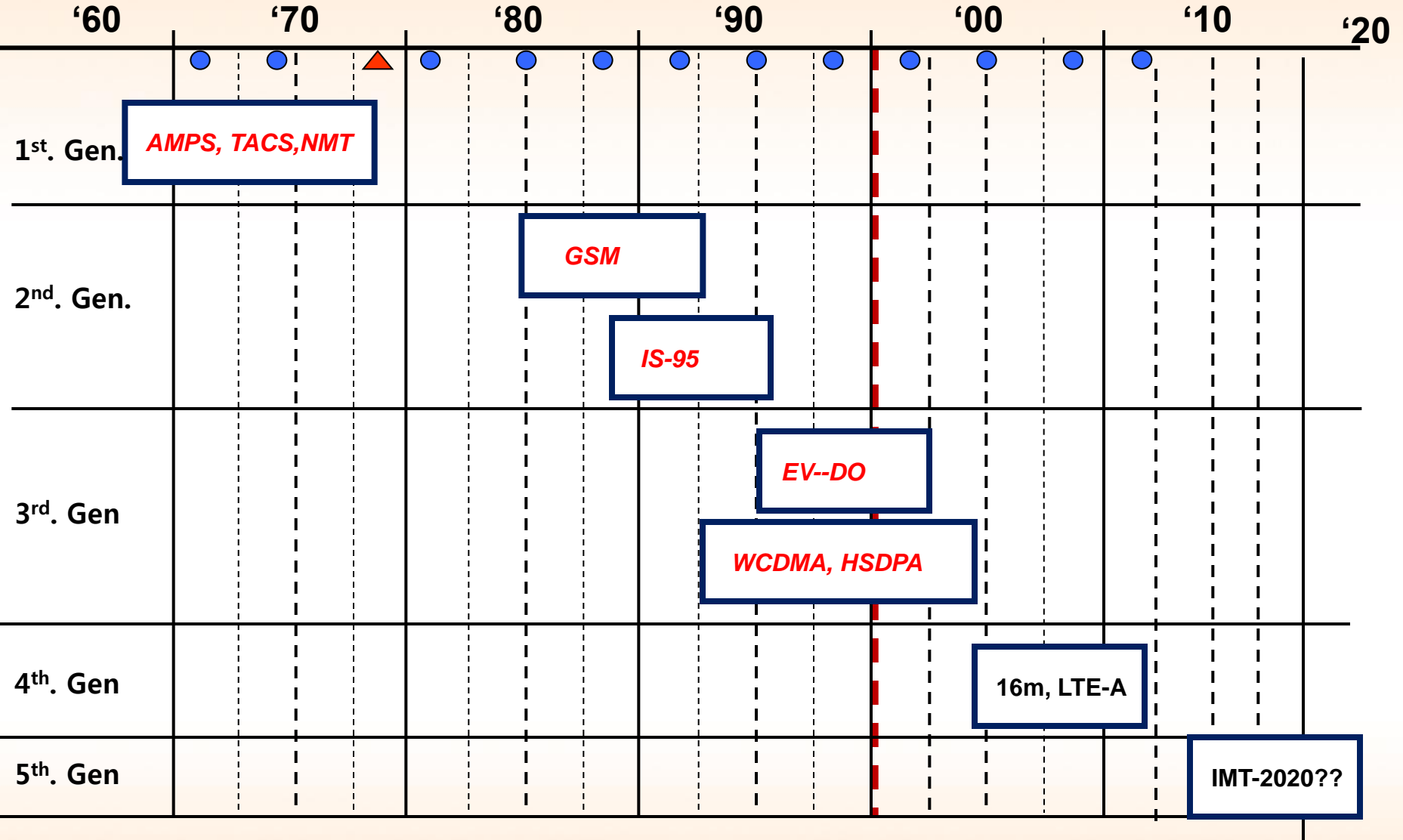


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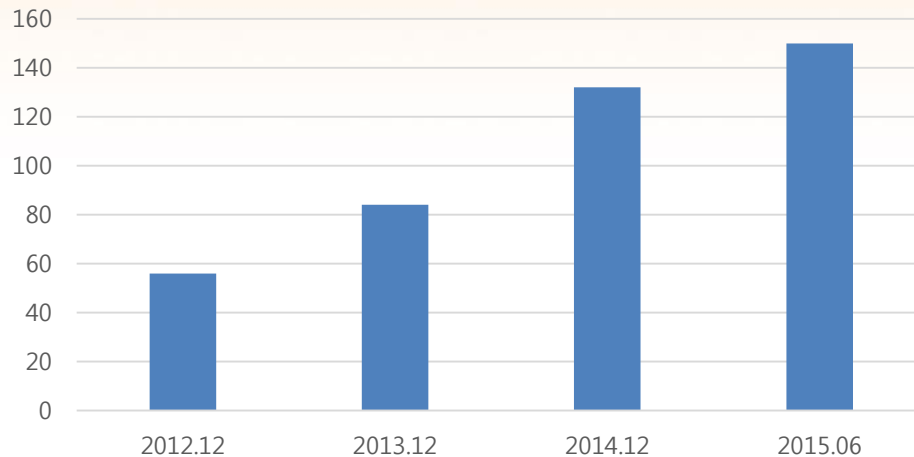


