



RP-161249

# 5G ARCHITECTURE OPTIONS

JOINT RAN/SA MEETING | JUNE 14TH 2016, BUSAN  
DEUTSCHE TELEKOM AG



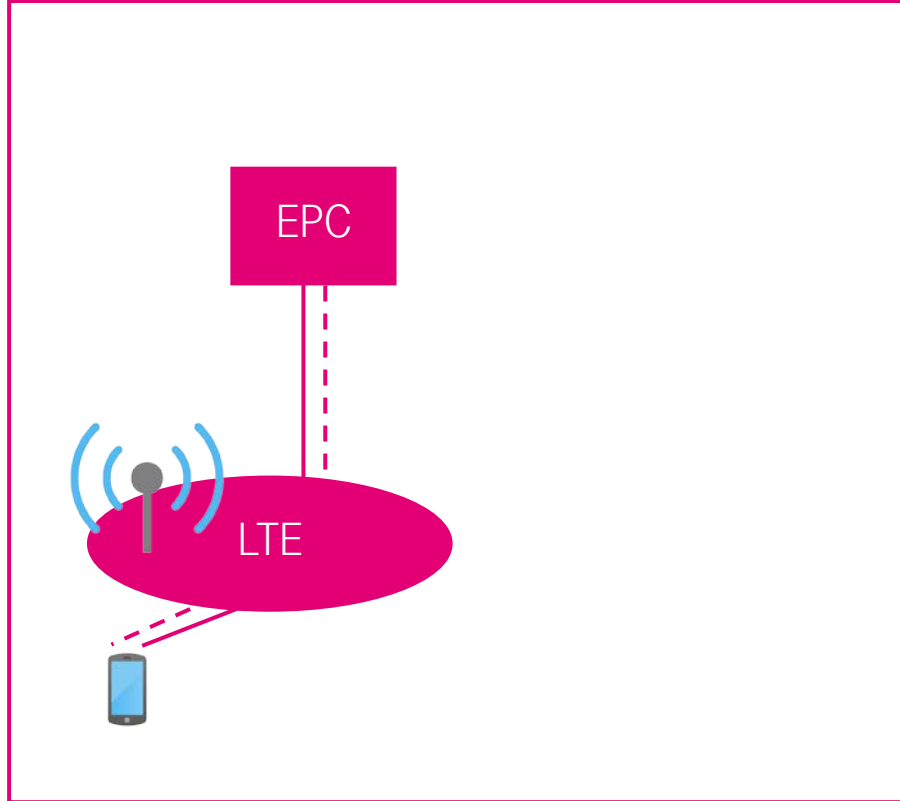
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# OUTLINE OF ARCHITECTURE OPTIONS IN THE LIGHT OF 5G AND “ACCELERATION” DISCUSSION

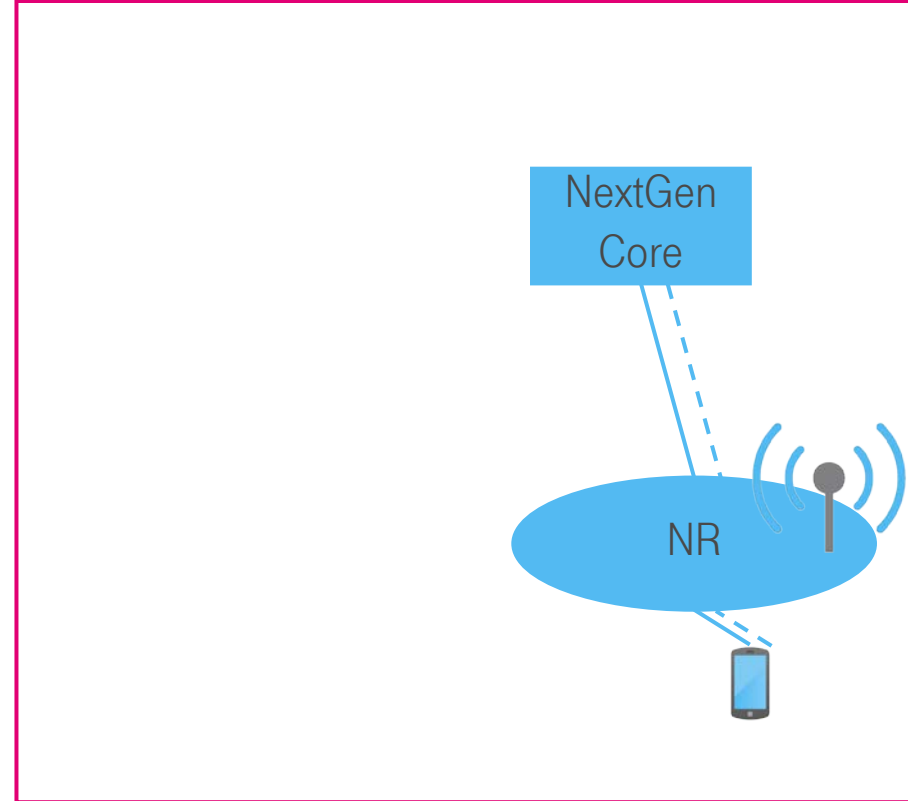
- TWO RADIO TECHNOLOGIES HAVE TO BE CONSIDERED IN THE 5G DISCUSSIONS
  - **LTE** (IN ITS REL-15 VERSION)
  - **NEXT GENERATION RADIO** (“NR”)
- PLUS RADIO LEVEL AGGREGATION OF BOTH RADIO TECHNOLOGIES
- TWO CORE NETWORK CONCEPTS HAVE TO BE CONSIDERED IN THE 5G DISCUSSIONS
  - **EPC** (WITH POTENTIAL EVOLUTIONS)
  - **NEXT GENERATION CORE** („NGCN“)
- THIS RESULTS IN 8 OPTIONS (NEXT SLIDES)

