



# 5G Mobile Communications

*Priorities for international cooperation in standards and spectrum*

**SAMSUNG**

**Dr. Maziar Nekovee**  
Samsung Electronics R&D



**5G Multi Lateral Workshop on Standards and Spectrum**  
**Lisbon 20 October 2015, in Conjunction with EU ICT 2015**

### Everything on Cloud



- Giga-bit Data Rate
- Ultra Low Latency

### Immersive Experience



- Giga-bit Data Rate
- Ultra Low Latency

### Ubiquitous Connectivity




- Massive Connectivity
- Ubiquitous Coverage

### Tele-Presence

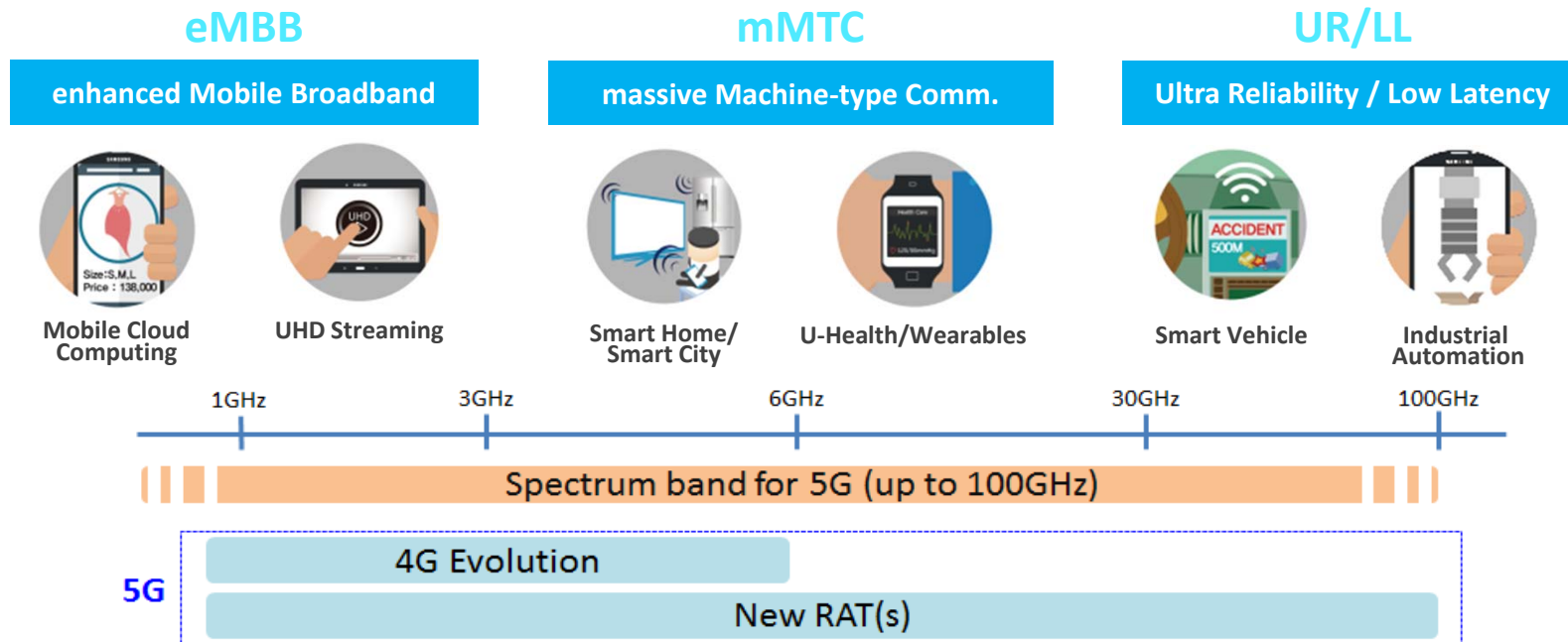


- Giga-bit Data Rate
- Ultra Low Latency

To deliver all of this, 5G needs new harmonized spectrum above and below 6 GHz 

■ Efficient Support for Various Usage Scenarios such as eMBB, mMTC, and UR/LL

■ New Technologies to Unlock Various Spectrum Bands above 6 GHz



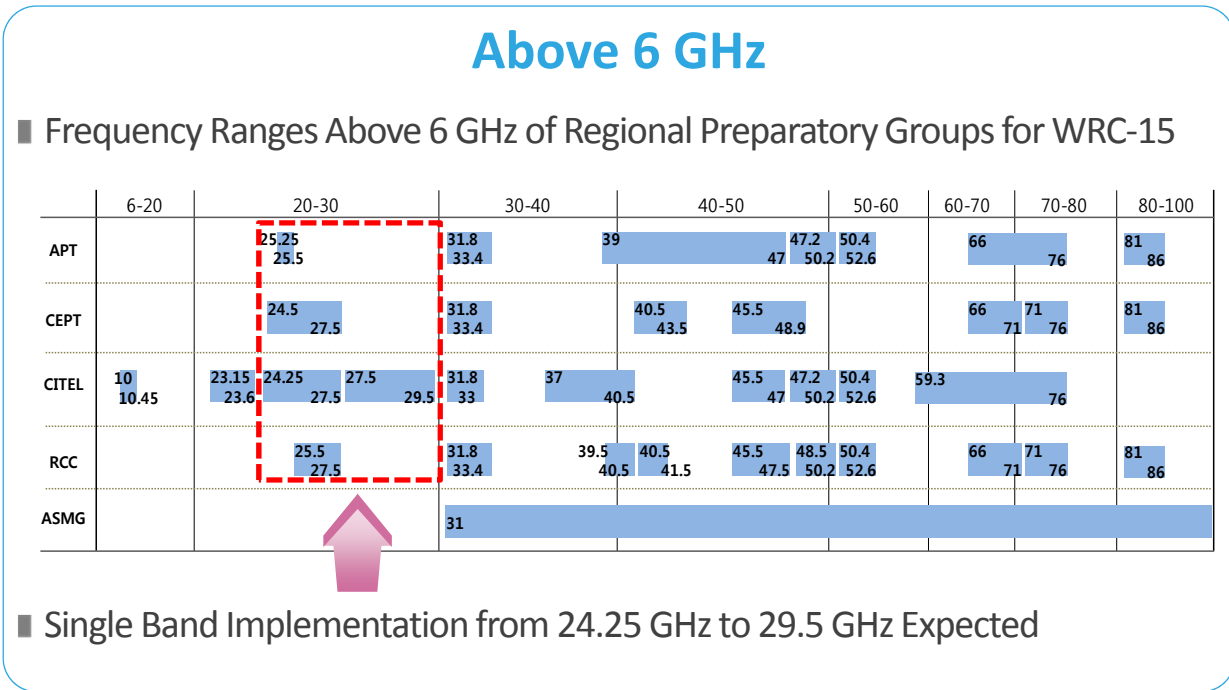
## “Below 6 GHz” and “Above 6 GHz” Spectrum Bands Considered for 5G