Mobile System Standards

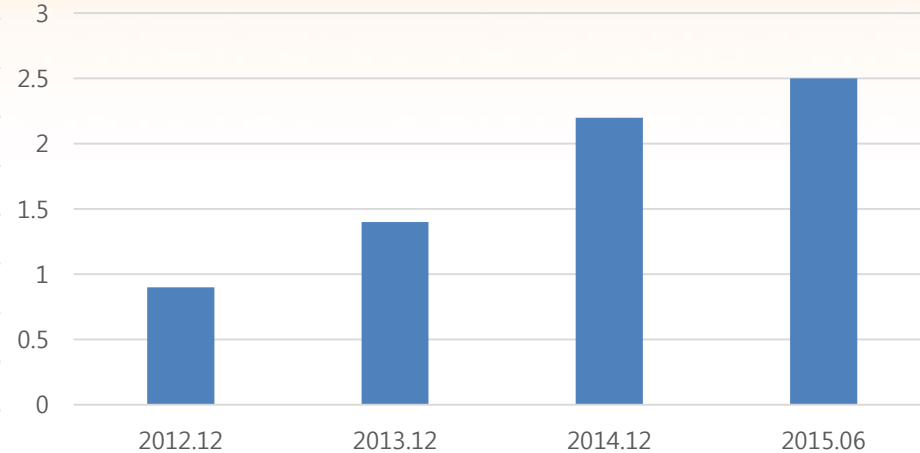


Motivation for timely 5G in Korea

Total Monthly Traffic(PB)



Monthly Traffic/user (GB)



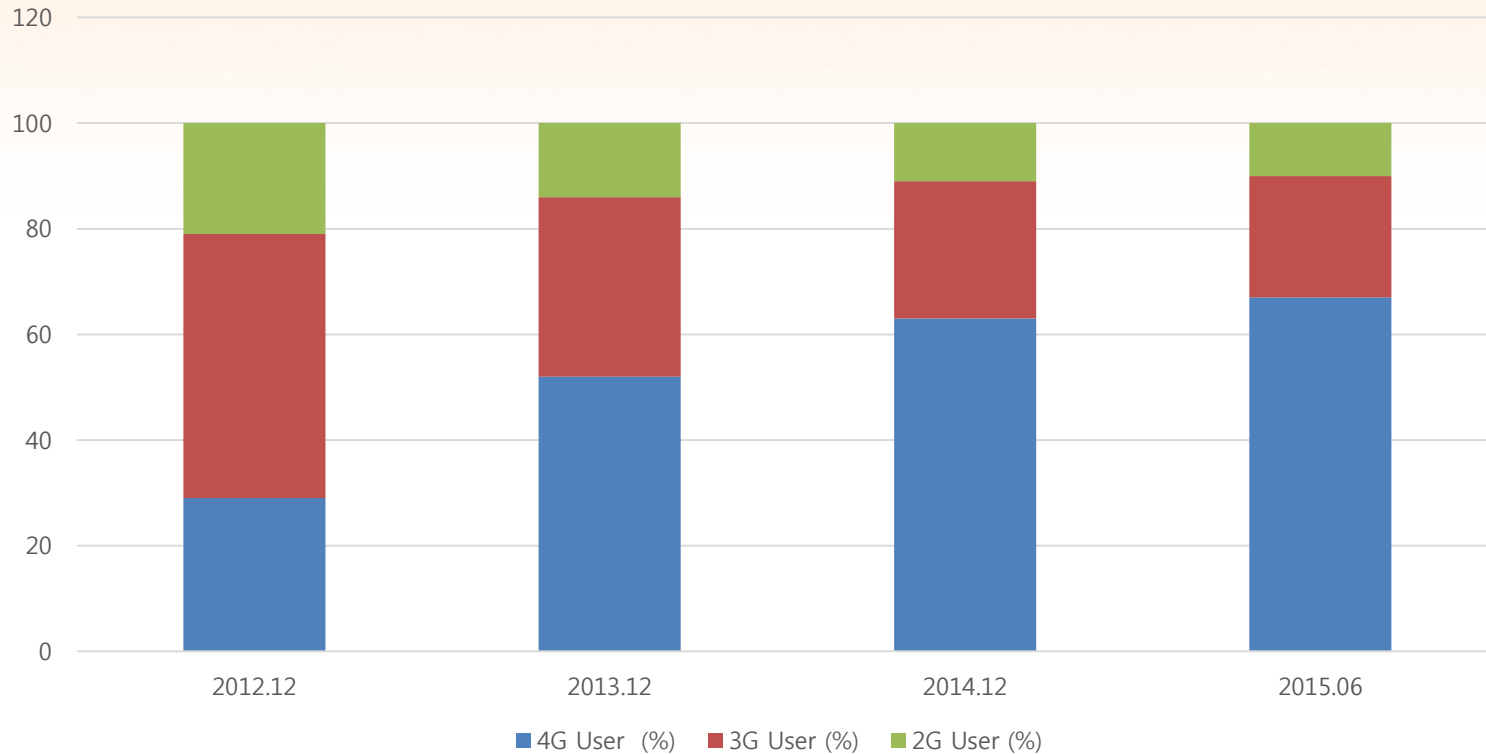
Source: Monthly Mobile Statistics, MSIP, Korea, 2015.8

