

A graphic element for the SORA logo, consisting of several horizontal, wavy lines in shades of blue and purple that sweep upwards and to the right, resembling a stylized flame or a signal wave.

SORA

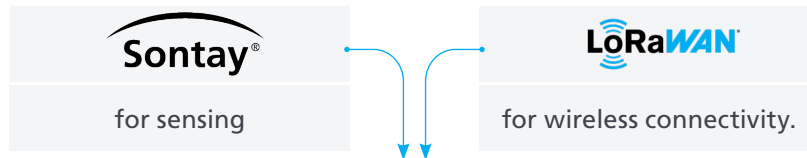


INTRODUCTION BROCHURE

Introduction to SORA

Sontay Open Range Application

The name **SORA** is a combination of the 2 key fundamentals of the product:



It is Japanese for sky which perfectly describes the possibilities and capabilities of the range.

The name SORA is the epitome of what we wanted the product to be.

For projects that require a fast turnaround, with minimal interruption and downtime along with minimum cost, SORA is the ideal solution.

End users can see vast improvements in a short period of time on their ambient conditions and energy efficiencies with minimal disruption.

Cost Efficient



Time Efficient

Introducing SORA! The ultimate solution for wireless sensing in BMS applications.

Combining the tried, tested and trusted sensing reliability of Sontay sensing devices with the unrivalled wireless power of LoRaWAN technology, SORA is set to change the way building sensors are selected and installed for the future.

GO THE DISTANCE

SORA has the wireless capability to cover substantial areas and penetrate through materials that would have been a challenge for other wireless systems.



LOW POWER

The whole ethos behind LoRaWAN is that it runs on low power.

This leads to extraordinary battery longevity in the field.



SECURITY

SORA offers excellent security with the state-of-the-art dedicated end-to-end encryption designed into LoRaWAN technology.

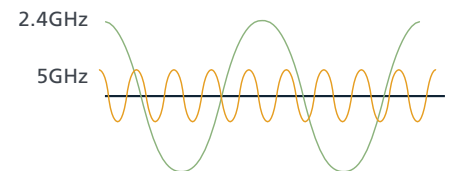


Connectivity has been demonstrated to reach an excess of 10KM in plain sight.



What is LoRaWAN?

- LoRaWAN is a wireless sensor network technology associated with IoT applications
- It stands for Long Range Wide Area Network
- It uses licence-free frequencies to transmit information
- Uses CHIRP Spread Spectrum technology for reliable, low-powered, long distance communications
- Communication range in excess of 10km outdoors
- Excellent resilience against attenuation in indoor environments



How does it work?

- LoRaWAN uses a licence-free frequency spectrum for transmitting data
- Networks support frequencies from the sub-gigaHertz range and also 2.4 GHz
- Higher frequencies can allow greater bandwidth



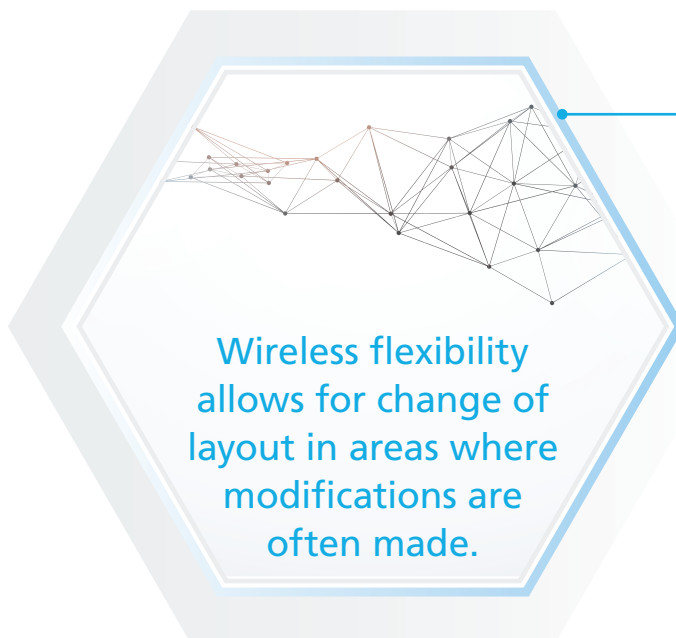
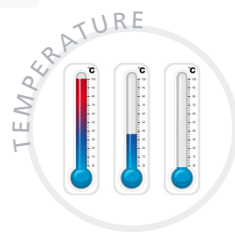
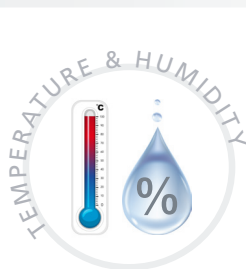
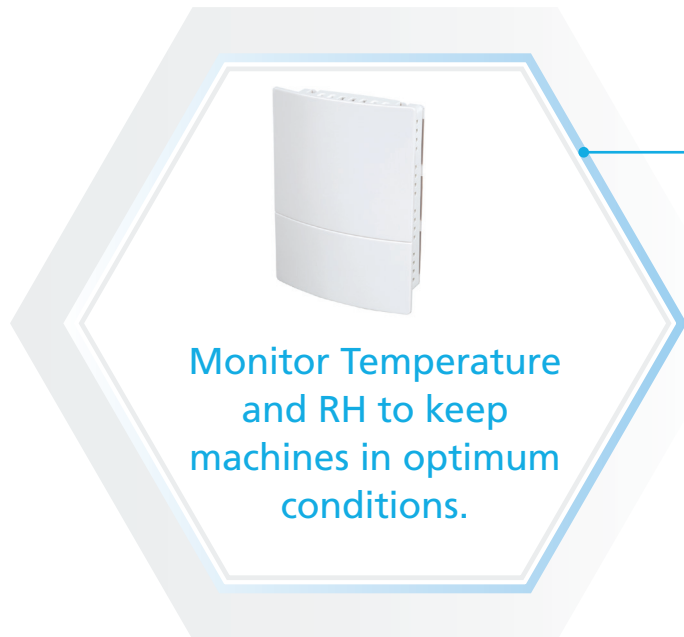
Why is SORA different?

