



# Your remote equipment

**Our device management**

Vodafone Internet of Things

The future is exciting.

**Ready?**





## Manage, secure and monitor your devices remotely

### How does the Internet of Things impact your business?

The new rule for the future is going to be: “any device can be connected.” Managing your devices ensures that they are working for you 24/7. You can see how they are performing and keep their software up to date.

Security will be crucial for these connected devices, with the need for the regular distribution of security patches and reconfiguration of compromised devices.

Vodafone IoT Device Management is our cloud-based solution that enables you to configure, monitor, troubleshoot and secure devices remotely.



“By 2020 there will be over 26 billion connected devices.”

- Gartner



## Manage everything from a single platform

Configuring your IoT devices manually, or even remotely, can be a challenge.

Simply monitor and manage the devices remotely, using Vodafone IoT Device Management.

Over-the-air updates ensure that your devices are kept up-to-date and are working efficiently. You save time and money from more efficient operations and more reliable devices.

The monitoring and alerting capabilities help you to proactively manage changes in device conditions to maximise uptime. Devices can also be instructed remotely to modify their behaviour.

Our formula to make things possible:

**1** provider that takes care of



Preventive maintenance



On-boarding



Device efficiency

**to make your business better**

**“76% of adopters say their IoT projects are mission-critical.”**

- Source: Vodafone Barometer 2019





## **Cellular router management** (for lifts, air conditioning compressors, healthcare equipment):

Machines providing important services, such as lifts or air conditioning compressors in buildings, or health monitoring equipment in the home, require continuous connectivity for remote maintenance and fault alerting. Without reliable operational awareness any faults may go unaddressed and result in a poor customer experience.

Building on top of our resilient IoT connectivity, our IoT Device Management service can be used to remotely monitor and manage the cellular routers providing your service's connectivity. The platform can monitor the router and alert you if there are connectivity exceptions occurring.

Valuable troubleshooting tools are available to enable remote diagnosis and fixes.

Connectivity devices are most efficient when they are up-to-date; our service enables you to roll out firmware updates quickly to your entire connectivity device estate.



## How can you secure your devices?

Imagine that a retail company uses our IoT connectivity routers to connect their remote Point of Sale (PoS) machines to the main servers.

The routers are monitored to ensure that there is only one local connection. If an additional device gets connected to the router, then this may indicate a security breach.

A business rule is configured through the IoT Device Management platform to monitor the number of devices connected to the router locally. In the event that an additional device is detected, an alert will be triggered to initiate security investigations.

**“The rapid digitisation of enterprise records will increase the cost of data breaches to \$2.1 trillion globally by 2019, increasing to almost 4 times the estimated cost of breaches in 2015”**

**- Juniper Research**



## Faulty firmware fixed

A company uses a large number of devices to combine both IoT connectivity and monitoring within one device.

Unfortunately, the customers report a critical defect which was not spotted during the testing. A new version of firmware is needed to fix the fault. The entire device estate has to be updated to the new firmware version, which can be done remotely using our IoT Device Management service.

By using IoT Device Management the company managed to keep their systems up and running and avoid putting their systems at risk.

The company did not have to update the devices manually, therefore saved money, time and significant logistics issues.