[Observation and Expectation]

- New solution for enhanced mobile broadband will be necessary.
- Wide bandwidth above 6 GHz band can be secured.

Motivation for Timely 5G in Korea

User Mix by Generation

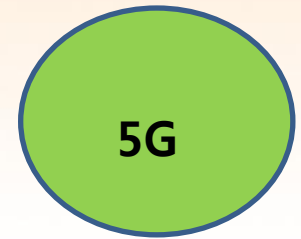
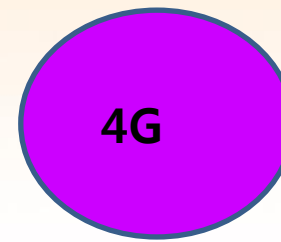
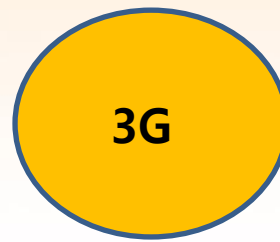
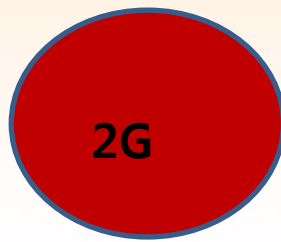
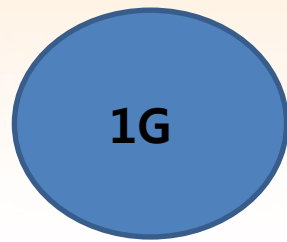


Source: Monthly Mobile Statistics, MSIP, Korea, 2015.8

[Observation and Expectation]

- Timely provision of new standard is essential for advanced market, e.g. Korea.
- Tight utilization of evolved LTE (e-LTE) and new RAT will be beneficial.

Mobile Standards History



AMPS
N-AMPS
TACS
ETACS
J-TACS
NMT
NTT
C-450

GSM
D-AMPS
PDC
cdmaOne
PHS

WCDMA(FDD/TDD)
cdma2000(inc.DO)
UWC-136
DECT
WiMAX

LTE-Adv.
WiMAN-Adv.

???