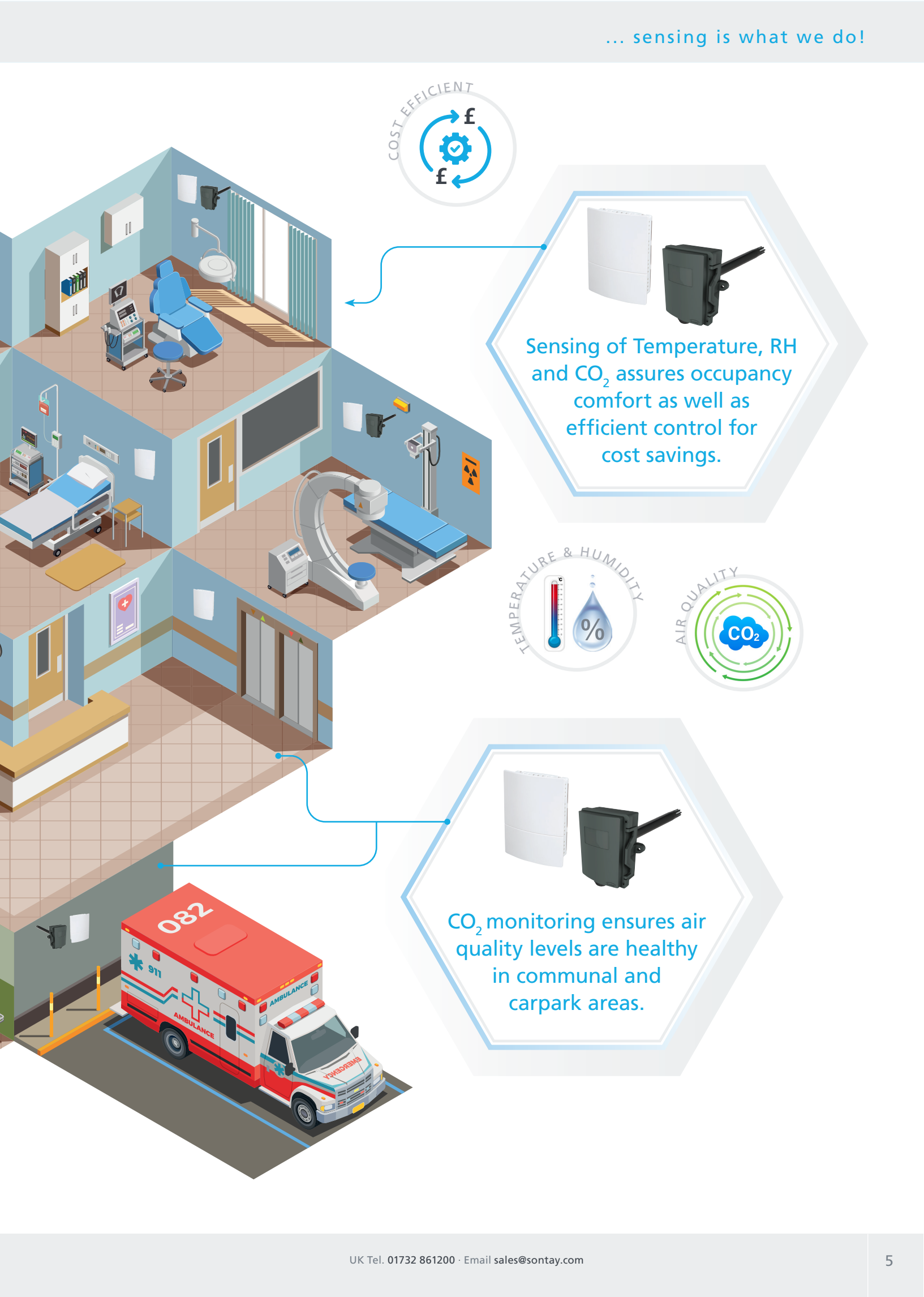
- SORA's sensing pedigree is based on Sontay's trusted sensing devices with the wireless technology of LoRaWAN. LoRaWAN is different to any other wireless sensing networks out there due to it being an open-protocol technology. This enables total interoperability with other devices. Compared to legacy systems, there are multiple advantages including reliability, security and range.
- The architecture of LoRaWAN makes SORA a sensor network rather than a means of simply transmitting data from one point to another. Once the data is available at the application server part of the network it is available to other applications or via another protocol. Effectively this creates a data set which is not limited by manufacturer, building or geographical constraints. Data exists in a manner in which it can be consumed, whether that is for a control algorithm or as part of an analytical data set.
- LoRaWAN also has a range of APIs to expose data to other relevant systems such as REST API, MQTT broker or BACnet/IP objects. SORA has been developed with a gateway that integrates specifically with BACnet or Modbus protocols which are typically used in building controls applications.



