

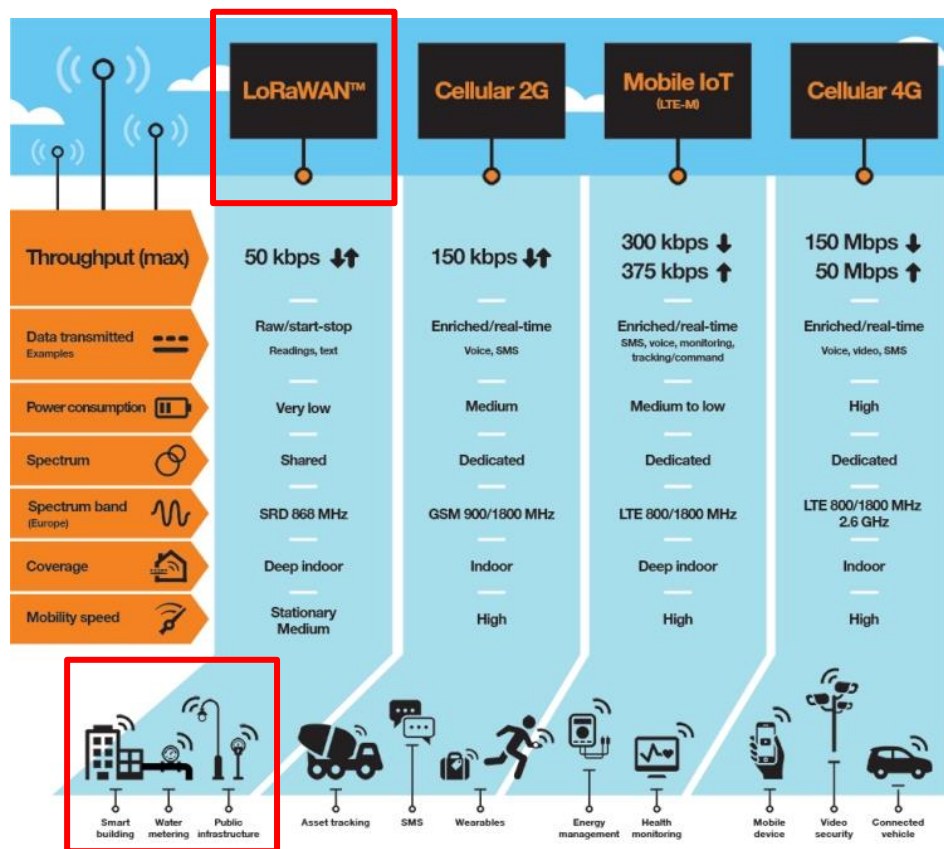
What is RTM?

RTM uses a low-cost technology (LoRaWAN) to collect 'real-time' information from sensors placed on strategic infrastructure, which is sent to a dashboard where **trends and gaps can be easily identified**.

In the example below, colleagues are **tracking the water flow** from a borehole over the course of days. Changes in the flow or lack of flow can then be **followed up with partners**.



What is LoRaWAN IOT Technology?



