



Promoting NB-IoT adoption through service and technology neutral regulatory frameworks

The positive impact of the Internet of Things (IoT) on citizens, businesses and governments will be significant, ranging from helping governments reduce healthcare costs and improving quality of life, to curb carbon emissions, increasing access to education in remote underserved communities and improving transportation safety.

The expected value added impact of the IoT by 2020 is estimated to be in the region of 4.5 Trillion USD globally (Machina Research), including both revenue opportunities and cost savings that may be generated.

It is essential that governments provide a regulatory framework for licensed spectrum that facilitates the development and growth of IoT, and does not impose service or technological restrictions that hold back innovation. Operators should not be prevented from deploying the latest cellular IoT technologies in their licensed spectrum bands due to technological restrictions.

The latest cellular standard allows cellular networks to support NB-IoT¹, a narrowband radio technology capable of addressing the connectivity requirements of IoT devices in most licensed spectrum bands.

NB-IoT can be deployed in three modes: in-band, standalone and guard-band in any of the frequency bands defined by the 3GPP specification².

The standalone configuration does not require LTE deployment. While NB-IoT was specifically designed to allow easy integration into existing radio access technologies, it is a completely new radio access standard.

It is important that policymakers and regulators recognize this aspect and promote a regulatory framework for IoT that is service and technology neutral.

¹ NB-IoT, LTE-M and EC-GSM-IoT, are the three Mobile IoT narrowband radio technologies standardized under 3GPP Release 13. For more details, see references to the GSMA Mobile IoT initiative.

² Please see 3GPP specification 36.101 section 5.5F
<https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=2411>

References

- **IoT opportunities and impact:** to find out more about the economic impact and opportunities search here: <https://www.gsma.com/iot/iot-opportunities-impacts/>
- **The GSMA mobile IoT initiative:** The GSMA mobile IoT is an initiative to promote the growth and development of the Internet of Things (IoT), the mobile industry together with 3GPP has standardised a new class of GSM technologies in record time. LPWA networks will support devices requiring, low power consumption, long range, low cost and security. More information can be found at: <https://www.gsma.com/iot/mobile-iot-initiative/>
- **For more information on technical deployment aspects on NB-IoT,** please refer to: <https://www.gsma.com/iot/3gpp-low-power-wide-area-technologies-white-paper/>
- **For more information on the GSMA position on Spectrum for IoT** please refer here: <https://www.gsma.com/iot/wp-content/uploads/2017/01/GSMA-IoT-spectrum-position-paper-FINAL.pdf>