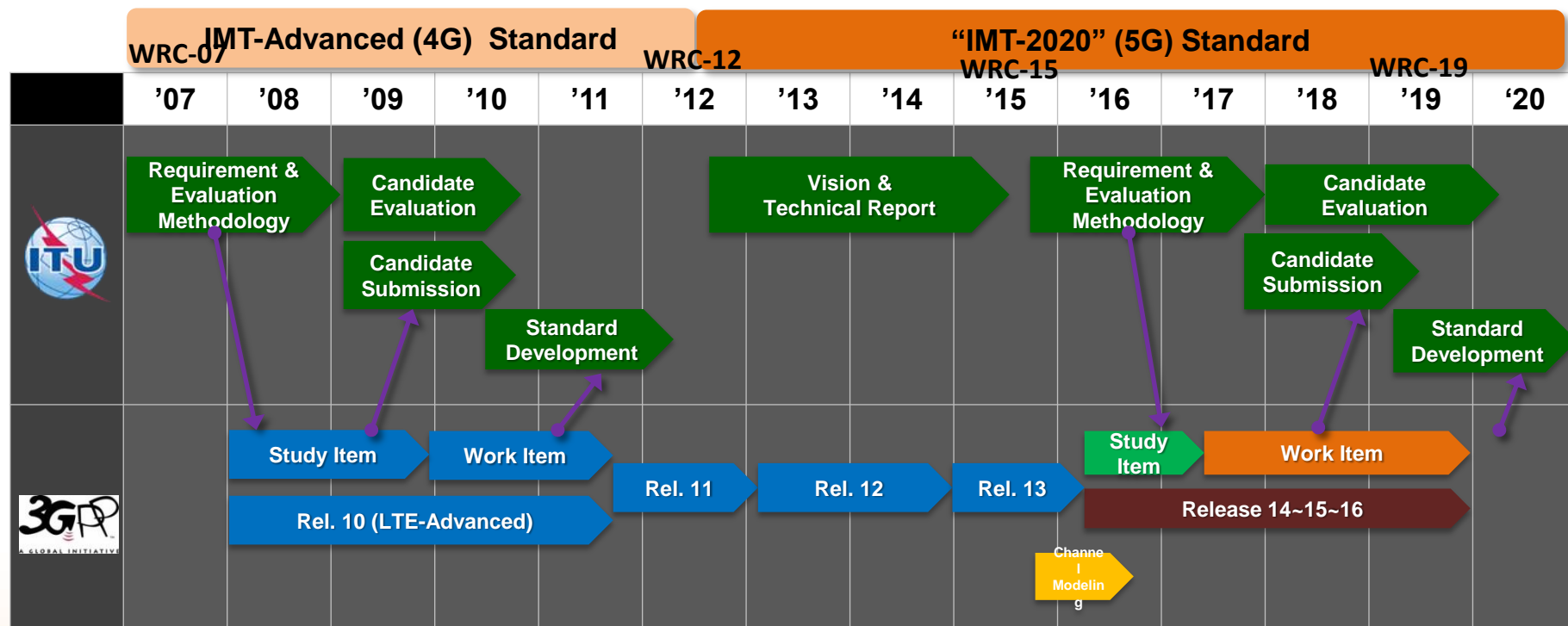
Standard History and Lessons

- > Number of Standards gets smaller, or even single standard.
- > Time Gap: R&D–Standard–Deployment becomes Shorter
- > Pre Standard Collaboration (e.g. R&D) is getting more important
- > Spread of Technology ownership among multiple players

Standard Roadmap

[Expectation]

- Phased approach for 5G standards: 1st phase until Sept. 2018 and 2nd phase until Dec. 2019
- 1st phase should include potential solutions for above 6 GHz.
- Tight integration of new RAT and e-LTE for smooth migration.



