

Enable a smarter, connected FUTURE

with Vodacom NB-IoT



What is NB-IoT?

The rapid expansion of the Internet of Things (IoT) market has seen the emergence of innovative new low-power wide-area networks (LPWANs). Narrowband (NB) IoT is a low-power wide-area (LPWA) wireless network technology, specifically developed for connecting IoT-enabled devices via low bandwidth connectivity.

With the potential to connect many millions of devices reliably and cost-effectively, NB-IoT is able to provide increased penetration, while at the same time ensuring extended device battery life through low-power usage, unlocking exciting and limitless opportunities in both industry and business IoT deployments.

What are the benefits of NB-IoT?



Extended battery life

- Optimised for the infrequent transmission of small amounts of data, NB-IoT ensures enhanced power efficiency and extends battery life
- Devices can run on batteries for 10 years or more without having to charge



Wider coverage and deeper penetration

- Offers extended-range and strong coverage over large areas to match 4G deployments, including indoors, underground, or deep within urban infrastructure



Low bandwidth for improved performance

- Low bandwidth meets direct need for IoT devices requiring only a few bytes of data to be transmitted per device per day
- Cellular-grade wireless technology performance can handle more data than other LPWANs



Mass deployment for enhanced scalability

- New technology allows for many more devices per area, with the potential to connect millions of devices in a single deployment



Low device cost

- Much lower cost of communications hardware required, means data collection devices can be built for a lot less
- Enhanced capability makes it affordable to place device per unit allowing more to be taken into the field

What are the benefits of NB-IoT?

In an increasingly digital world, there is growing demand for smart metering and control, asset tracking, remote monitoring, and several other applications to build smart cities, farms, and industries (Industry 4.0) of the future.

Where it can be used?	The NB-IoT difference	Industries and businesses that stand to benefit
<p>Smart utilities:</p> <ul style="list-style-type: none"> • Water and gas meters • Electricity meters • Utility tracking (e.g., liquid or pressurised fuel bottle tracking) 	<ul style="list-style-type: none"> • Extended battery life means batteries last for the lifetime of the device • Network connection offers strong penetration and reach • Devices can be deployed in rural areas, beneath manhole covers, or deep within building basements 	<ul style="list-style-type: none"> • Municipalities • Water and gas meter equipment manufacturers and suppliers • Liquids and pressurised fuel suppliers
<p>Smart agriculture:</p> <ul style="list-style-type: none"> • Environmental monitoring devices 	<ul style="list-style-type: none"> • Long lifespans in the field • Devices, such as soil condition monitors in precision agriculture, are often deployed without reliable access to power • Batteries must last for the lifetime of the device - perhaps a decade or more 	<ul style="list-style-type: none"> • Agricultural businesses
<p>Smart asset tracking:</p> <ul style="list-style-type: none"> • Container/cargo tracking (e.g., valuable goods, parts, equipment, or tools) 	<ul style="list-style-type: none"> • Low device and connectivity cost supports high density of devices while guaranteeing quality of service to track location and movement of asset • Devices may be deployed in their thousands or millions 	<ul style="list-style-type: none"> • Utility suppliers • Healthcare suppliers • Logistics and courier businesses
<p>Smart garbage bins</p>	<ul style="list-style-type: none"> • Low device and connectivity cost supports high density of devices while guaranteeing quality of service to track bin location and waste levels • Devices may be deployed in their thousands or millions 	<ul style="list-style-type: none"> • Municipalities • Waste disposal or recycling businesses
<p>Smart parking</p>	<ul style="list-style-type: none"> • Low bandwidth supports devices that only send a few bytes of data each day • Smart parking sensors that only ping the network when a bay becomes free and don't need to support voice or even duplex data transmissions 	<ul style="list-style-type: none"> • Parking and facility management businesses
<p>Smart alarms and event detectors</p>	<ul style="list-style-type: none"> • Mass deployment at low cost • Smoke or fire alarm devices can be deployed in their thousands or millions 	<ul style="list-style-type: none"> • Building or facility management businesses • Security businesses

To find out more about NB-IoT coverage in your area and how it can help take your business further visit: <http://voda.com/narrowband-iot>

