# Iot: Environmental control

- **Demo Description**: End-to-end, cloud based, environmental IoT solution: a vehicle travelling in Bucharest assesses the air quality parameters using an advanced network of environmental sensors. The information is viewed on a client application after is stored, processed and analyzed in back-end systems in real time by using Telekom Romania wireless data network.
- **Demonstrated Functionalities**:
    - Environmental measurements: Temperature, Relative Humidity, Air pressure, CO, CO2, NO2, PM-Particle Matters (PM1, PM2.5, PM10).
    - Administration portal and an open market collaboration cloud based platform
    - Reliable and uninterrupted wireless connectivity.
- **Applicability & Technology Value:** 29B connected devices[1] are forecast by 2022, of which around 18B will be related to IoT while by 2018 mobile phones are expected to be surpassed in numbers by IoT devices. These include connected cars, machines, meters, wearables and other consumer electronics devices. To be able to cope with the sheer number of connected devices in the network, 5G is introducing new access technologies such as NB-IoT (Narrow Band IoT) and CAT-M (Category Machine) allowing to support up to 1M devices per Km^2, 10 years battery lifetime and up to 7 times improved coverage compared to today's GSM networks. 5G and IoT is the key element for bringing about the Networked Society.
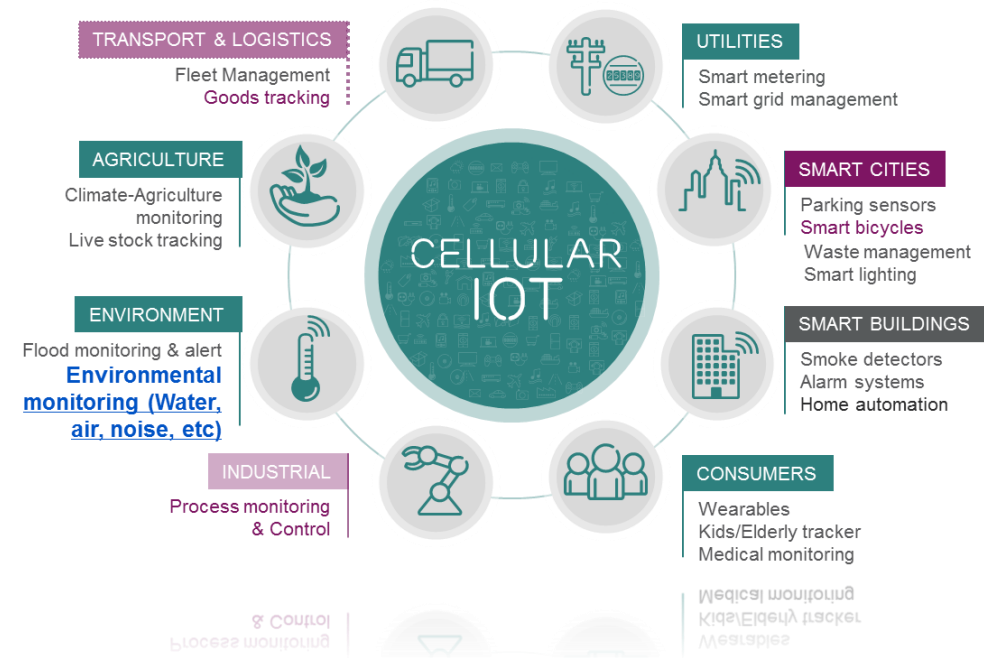
(1): According to Ericsson Mobility Report, November 2016
https://www.ericsson.com/en/mobility-report