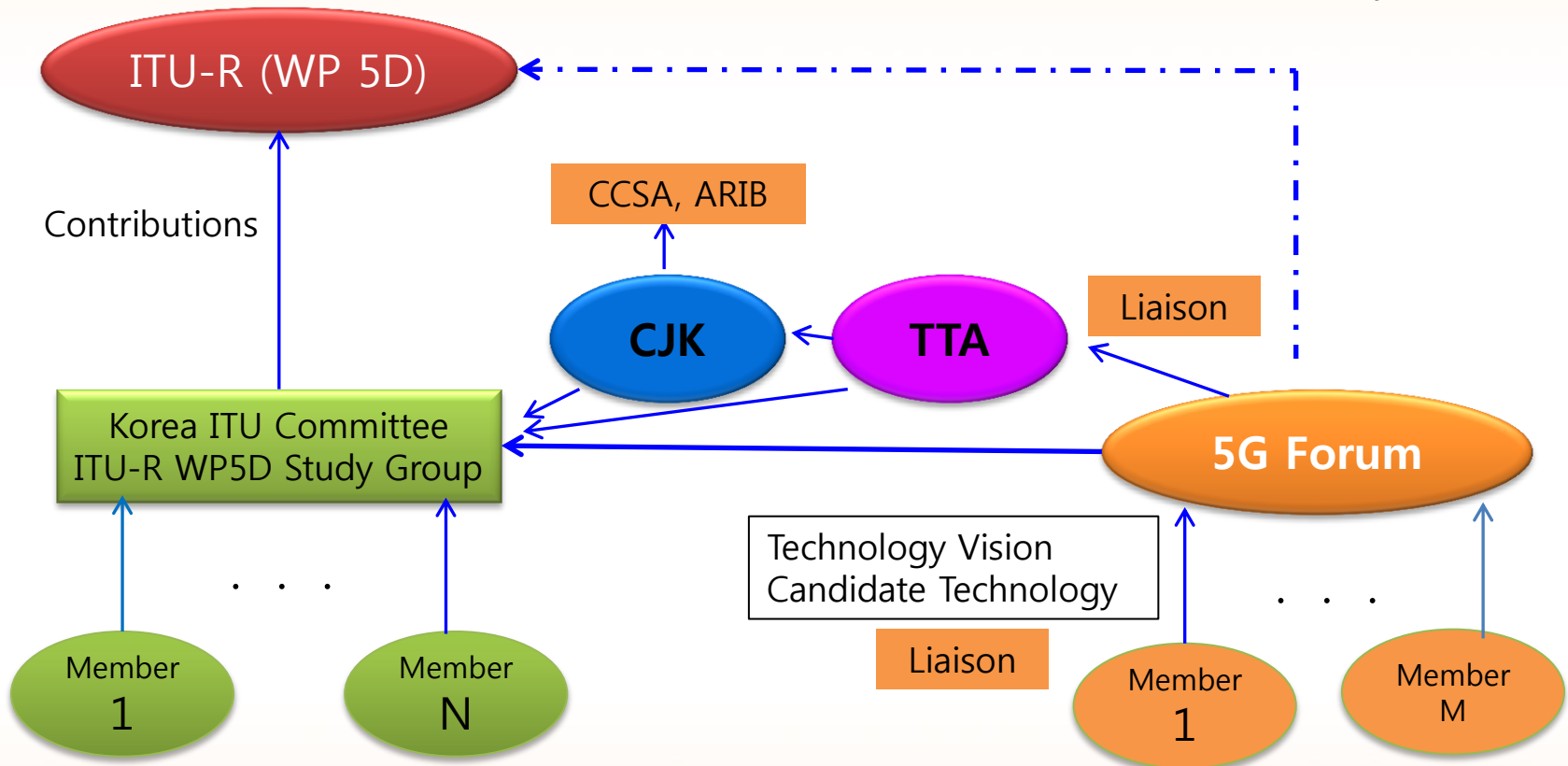
Commercialization



5G Standard flow in Korea

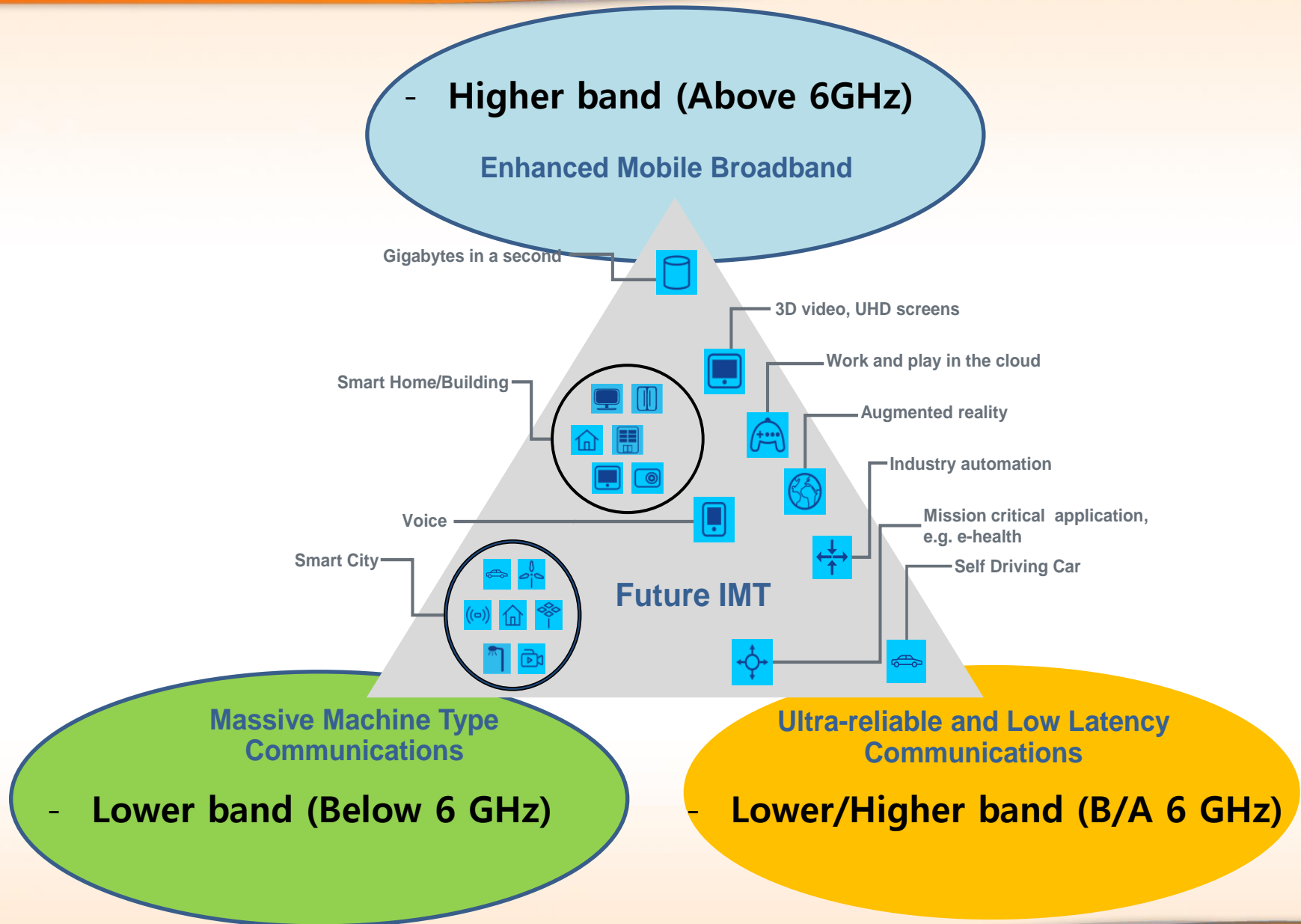
Relationship between 5G Forum & ITU-R

ITU-R M.[IMT.VISION] (Note: WP 5D plans to stabilize the document in early 2015)