■ Much Larger Bandwidths Available in Spectrum Bands Above 6 GHz

### Below 6 GHz

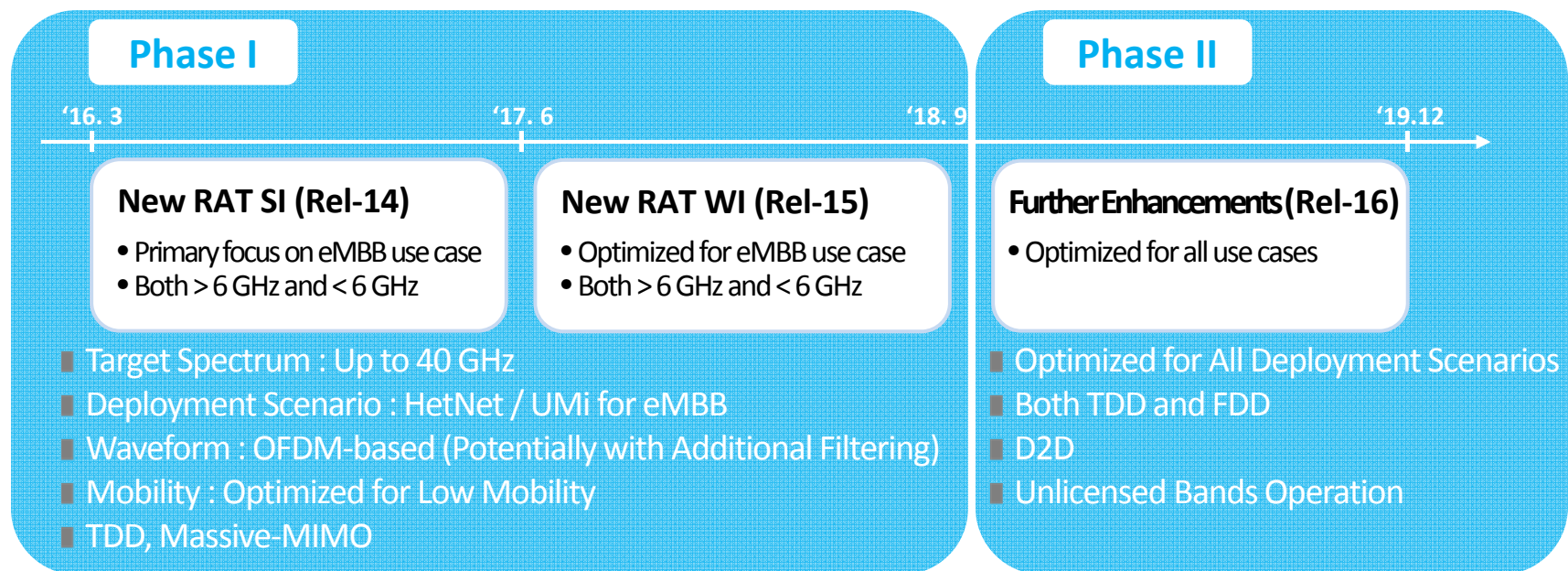
■ Frequency Bands Supported by Regional Preparatory Groups

470	694
1300	1400
1427	1525
(CEPT & CITEL : 1427-1518)	
(APT : 1427-1452 & 1492-1518)	
(ATU : 1350-1518)	
(ASMG : 1452-1518)	
2700	3100
3600	4200
(CEPT : 3400-3800)	
(CITEL : 3.4-3.4 GHz)	
(ASMG : 3.4-3.6GHz)	
4400	5000
5350	5850
5925	6425
(RCC : 5925-6425)	



## Two Phases of 5G Standardization

- Phase I : Focus on enhanced Mobile Broadband (eMBB) Usage Scenario
- Phase II : Further Enhancement for all 5G Usage Scenarios





5G will be a great success if we all work together!



## Global 5G Initiatives with Samsung's Active Engagement

**5G PPP Association (Full Member)**  
Leading and Participating in EU Flagship 5G Projects  
mmMGIC, METIS-II, FANTASTIC-5G

**5GIC Founding Member**

**5G Forum** 5G Forum Executive Board Member

**Member of Giga KOREA Project**

**NYU Wireless Center (Board Member)**

**Issued NOI on the use of above 24 GHz for Mobile**

**5GMF (5G Mobile Promotion Forum)**

**IMT-2020 Promotion Group**

**Member of Future Forum**

**Contributor to 863 Project**

Logos: kt, SK telecom, verizon, Deutsche Telekom, SAMSUNG, KDDI, docomo, FC, NYU WIRELESS, 5G PPP, HORIZON 2020, UNIVERSITY OF SURREY, IMT-2020, 未来移动通信论坛, 863



**Thank You**