# 5G SCENARIOS IN 3GPP NR & NEXTGENCORE (1/4)

1) Standalone LTE, EPC connected - legacy

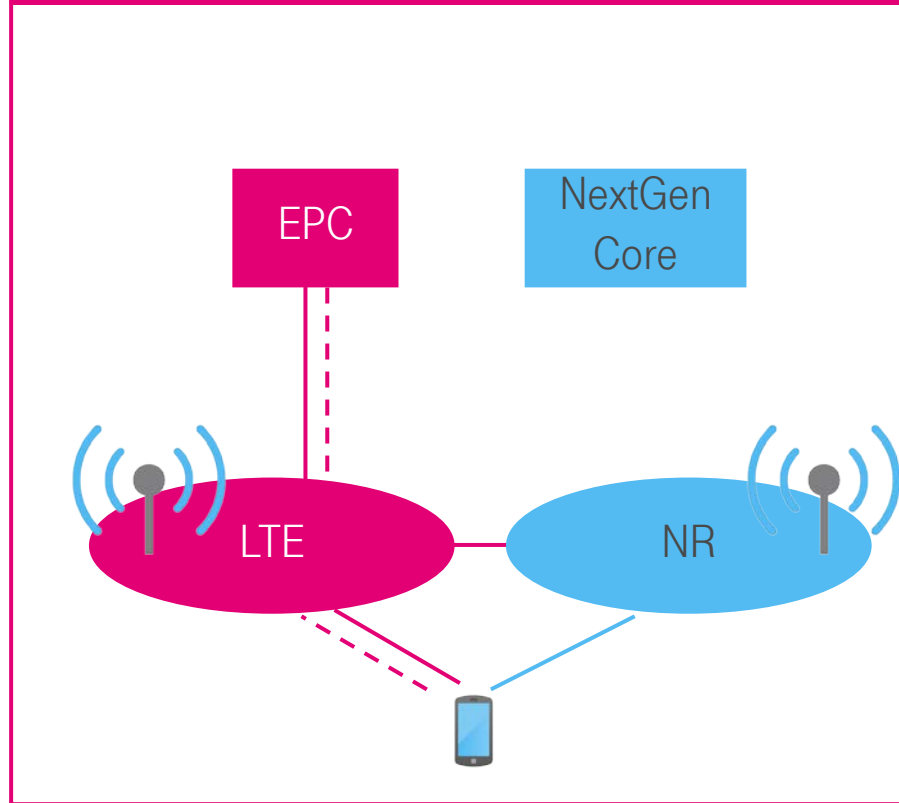


2) Standalone NR, NGCN connected

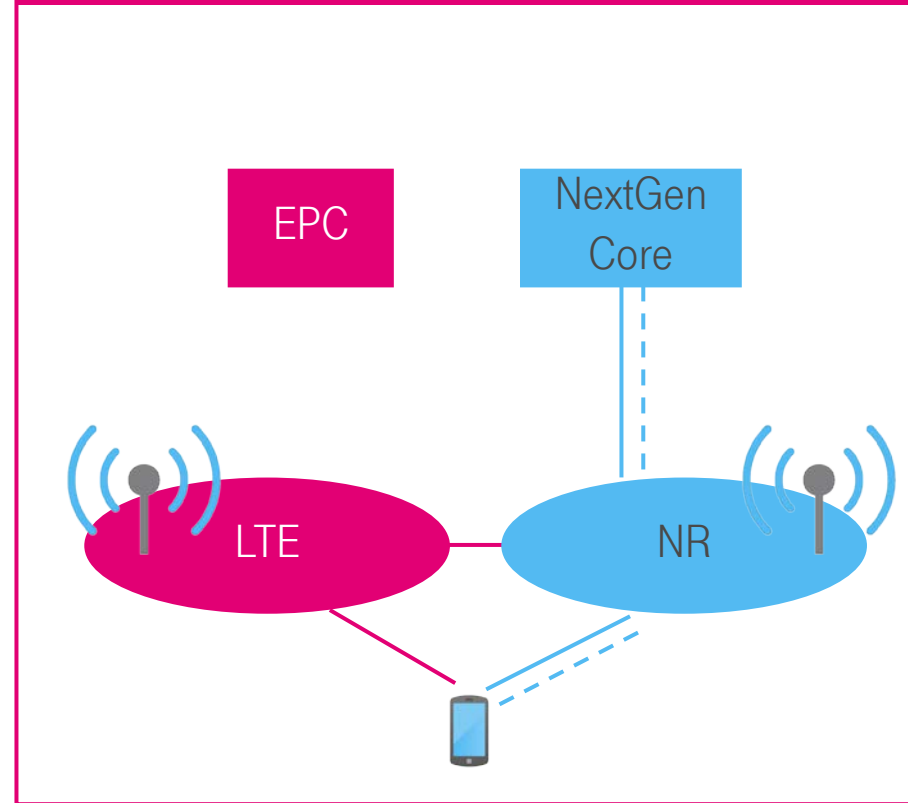


# 5G SCENARIOS IN 3GPP NR & NEXTGENCORE (2/4)

3) Non-Standalone/"LTE assisted", EPC connected

