

# 1. IoT and LPWAN

The battle for the Internet of Things (IoT) has certainly started. As shown in the emerging technology hype cycle in Fig. 1, IoT is just on the peak of the inflated expectations. Cisco predicts that the corresponding Value at Stake will be \$14.4 trillion for companies and industries worldwide in the next decade: this is simply equivalent to the GDP of the USA !

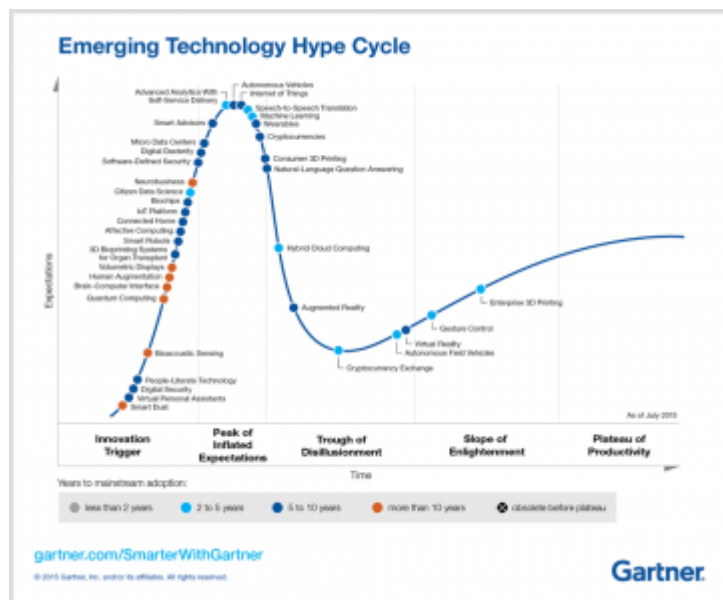


Fig. 1. Technology hype by Gartner

In the battle field, Low-Power WAN (LPWAN) technologies have made significant moves to become the default specialist network for IoT. These technologies fill the gap by providing long range (up to 40km) and low power connectivity (sensors operated on a battery) as seen in Fig. 2. Further, they allow low cost radio devices and operation thus enabling scaling up IoT applications.

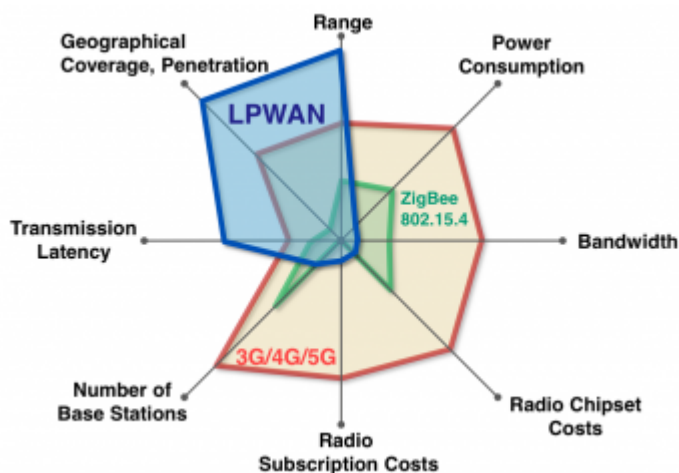


Fig. 2. LPWAN sweet spot

LoRa, Sigfox, and NB-IoT are the major technologies in the LPWAN category. Each of them has advantages and shortcomings, and the task of identifying which technology will prevail on the long term seems abusively superfluous for the time being. You can simply take a look on how LoRa and Sigfox will be crushed by NB-IoT to figure out that we are very far from a market convergence point.

Can you predict if Bluetooth, Zigbee, or Thread will be the lead technology in Wireless personal area

networks ? For the older, were you able to predict the predominance of WiFi, or even Ethernet over Token Ring ?

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