

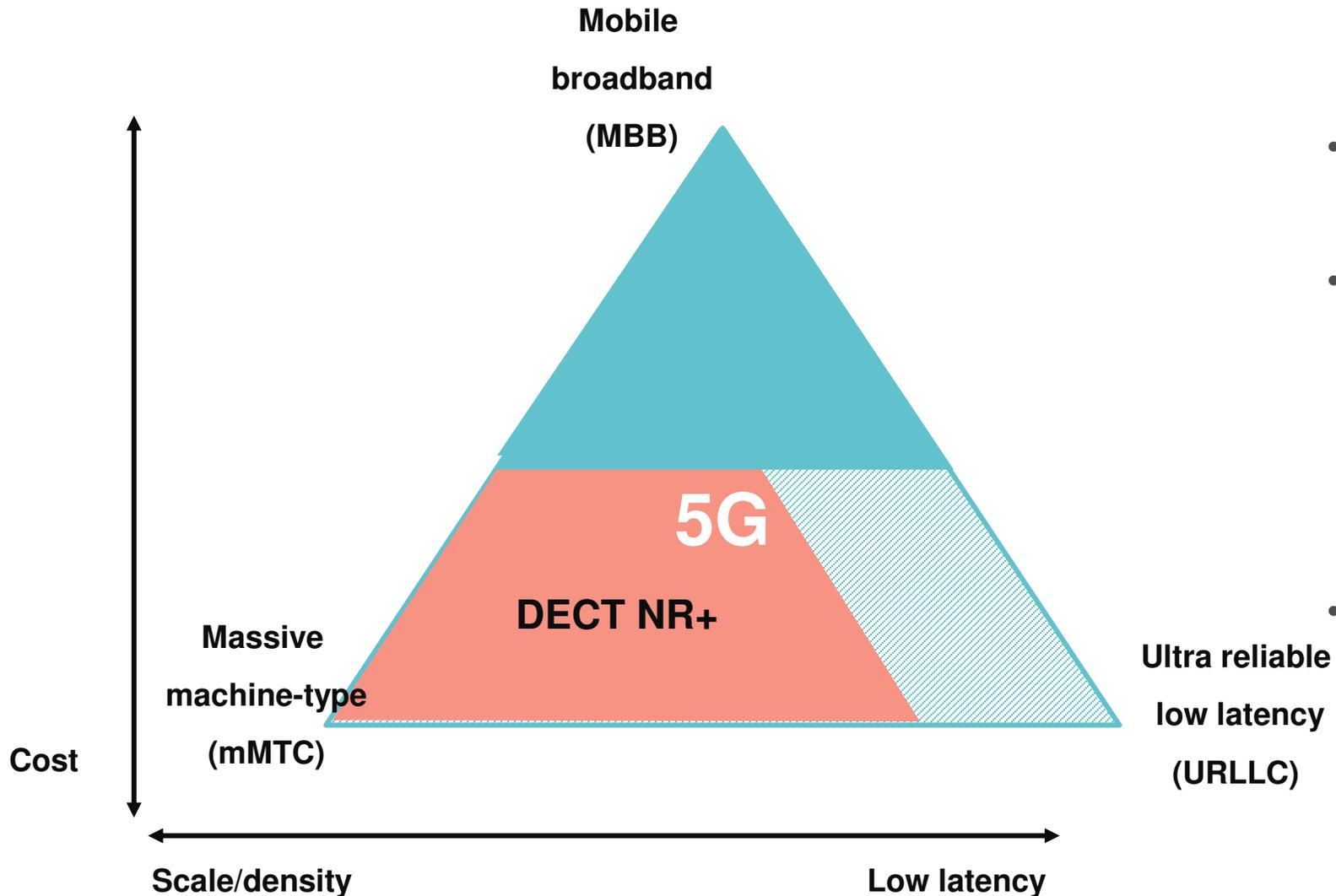
DECT-2020 NR for industrial use

- Local area autonomous wireless technology

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DECT NR+ is part of IMT-2020 technology



- ITU-R defines the mobile communication requirements for IMT frequencies.
- IMT-2020 technology is the official name for 5G
- DECT NR+ meets the massive Machine Type Communication (mMTC) and the Ultra-Reliable and Low Latency Communication (URLLC) service requirements set by ITU-R for 5G technology.
- DECT NR+ address both requirements with the ETSI TS 103 636 standards series.

