

# **How to deploy sensors for maximum accuracy, reliability and long term success**

# In today's session we'll cover

What sensors are best suited to a variety of spaces and challenges

Common challenges and mistakes to avoid and how to navigate them

Tips on how to ensure sensors provide the most accurate data

Learn why deploying sensors across a LoRaWan network is beneficial

## Today's host



David Thomas  
Business Operations

# Choosing the right sensor



## Desk PIR

Detects heat and motion on individual assets



## Room Counter

Detects number of individuals in a space



## Footfall Counter

Counts number of people passing into or through an area



## Environmental

Monitors CO2, Temperature and Humidity levels

## Key considerations in planning:

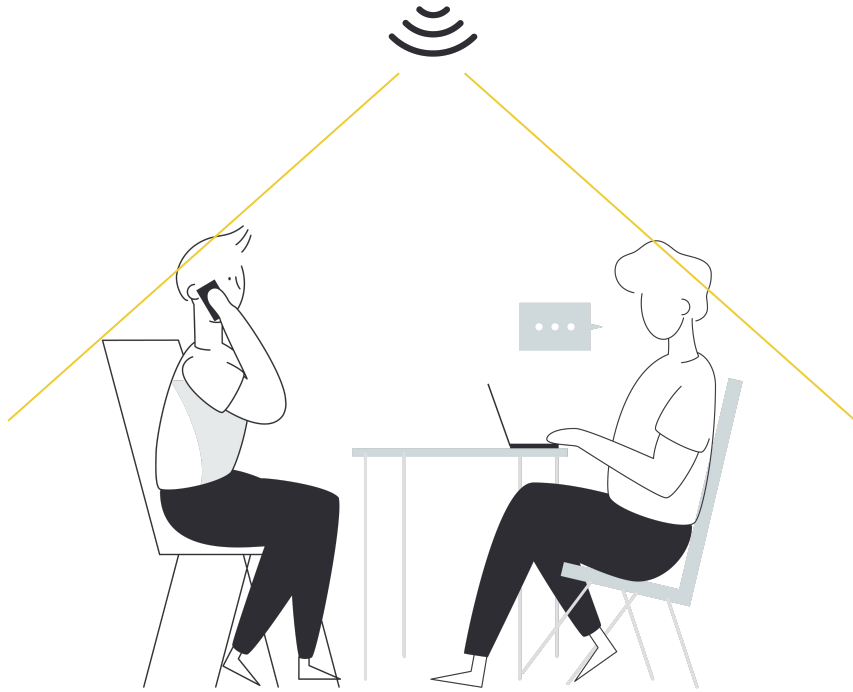
- Define goals and objectives of study ahead of deployment
- What level of granularity is necessary?
- What are the timeline considerations?

## Key considerations in sensor placement:

- What is the nature of the space - fixed space or flexible?
- Are there any unusual spatial considerations?
- How to maximise longevity of placement?

# Example 1: Deploying Counter Sensors

Wall versus ceiling mounted



## Example 2: Deploying Environmental Sensors

### Key considerations in placement:

- Capture data from area where people spend most of their time i.e. head height
- Key areas to consider:
  - Communal areas
  - Poorly ventilated spaces
- Spread sensors throughout office to avoid making decisions based on isolated incidents



# Key benefits of deploying across a LoRaWAN network

LoRaWAN is a network layer that runs on top of the LoRa radio layer

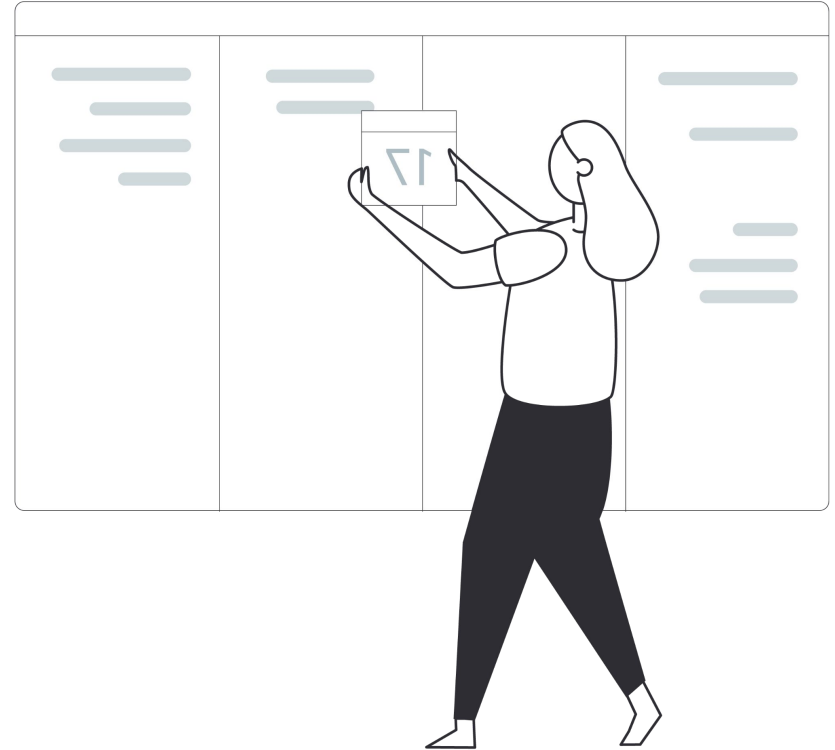
- LoRa stands for Long Range which in a building context means **exceptional range**
- LoRaWAN is an open standard allowing **seamless interoperability** between different manufacturers devices
- LoRaWAN networks can be **public or private**
- LoRaWAN provides **end to end device security**

Benefits of using a LoRa network over WiFi & Bluetooth

- **Minimal Path Loss** - obstructions caused in data transmission by buildings
  - Higher frequencies suffer greater, meaning Bluetooth & Wifi signal don't travel
- **Segregated from IT Network**
  - No interference or affect from existing systems and secure from 3rd party access

# The importance of communication

- Involve key stakeholders early in planning stage to understand full scope and potential of data
- Avoid employee confusion and scepticism by defining purpose of sensors and outlining capability
  - No personal data gathered
  - Focus is on space and asset usage not individual behaviour
- Minimise accidental removal or movement of sensors



# Thank you

The book cover features the OpenSensors logo at the top right. The title 'Shaping the future of your workplace' is prominently displayed. Below it, the subtitle reads 'Best practice guide on creating a data led workplace strategy'. The central illustration shows a person standing and pointing at a large digital display with various charts and graphs, while another person sits at a desk in the background. A yellow button at the bottom right says 'Download the ebook'.

**Shaping the future of your workplace**  
Best practice guide on creating a data led workplace strategy

Download the ebook

The report cover features the OpenSensors logo at the top right. The title 'Return to work survey May 2021' is prominently displayed. Below it, the subtitle reads 'Impacts of the pandemic on the future of work and the implications for businesses'. The central illustration shows a person sitting at a desk with a laptop, with various data visualizations like bar charts and a checklist floating around them. A blue button at the bottom right says 'Download the report'.

**Return to work survey May 2021**  
Impacts of the pandemic on the future of work and the implications for businesses

Download the report

## Connect with us

 [Opensensors.com](https://opensensors.com)

 [OpenSensors.io](https://OpenSensors.io)

 [OpenSensors.io](https://OpenSensors.io)

 [hello@opensensors.com](mailto:hello@opensensors.com)