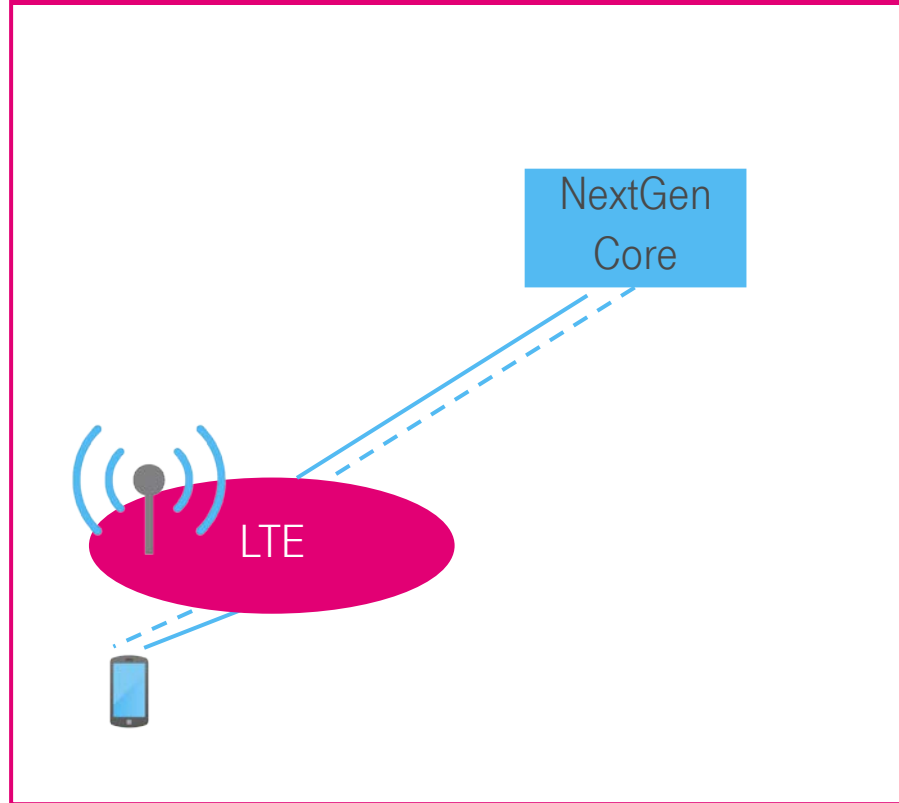


4) Non-Standalone/"NR assisted", NGCN connected

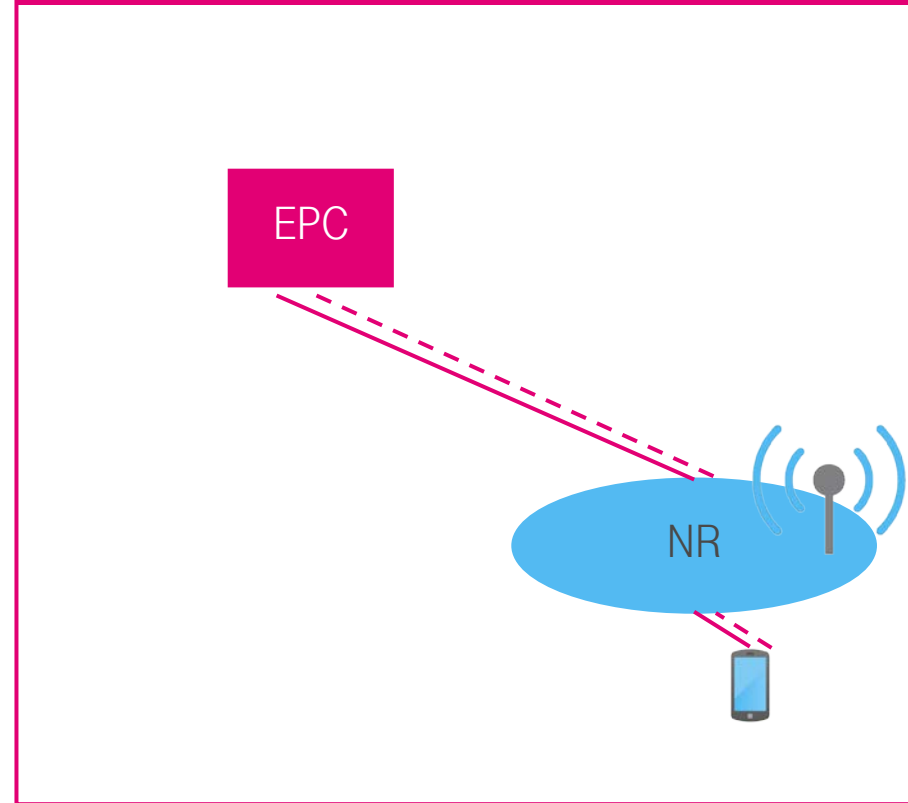


# 5G SCENARIOS IN 3GPP NR & NEXTGENCORE (3/4)

5) Standalone LTE Rel-15, NGCN connected

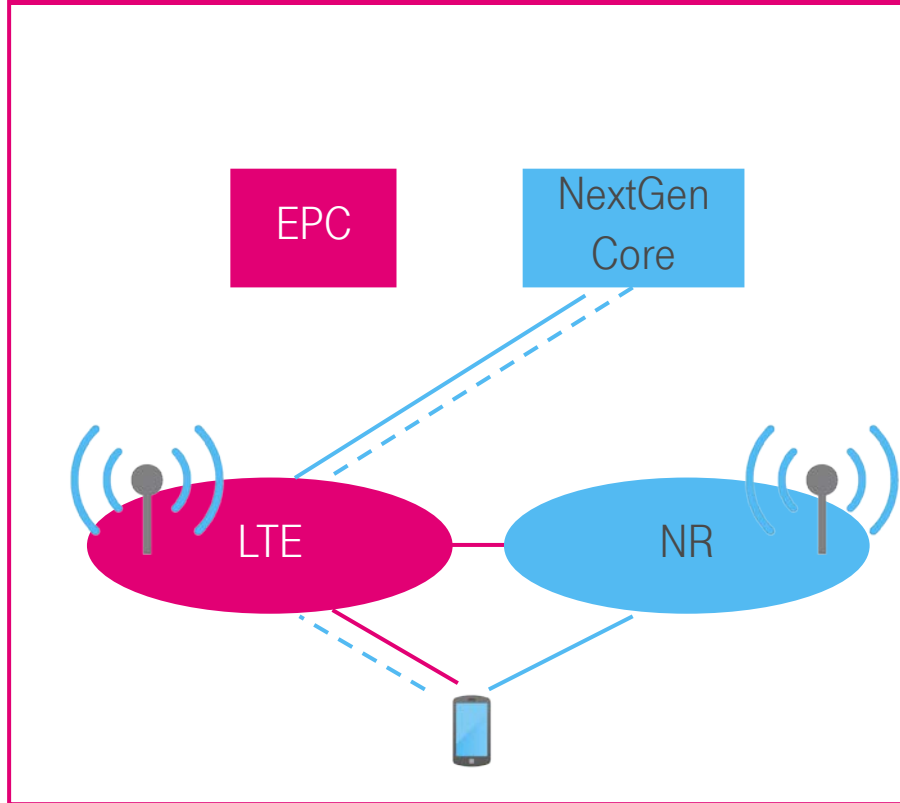


