

RAN #75

AI 10.1.1

RP-170120



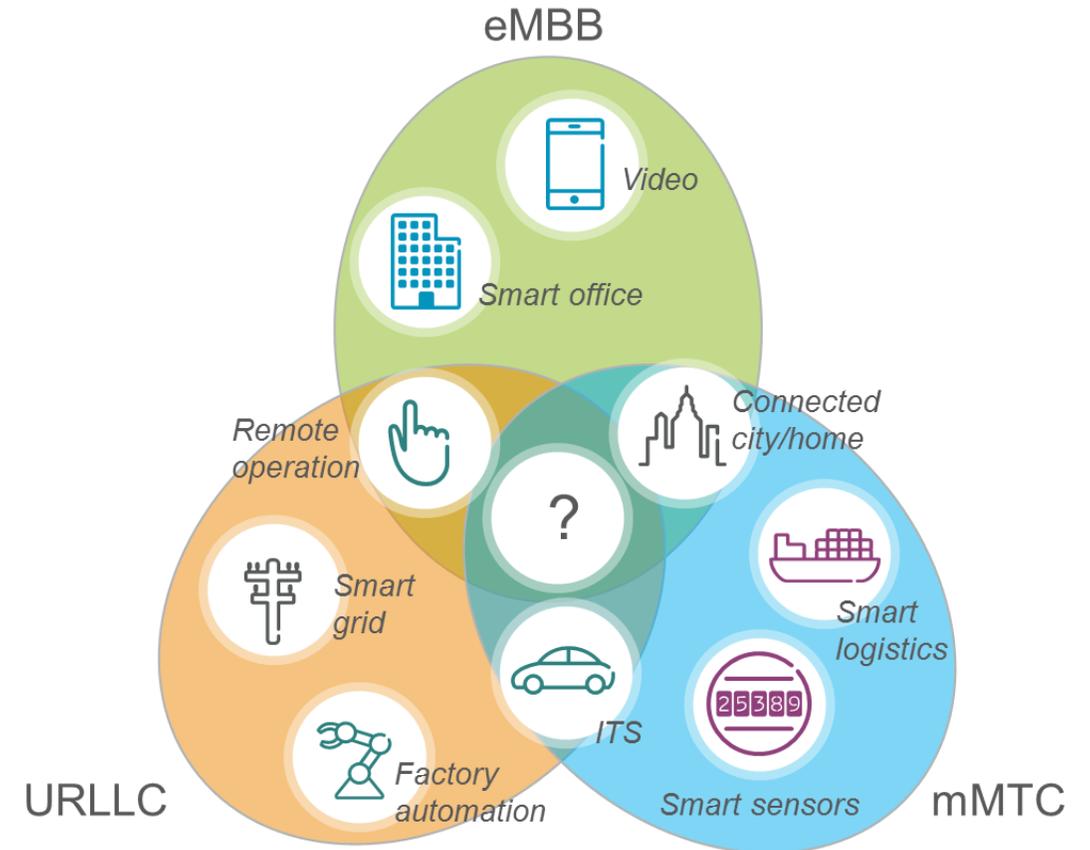
MOTIVATION FOR WI ON HRLLC SUPPORT IN LTE

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RELIABILITY AND LATENCY



- › The 5G landscape consists of overlapping use cases based on
 - eMBB (human user)
 - mMTC (machine user)
 - URLLC (reliability and latency)
- › While eMBB and mMTC are being addressed by LTE, URLLC is outside the current capability
 - LTE should be improved for URLLC use cases within reach



5G use cases in LTE

WI OBJECTIVES



- › A phased approach is taken where the...
 - ...1st phase (until RAN#78)
 - › consists of identifying
 1. Latency and reliability requirements in both wide area and local area deployments
 2. (Potentially) New evaluation scenarios
 3. Solutions to improve reliability under identified latency constraints
 - ...2nd phase (until RAN#80)
 - › consists of
 - Specifying the most promising identified solutions and associated core requirements
- › Both physical layer solutions (RAN1, RAN2, RAN4) and improvements to higher layer (RAN2) is part of the scope
- › The work should be based on the outcome of the “Shortened TTI and processing time for LTE” with a focus to enable ultra-reliable communication.

WI OBJECTIVES

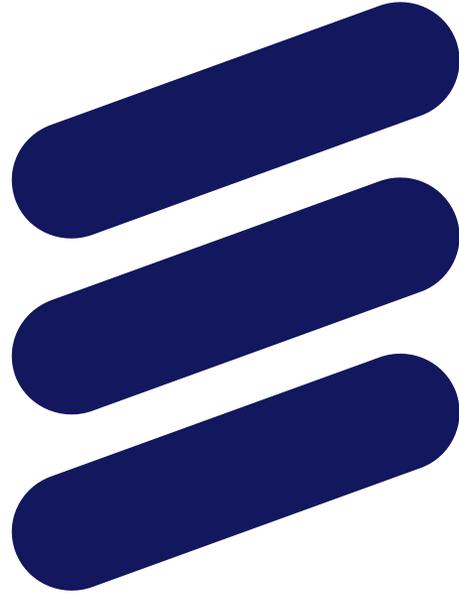


- › Both wide area and local area deployments are targeted
- › Any solutions considered shall be backward compatible with the existing LTE system and shall not require changes to key LTE properties such as the frame structure, numerology and physical channel coding.

CONCLUSION



- › LTE Rel-15 should address relevant reliability use cases within reach, building upon the low-latency improvements already in place for LTE (*Instant Uplink Access (Fast UL)*, and *Shortened TTI and processing time*)
- › ITU targets for 5G URLLC should be fulfilled in LTE
- › Solution should be backwards compatible with the existing LTE system



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