**“The IoT will have a total economic impact of up to \$11 trillion by 2025.”**

**- McKinsey Global Institute**

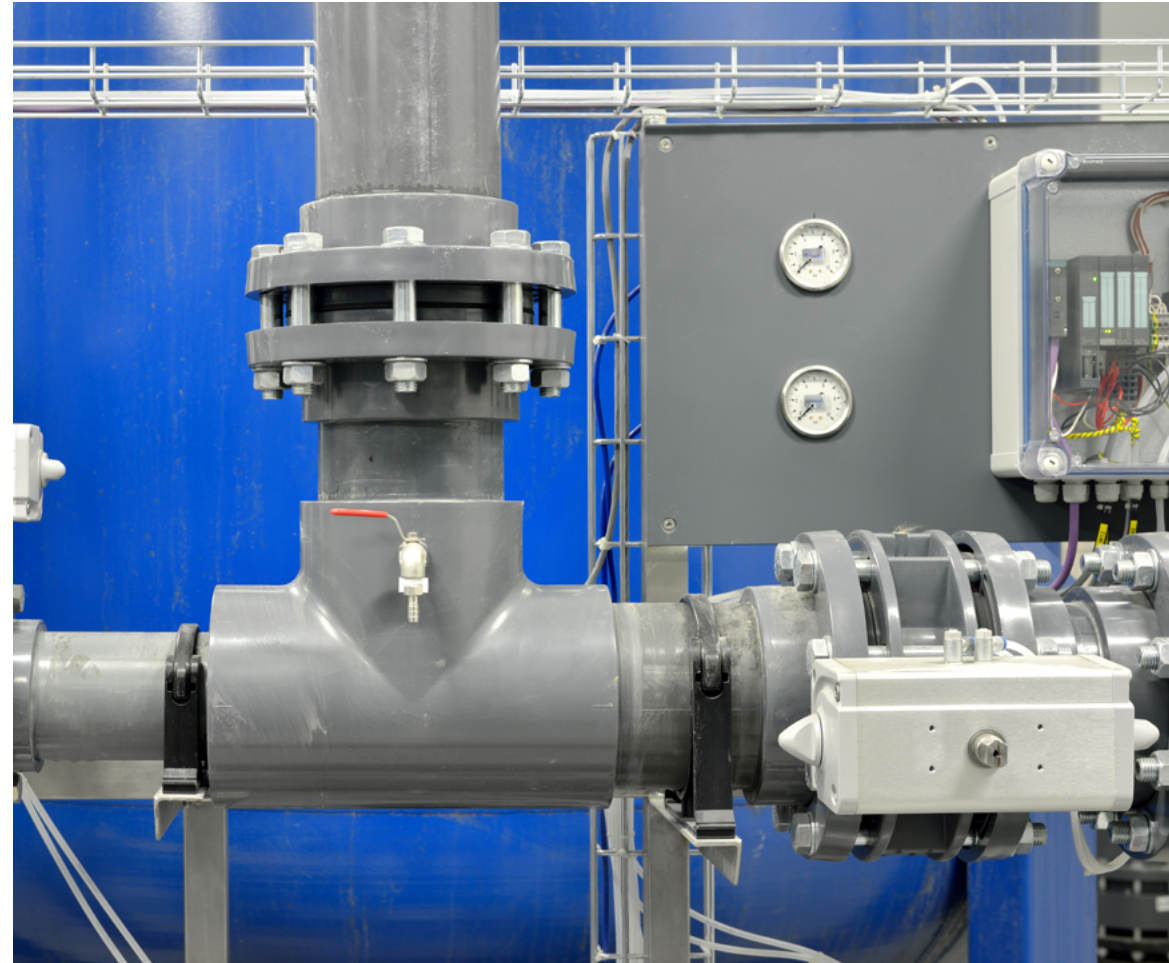




## Data collection from meters

A water company installs NB-IoT enabled meters to monitor household water usage. They integrate their systems with the IoT Device Management platform, which reliably collects the readings from the meters and communicates the information to the water company's systems.

The water company develops platform integration just once; new types of devices can be added, and any complexity is dealt with by the IoT Device Management platform, thereby reducing local development needs and cost.





## Features and benefits

Feature:	Benefit:
<b>Remote device configuration management</b>	Monitor, secure and control devices remotely; save the time needed to visit and configure devices
<b>Firmware, software updates</b>	Over-the-air provisioning of devices so that they are always up-to-date, operating efficiently, and resilient against attack
<b>Monitoring, exception alerting</b>	Reduction in downtime, proactive alerts, and improved security
<b>Remote device commands</b>	Remote instructions can be sent to devices to alter behaviour
<b>One platform</b>	Manage all devices and their connectivity from one platform

## Configuration

Read and update configuration parameters and data to help diagnose and fix technical issues.

## Alerts

Receive alerts when devices go beyond set values.

## Data storage

Store necessary data from the devices. Decide which type of device data will be stored.





## Why Vodafone

**Market leader** in offering IoT services (according to leading industry analysts).

**Enhanced device management** functionality through integration with our IoT connectivity service.

The highly resilient **IoT connectivity** is wholly managed by us, providing clear visibility and control of your IoT devices, SIMs and services with end-to-end security built in from the ground up.

Our dedicated **team of IoT experts** serving millions of customers and the largest mobile telecommunications network to ensure the best connectivity service worldwide.

### Discover more

IoT solutions will influence the productivity of your business in the near future.

To discover more on Vodafone IoT Device Management, please contact your Account Manager.



[www.vodafone.com/business](http://www.vodafone.com/business)

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