

RWS-180005

3GPP Workshop on IMT2020 submission

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Overview of RAN aspects

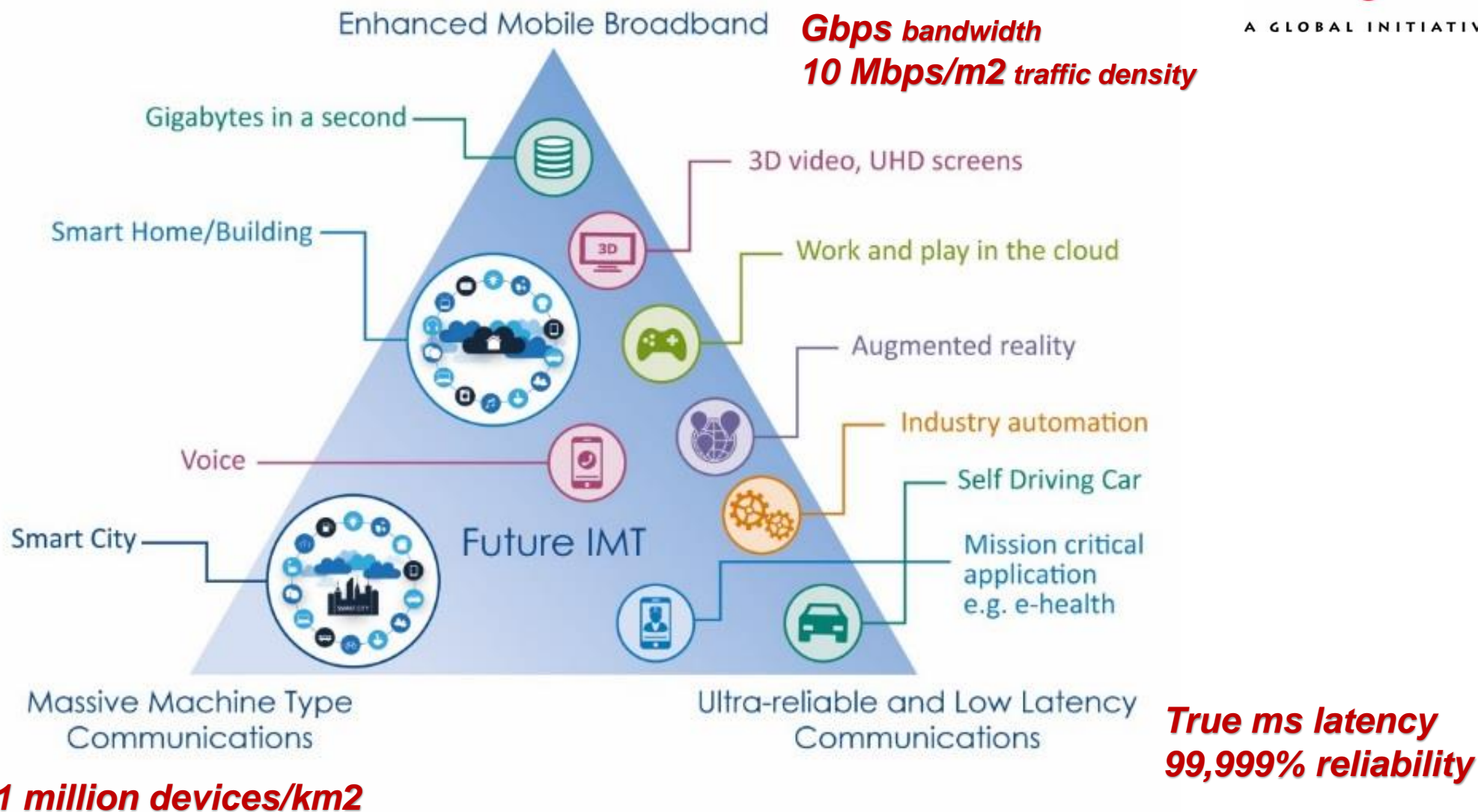
Balazs Bertenyi (Chairman of 3GPP RAN)

Outline



- 5G vision → 5G NR standards
- What is 5G NR
- The advent of 5G – 3GPP Release 15

5G vision - at the outset



5G vision - for real



Perfect storm of multiple technology breakthroughs:

- **Low latency** radio with fully flexible network
- **Artificial Intelligence** and Automation
- **Device revolution** for AR/VR
- **Vertical industries** going wireless



5G vision → 5G NR

What is 5G NR ?

