



## **IoT in 4G and 5G**

This course presents the overview of the Internet of Things in 4G and 5G. It will focus on Machine-Type Communication (MTC) features which have been introduced in Release 16 and Release 17 of the 3GPP technical specifications in order to support the billions of low power devices covering an eclectic range of use cases. In particular, the evolution of NB-IoT and LTE-M will be discussed in light of the 5G system

### **Content of the 2 days Live Training:**

#### **1) What is the Internet of Things?**

1. Markets and Verticals.
2. The IoT Ecosystem.
3. LPWA (Low Power Wide Area) Technologies
4. LoRaWAN, Sigfox.
5. Short Range IoT Technologies:

#### **2) Introducing MMTC:**

1. IoT Roadmap in 3GPP
2. Cellular IoT
3. Non cellular IoT
4. MMTC Requirements and Capabilities.

### 3) IoT Platform and use cases

1. IoT platform and IoT architecture
2. Description of IoT use cases

### 4) MMTC Evolutions:

1. 2G
2. 3G
3. 4G
4. 5G

### 5) MMTC Architecture:

1. E-UTRAN and EPC.
2. E-UTRAN and 5GC.
3. NG-RAN and 5GC.

### 6) NB-IoT, LTE-M and 5G:

1. NB-IoT.
2. LTE-M
3. Co-existence between Cellular IoT and NR

### 7) MMTC and Network Slicing:

1. DECOR.
2. Network Slicing

### 8) MMTC Enhancements

1. Extended Discontinuous Reception.
2. Power Save Mode.
3. NR Light.
4. Early Data Transfer
5. SON for NB-IoT
6. Co-existence with NR
7. Stand-alone LTE-M