

**Executive Introduction** 2022





# Who uses IoT for Buildings

# Properties exist in every vertical!

Gov't and

Heritage Buildings



**Property End Users Properties** Commercial **Property Owners** Critical Building Spaces, Systems and Assets Commercial Tenants

Distributed Office Portfolios

We need IoT technology to help us provide more efficient services We need IoT technology to help us provide value added (new) services



Retail and F&B Mining Branch Outlets Industrial & Airfields Manufacture Sheds and Warehouse City Blocks Remote Equipment (Telco, Utility, Rail) urban·io

Oil and Gas

Agriculture



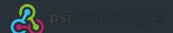


Industrial IoT for buildings that works out of the box anywhere in the world

# Difficult and Expensive

Industrial and Building Automation solutions are capital intensive, require specialist installations and lots of cabling. This usually means they are put in when buildings are constructed and are impractical to retrofit. In addition these technologies are typically not connected (easily) to internet based systems. This means that 90% of the buildings used by businesses have little or no automation and practically zero visibility of critical building system health.





# Simple and Cost Effective

- A battery powered wireless sensing capability inside a hardened industrial grade package.
- One click commissioning with any smart-phone.
- Automated internet connected dashboards and sensor alerts

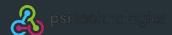
Urban.io provides light industrial and commercial monitoring capabilities for **1/10th** of the price per point of traditional solutions.





£5

per point to purchase install and commission

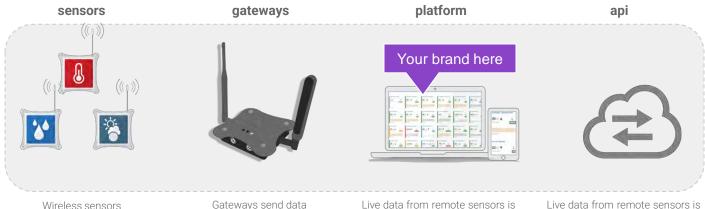


# What does **urban.io** do

Urban.io provides a range of low cost, industrial grade IoT devices that provide real time data from building systems, spaces and other remote field assets. Data from these devices is collected and displayed in a monitoring cloud platform as a turnkey managed service which you can brand as your own. Urban.io also provides standard ways to integrate live sensor data into third party business systems.

displayed in dashboards on a

cloud based Monitoring Platform



via mobile telephone

networks to the urban io Cloud

**Your Business Systems** 





Sensor data can trigger actions in systems or with maintenance staff to

**si** technoloaies

Wireless sensors

Automatically connect

to gateways near them

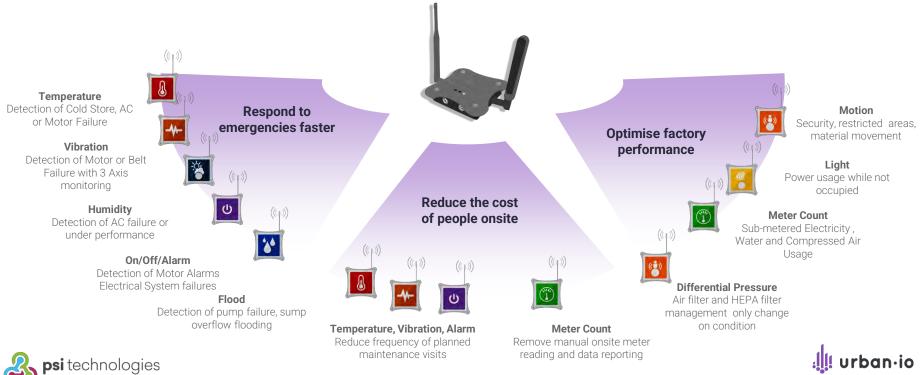
Live data from remote sensors is securely published via standard integration technologies optimise or attend the location



# Some practical examples

Our IoT sensors can measure the health or status of a range of systems and spaces within factories





# **urban.io** technology

Our IoT devices are designed for low cost, retrofit solutions in remote locations with automatic setup. We bring our own network which can work in 95% of populated locations globally, indoor or outdoor - out of the box, no customisation required.

#### sensors



Gateways use LoRa Radio Frequency network technology to aggregate data wirelessly from remote sensors. Certified for usage in North America, Europe, SE Asia and ME/Africa.



~1.5km range

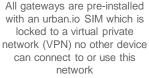
Are wireless, battery powered, waterproof, shockproof and dustproof, magnetically attach or can simply sit on a surface.

# gateways



Have Battery Backup and can function for 4 hours without power. Can store 100,000 sensor messages in a buffer if mobile networks are down and then retransmit when live.

## platform





3G/4G - Data (anywhere with mobile signal)

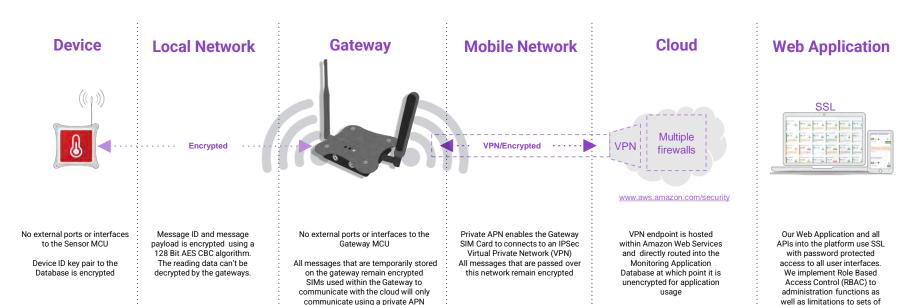
All data from all sensors is sent to the cloud every 10 minutes with the exception of emergency triggers which will transmit within 10 seconds.