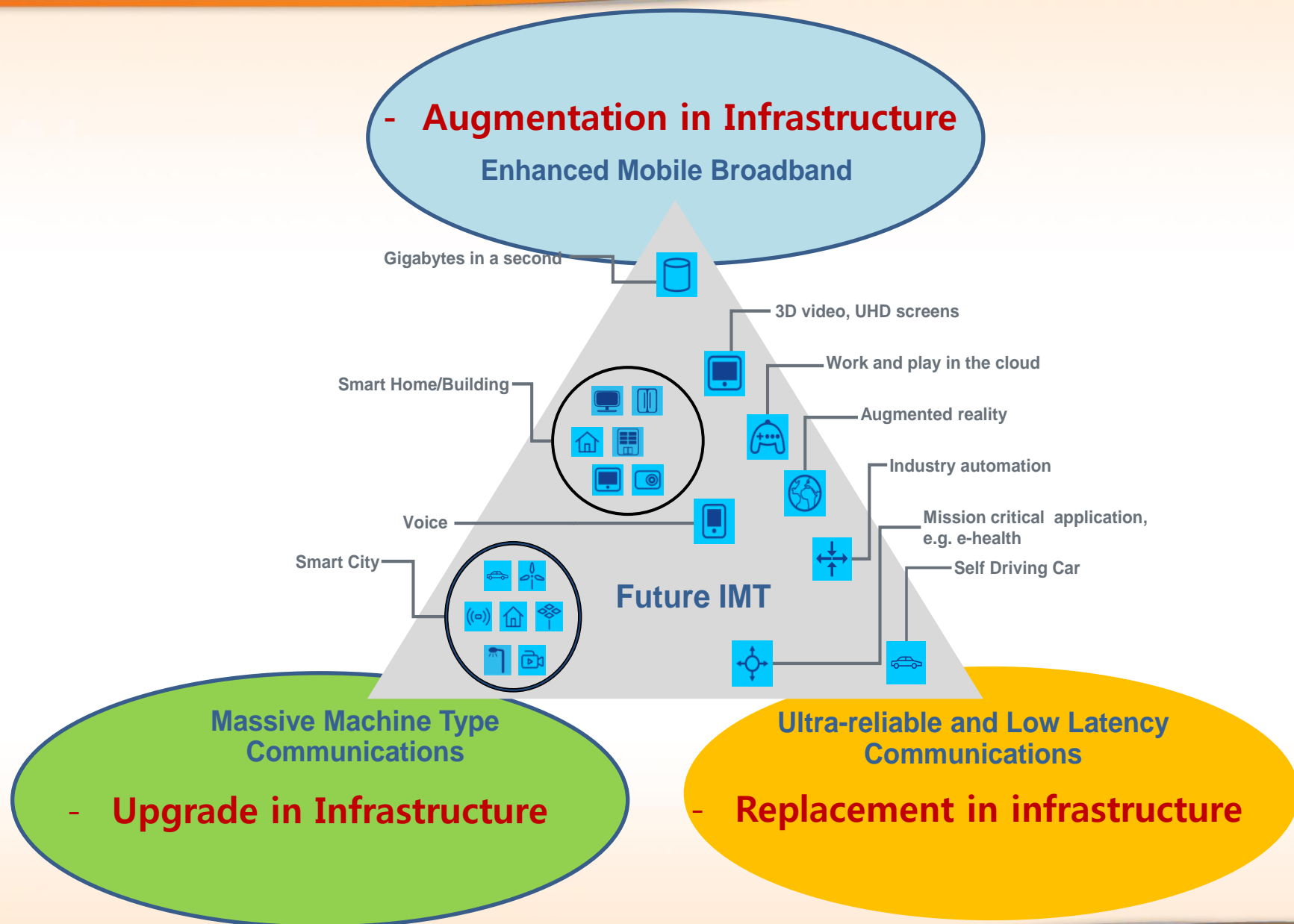


- 5G Forum contributes to Korea ITU-R WP5D Study Group via liaison

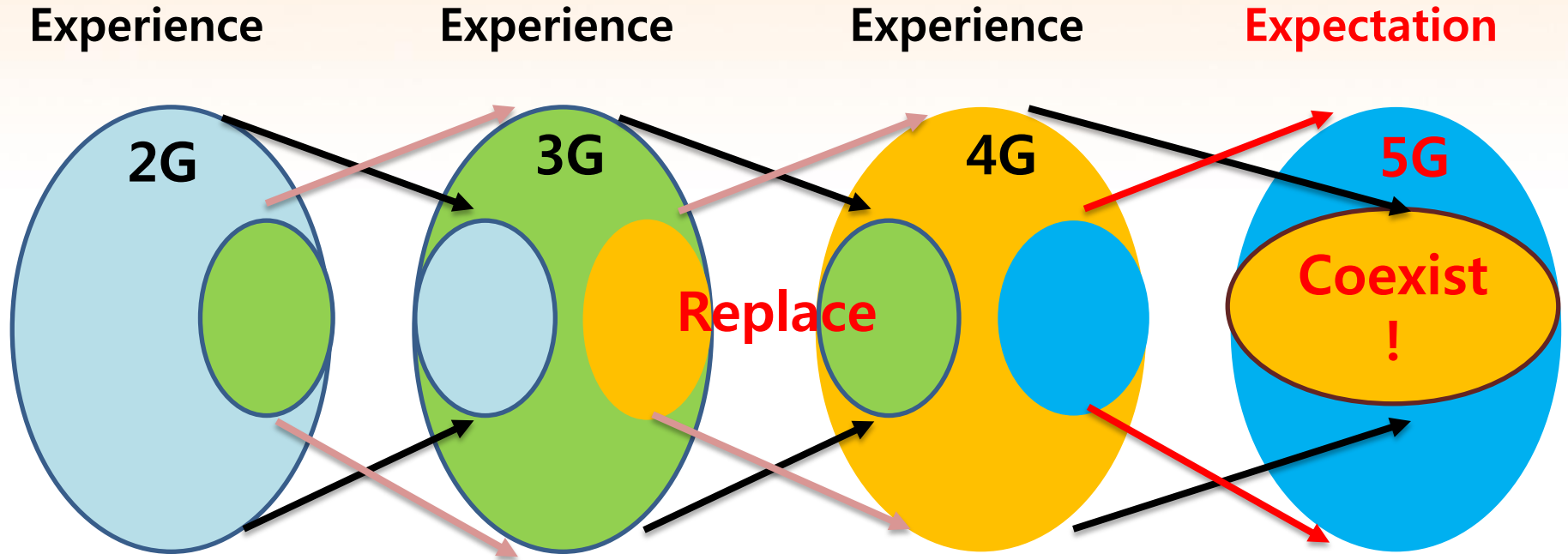
Usage Scenarios and Spectrum



Usage Scenarios and Infrastructure



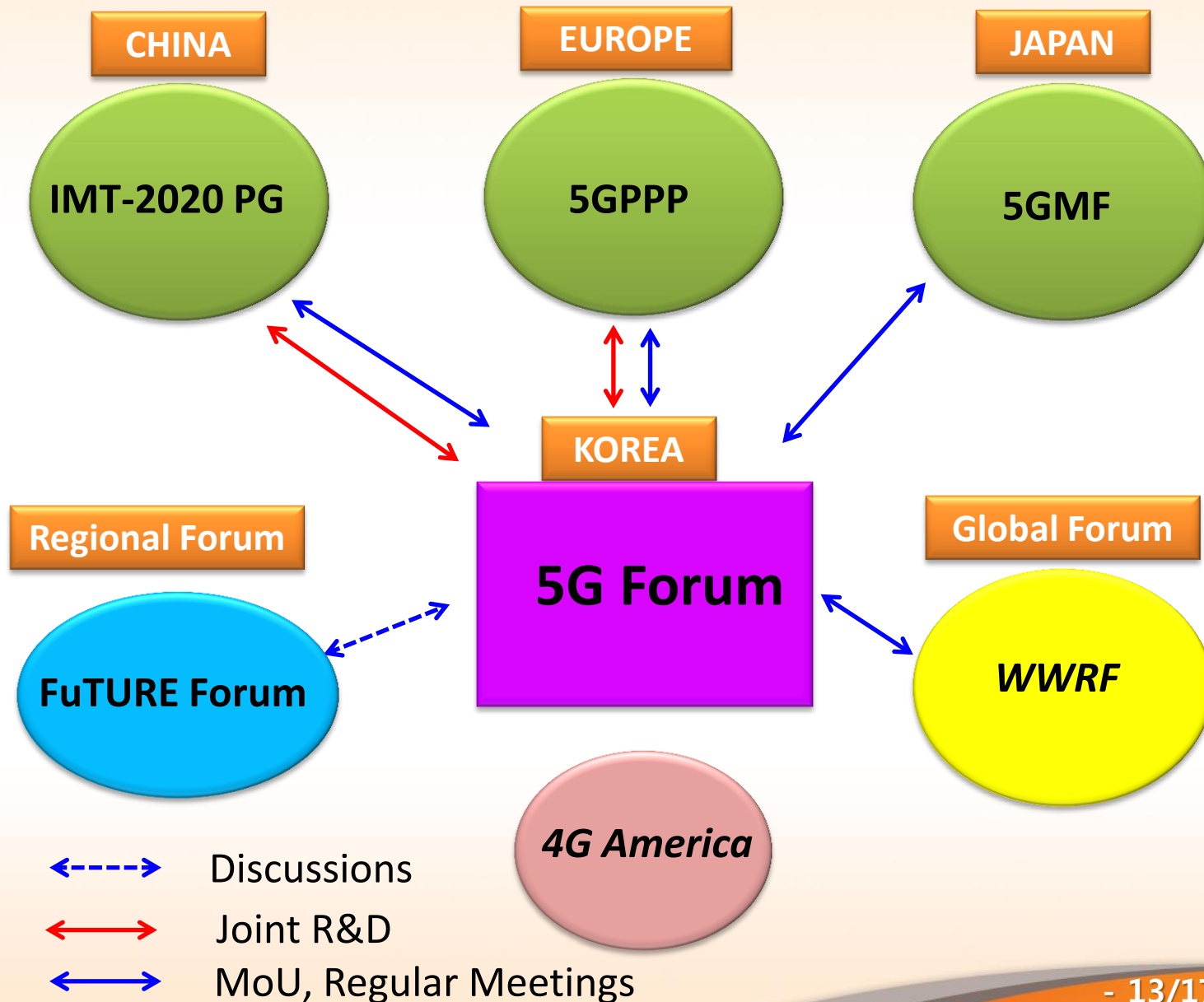
Standard Migration and Investments



Migration to 5G might be different from past, since

- 4G architecture is flexible for the time being
- No competing standard
- Huge investment in 4G RAN and CN
- Multi radio capable Devices

Global Collaboration for 5G



5G Forum - IMT 2020PG

- Industry association level collaboration
 - On June 28, 2013, 5G forum and IMT-2020 PG had MoU on
 - (a) Research of 5G mobile communication technology
 - (b) Analysis of 5G prospects and technology trends
 - (c) Discussion of 5G global standardization strategy
 - (d) Search for 5G frequency candidates
 - (e) Development of new 5G-based services



5G Forum - 5GPPP

- Industry association level collaboration
 - On June 17, 2014, 5G forum and 5GPPP Industry Association had MoU on
 - 5G research,
 - Pre-standardization activities,
 - Regulatory issues and
 - 5G frequency concepts and future frequency bands



5G Forum - 5GMF

- Industry association level collaboration
 - On April 6, 2015, 5G forum and 5GMF had MoU
 - ✓ Research of 5G mobile communication technology,
 - ✓ Analysis of prospects and technology trends,
 - ✓ Discussion of global standardization trends,
 - ✓ Information sharing of 5G frequency concept,
 - ✓ Development of new services



Thank You !!