Long Range

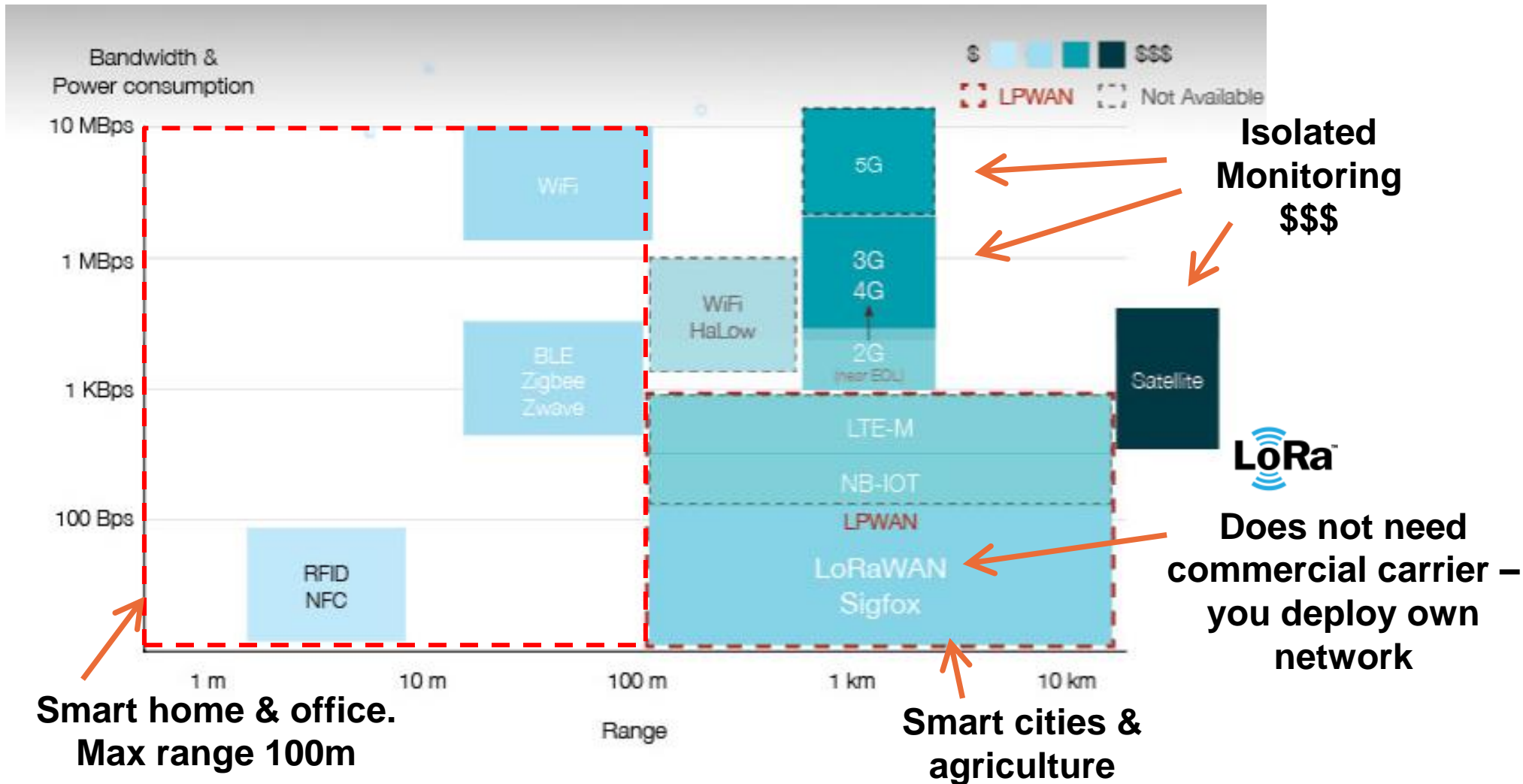
- 700 km unlimited line-of-sight
- 25 km suburban (earth curvature)
- 2 km urban (smart cities)

Wide Area Network

- Each gateway = 1M+ messages /day
- Battery life ~10 years
- Unlicensed radio bands (free!!)
- Two-way encrypted communication

Long Range Wide Area Network (868MHz)

Comparison LoRaWAN to Existing IOT Solutions



How is it Set Up?

1. IOT DEVICES



LoRa



LoRa



LoRa

OVER
LORA

2. LORA GATEWAY



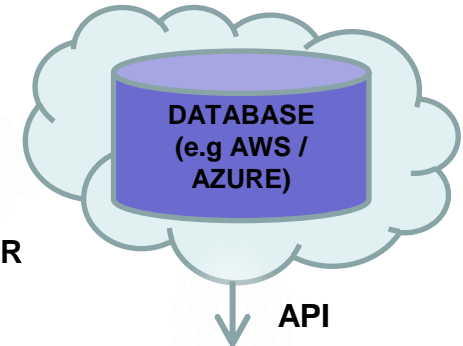
OVER INTERNET
ETHERNET / 3G / 4G

3. PACKET HANDLING SERVER



HTTP
BROKER

4. DATA STORAGE



5. VISUALISATION



LoRa Technology Architecture

Full List of IOT Sensors Available



1. Water Flow Meters
2. Borehole Level Sensors
3. Reservoir Ultrasonic Sensor
4. Pipe Pressure Sensor
5. Solar Irradiation Sensor
6. Free Residual Chlorine Sensor
7. Pre-Paid Water Meter
8. Turbidity Sensor
9. Multi-Parameter Weather Station
10. Electrical Energy Consumption Sensor
11. Particulate Matter Sensor PM1 PM10 PM100
12. Indoor Air Quality (bVOC, IQV, CO2)
13. Cold Chain Temperature Sensor
14. Solar Powered GPS Asset Tracker
15. Customer Satisfaction 'Smiley Face' Sensor