- Operation from low to very high bands: 0.4 – 100GHz
 - Including standalone operation in unlicensed bands
- Ultra wide bandwidth
 - Up to 100MHz in <6GHz
 - Up to 400MHz in >6GHz
- Set of different numerologies for optimal operation in different frequency ranges

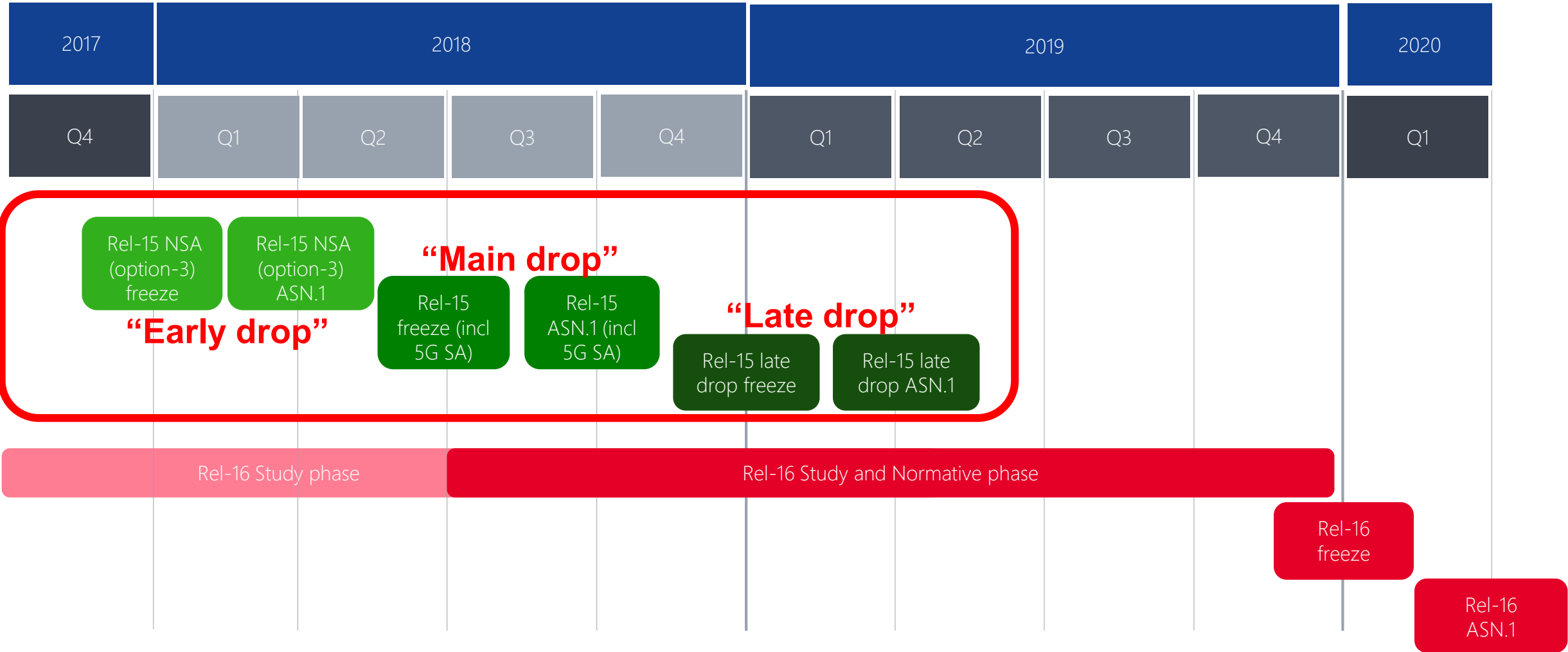
What is 5G NR ?

- Native **forward compatibility** mechanisms
- **New channel coding**
 - 📶 LDPC for data channel, Polar coding for control channel
- Native support for **Low Latency and Ultra Reliability**
- **Flexible and modular** RAN architecture: split fronthaul, split control- and user-plane
- Native end-to-end support for **Network Slicing**






Release 15 – the advent of 5G

Timeline



Why the multiple “drops”

“Early drop” for Non-Standalone 5G

-  Addresses the most urgent deployment needs for eMBB
 -  Uses LTE anchor with 5G NR in Dual Connectivity configuration
-  Accelerated specification to ensure a single global ecosystem

“Main drop” for Standalone 5G

-  Contains full standalone 5G support with 5G Core

“Late drop” for accelerated migration

-  Contains specs for all potential migration options



Thank you!



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