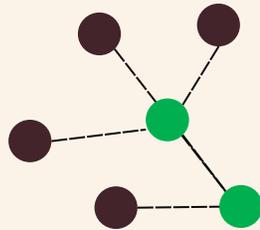




DECT NR+ designed for scale and density

LOCAL

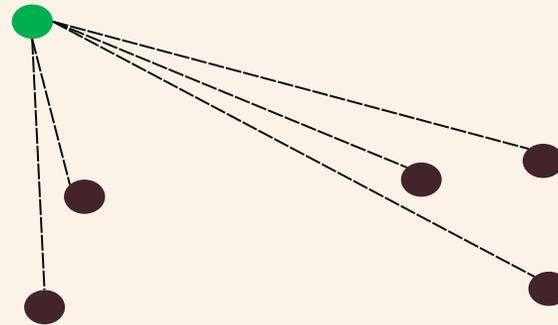
Local area and limited size of installations.
(eg: Zigbee, Thread)



Centralized mesh

WIDE AREA

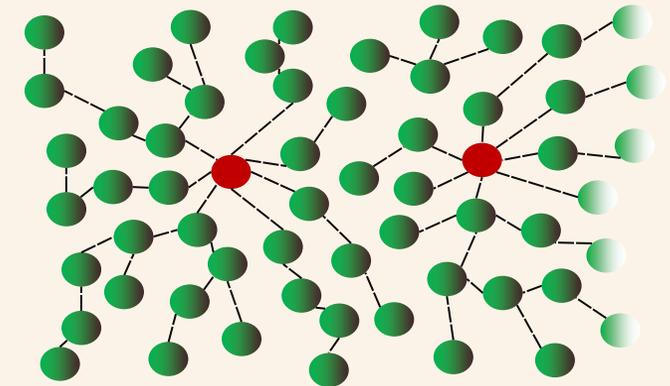
Wide area installations with limited bandwidth.
Data subscription resulting high OPEX.
(eg: NB-IoT, LTE-M)



Centralized point-to-point

From HIGH DENSITY to WIDE AREA

Autonomous, any scale, density, and location.



De-centralized mesh

Router function

End device function

Gateway function



DECT NR+



- DECT NR+ is designed for shared spectrum use.
- 1880 – 1900 MHz in the first product operating band.
- State of art OFDM physical layer with adaptive modulation, channel coding and HARQ support
- Support low latency operation. The standard enables less than 1ms radio layer latencies in a single link.
- -40 up to 23dBm transmit power.
- About 124 dB link budget @ 1,728 MHz channel
- Listen-Before-Talk for spectrum sensing and interference avoidance.





DECT NR+



- Self-organizing – light radio planning as no subnets or deployment specific network configurations, nor roof top router installations.
- Fully autonomous and automatic maintenance to deal with any environment changes or adapting to new or incremental installations.
- Up to 4 B unique device ID
- Up to 16 M unique NW IDs.
- High density deployment thanks to autonomous operation

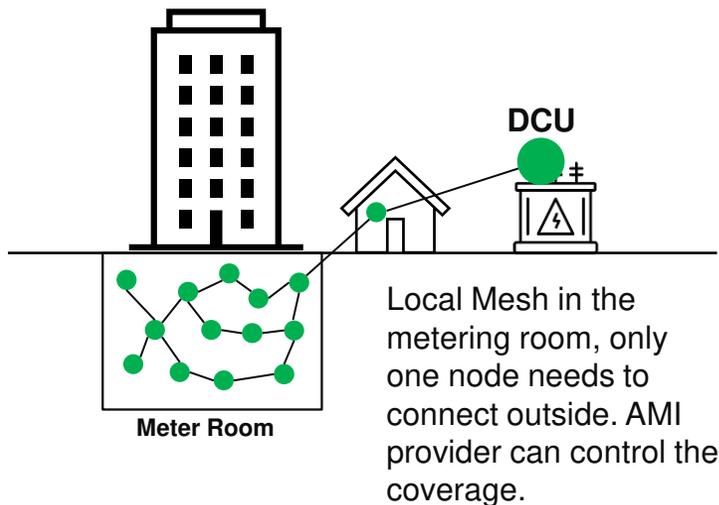


Fit for smart metering

- Metering room coverage challenge

DECT NR+

Meters will create a mesh network in a metering room and only one meter needs to find a way out to next building.



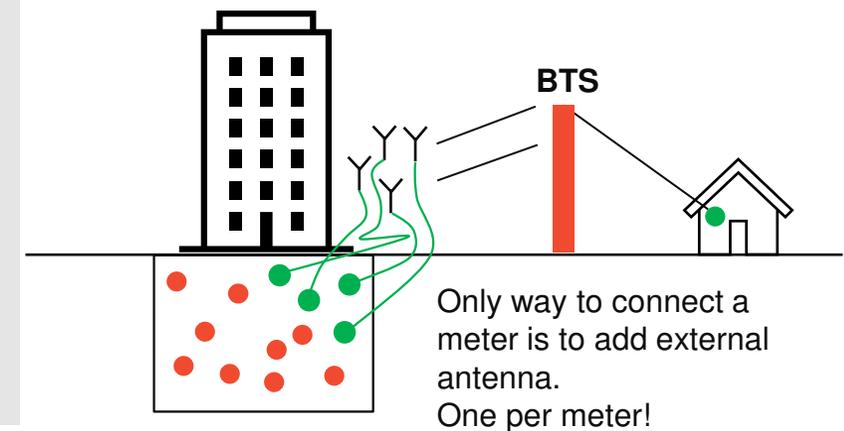
Metering rooms Challenge

Metering room with several hundred meters are quite common. In addition to the high density, they are usually deep indoor in building basement.



Cellular

Every meter requires an external antenna and cable outside of the metering room to connect cellular base station. In many countries external antennas are not allowed.



Thank You



Wirepas



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