

# *Summary of Requirements identified during 3GPP RAN long term evolution workshop*

**3GPP TSG RAN Workshop**

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# Requirements for 3GPP RAN long term evolution



- **Reduced cost per bit**
  - Improve spectrum efficiency ( e.g. 2-4 x Rel6)
  - Reduce cost of backhaul (transmission in UTRAN)
- **Increased service provisioning – more services at lower cost with better user experience**
  - Focus on delivery of services utilising "IP"
  - Reduce setup time and round trip time
  - Increase the support of QoS for the various types of services (e.g. Voice over IP)
  - Increase "cell edge bitrate" whilst maintaining same site locations as deployed today
  - Increase peak bitrate (e.g. above 100Mbps DL and above 50Mbps UL)
  - Enhance the bitrate for MBMS (e.g. 1-3 Mbps)

# Requirements for 3GPP RAN long term evolution



- Flexibility of use of existing and new frequency bands
  - Allow to deploy in wider and smaller bandwidths than 5 MHz ( e.g. ranging from 1.25 to 20MHz)
  - Allow variable duplex technology within bands as well as between bands
  - Non-contiguous spectrum allocations to one UE should not be precluded
  - Should consider FDD/TDD convergence?
- Architecture and mobility
  - Need to consider UTRAN Evolution and UTRA Evolution at the same time aiming at simplifying the current architecture
  - Shall provide open interfaces to support Multi-vendor deployments
  - Consider robustness – no single point of failure
  - Support multi-RAT with resources controlled from the network
  - Support of seamless mobility to legacy systems as well as to other emerging systems including inter RAT Handovers and Service based RAT Selection
  - Maintain appropriate level of security
- Allow for reasonable terminal power consumption

# ***Requirements for 3GPP RAN long term evolution***



- **Guidance to the work:**
- **Proper flexibility – avoid unnecessary options and remove the existing unnecessary ones**
- **Long term evolution should focus on significant improvements**
- **Emphasize backward compatibility but possible to trade off vs performance and/or capability enhancements**
- **Need for input from SA on different subjects e.g.:**
  - **Potential New functional splits between Radio Access Network and Core Network**
  - **Evaluation of the ratio between Peak and Average throughput for service delivery to determine optimisation of the backhaul**
  - **Determine the throughput per user**

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