# urban.io enterprise class security device to cloud

Our IoT Platform has a custom designed security architecture to prevent malicious usage of Sensor Data and or malicious commands being sent to devices within the network.



data.





# **Ruggedised IoT Sensors**

- 1. Measure Temperature, Humidity, Vibration, Light, Motion, Flood, Machines and Meters
- 2. Send data every 10 mins or immediately on alert event
- 3. Auto detect and fail over to any Gateways in area

# Why are they special:

Industrial Grade specification at a Consumer Price

## Simple Installation

Magnetic feet to snap to surface or into adhesive plate

# One Click Configuration

 QR Code scan on mobile phone connect to platform and send data within 1 minute (no skills required)

### **Outdoor Rated**

IP67 - fully waterproof and dustproof

### Resilient to Failure

- 2 year+ battery life
- Moves to Hypersleep mode if no gateways detected in area

## Secure

No external ports, Sensor data is encrypted using 128 Bit AES CBC





# **Ruggedised IoT Gateway**

- 1. Provides local independent network for up to 2000 IoT sensors
- 2. Roams to 3G/4G mobile network to send data to cloud platform
- Auto detect and connect all Urban.io sensors in area

# Why are they special:

Industrial Grade specification at a Residential Price

# Ultra-range

• 500m in Urban and 1.5km in Outdoor environments

## **Outdoor Rated**

IP65 - water resistant and dustproof

## Resilient to Failure

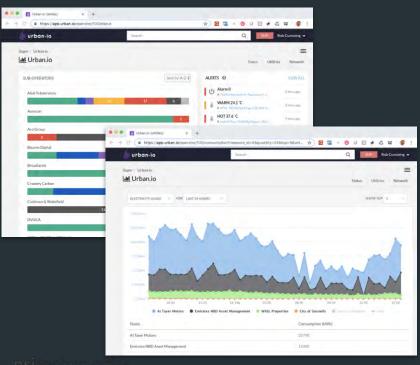
- 2 hour Battery Backup in the event of power failure and reports power loss to operations team
- Can store up to 20,000 device readings in the event of mobile network failure and then restores data once network is restored

### Secure

No external ports, Sensor data is encrypted using 128 Bit AES CBC



# Platform



# **Cloud Sensor Management and Reporting Platform**

- 1. Aggregates all sensor data and displays status and history of all measured variables
- 2. Customisable Alarm and Alert profiles
- 3. Optional Configurable Display Dashboards

# Why it is special:

Completely Cloud based works on any web enabled devices

### Ultra-fast

 Using latest distributed system cloud infrastructure to dynamically search and display massive datasets in sub-second speed

# Beautiful zero configuration dashboards

Automatic layout of commissioned devices into standard dashboards

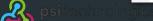
### Resilient to Failure

 Runs in Amazon Web Services in Multiple Availability Zone configuration with distributed self healing service architecture

### Secure

- Banking grade web security layer with Role Based Access to all application features.
- All Sensor data is encrypted using 128 Bit AES CBC





# APIs

























## Secure Cloud API

- Standard Public Interfaces to access IoT data
- 2. Specific Modules to connect to each major Enterprise IT Vendor IOT platform
- Simple administration to stream data to external Work Management Applications or Enterprise IOT Platforms

# Why it is special:

Completely Cloud based; connect and securely transfer data

# Simple Configuration

 Intelligent Administration interfaces that remove the guesswork to hook things together

## Data in the format that is expected

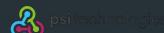
 Data is scrubbed and only the values and types that are required by the target system are sent, reducing the volume of IoT data that is transferred

## Resilient to Failure

 Runs in Amazon Web Services in Multiple Availability Zone configuration with distributed self healing service architecture

#### Secure

Banking grade web security layer with password protected AP



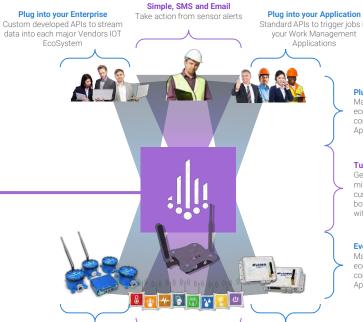


# How we help

"The simplest, most cost effective way to plug your Buildings into your business"



Feed IoT data to everyone who is servicing Commercial Property Owners and Users



Standard APIs to trigger jobs in your Work Management

#### Plug into everyone

Make data from our device ecosystem easy to access and configure within other Enterprise Applications

#### Turnkey, Simple, Cost Effective

Get data from your buildings in minutes, No development, no customisation, works out of the box in every country, everywhere with a mobile network.

#### Evervone can plug into us

Make data from our device ecosystem easy to access and configure within other Enterprise Applications

#### Plug in 3rd Party Devices

Provide open license to our device protocols so other devices can connect to our gateways

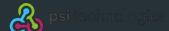
### Simple plug & play Industrial IoT

Provide a wide range of low cost ruggedised sensors that detect specific variables in common building systems

#### Plug in Building Systems data

Standard APIs to allow readings from BMS and Controllers that are connected to the internet





# Want to plug your buildings into your business?

Contact: enquiries@urban.io