6) Standalone 5G NR, EPC connected

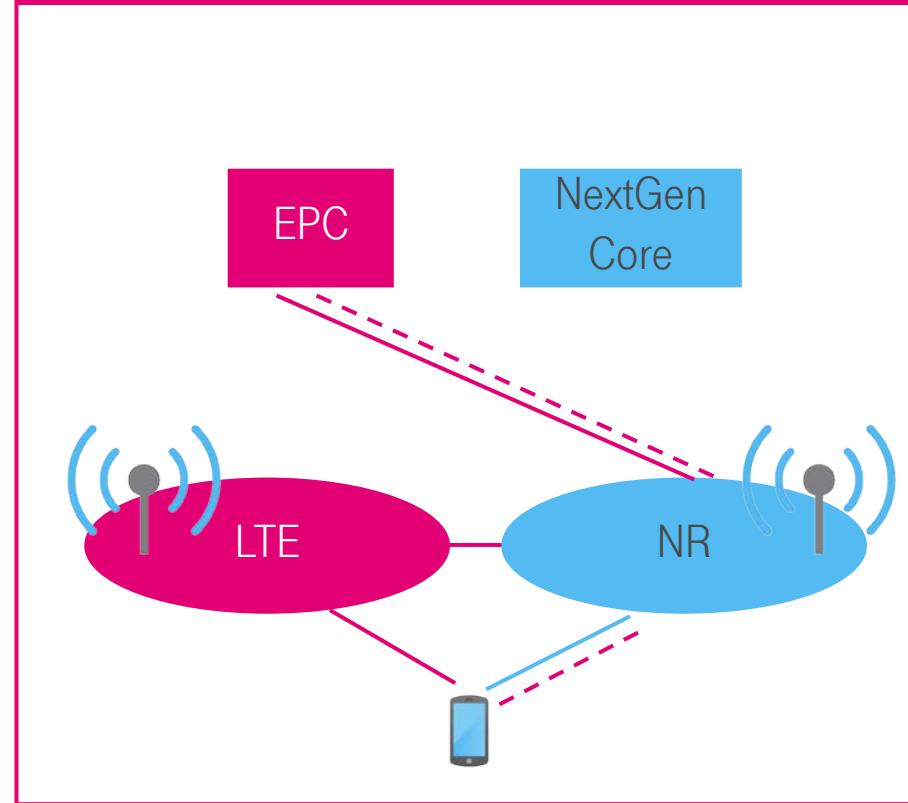


# 5G SCENARIOS IN 3GPP NR & NEXTGENCORE (4/4)

7) Non-Standalone/"LTE assisted", NGCN connected



8) Non-Standalone/"NR assisted", EPC connected



# QUESTIONS AND CONCLUSIONS

- **SCENARIO 1) IS LEGACY → 7 OPTIONS REMAIN**
- **DOES 3GPP NEED TO SUPPORT ALL REMAINING 7 ARCHITECTURE OPTIONS ?**
- **IS THERE A PHASING POSSIBLE / DESIRABLE ?**
- **HOW TO ENSURE FORWARD COMPATIBILITY IN ORDER TO AVOID GLOBAL FRAGMENTATION, ESPECIALLY CONSIDERING ROAMING ?**

**QUESTIONS ?**  
**LIFE IS FOR SHARING.**