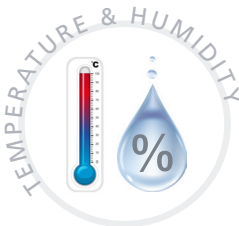
SORA Application in a building

The floorplan shows how SORA can provide vital monitoring in a hospital application.



A diagram showing a white wall-mounted sensor unit and a black handheld device. The sensor unit is rectangular with a small screen and buttons. The handheld device is a PDA-like device with a screen and a stylus.

Sensing of Temperature, RH and CO₂ assures occupancy comfort as well as efficient control for cost savings.

A diagram showing a white wall-mounted sensor unit and a black handheld device. The sensor unit is rectangular with a small screen and buttons. The handheld device is a PDA-like device with a screen and a stylus.

CO₂ monitoring ensures air quality levels are healthy in communal and carpark areas.

SORA Products

The SORA product range - sensing devices and gateways.

Gateway



Part code	Description
RF-LW-HUB-EU868-100	SORA Hub 100 Points European
RF-LW-HUB-EU868-250	SORA Hub 250 Points European
RF-LW-HUB-EU868-1000	SORA Hub 1000 Points European
RF-LW-HUB-EU868-5000	SORA Hub 5000 Points European

Temperature only

Part code	Description
RF-LW-T-S	Space mounted temp sensor
RF-LW-T-D	Duct mounted temp sensor
RF-LW-T-I	Immersion temp sensor
RF-LW-T-C	Clamp-on temp sensor
RF-LW-T-O	Outside air temp sensor
RF-LW-T-OR	Outside air with rad shield temp sensor
RF-LW-T-555	Flying lead temp sensor

CO₂ only

Part code	Description
RF-LW-CO2-D	Duct mounted CO ₂ sensor

Temperature, Humidity & CO₂

Part code	Description
RF-LW-RHT-CO2-S	Space mounted temp and humidity sensor

Accessories

Part code	Description
RF-AERIAL-PM0.75	Aerial Extension c/w Bulk Head Fitting 0.75 Metre
RF-AERIAL-PM2	Aerial Extension c/w Bulk Head Fitting 2 Metre
RF-AERIAL-PM5	Aerial Extension c/w Bulk Head Fitting 5 Metre

Temperature & Humidity

Part code	Description
RF-LW-RH-D	Duct mounted temp and humidity sensor
RF-LW-RH-W	Wall mounted temp and humidity sensor
RF-LW-RH-O	Outside temp and humidity sensor
RF-LW-RH-S	Space mounted temp and humidity sensor

Temperature & CO₂

Part code	Description
RF-LW-CO2-T-S	Space mounted temp and CO ₂ sensor

What makes it different to other wireless protocols?



Reliability



Interoperability



Security



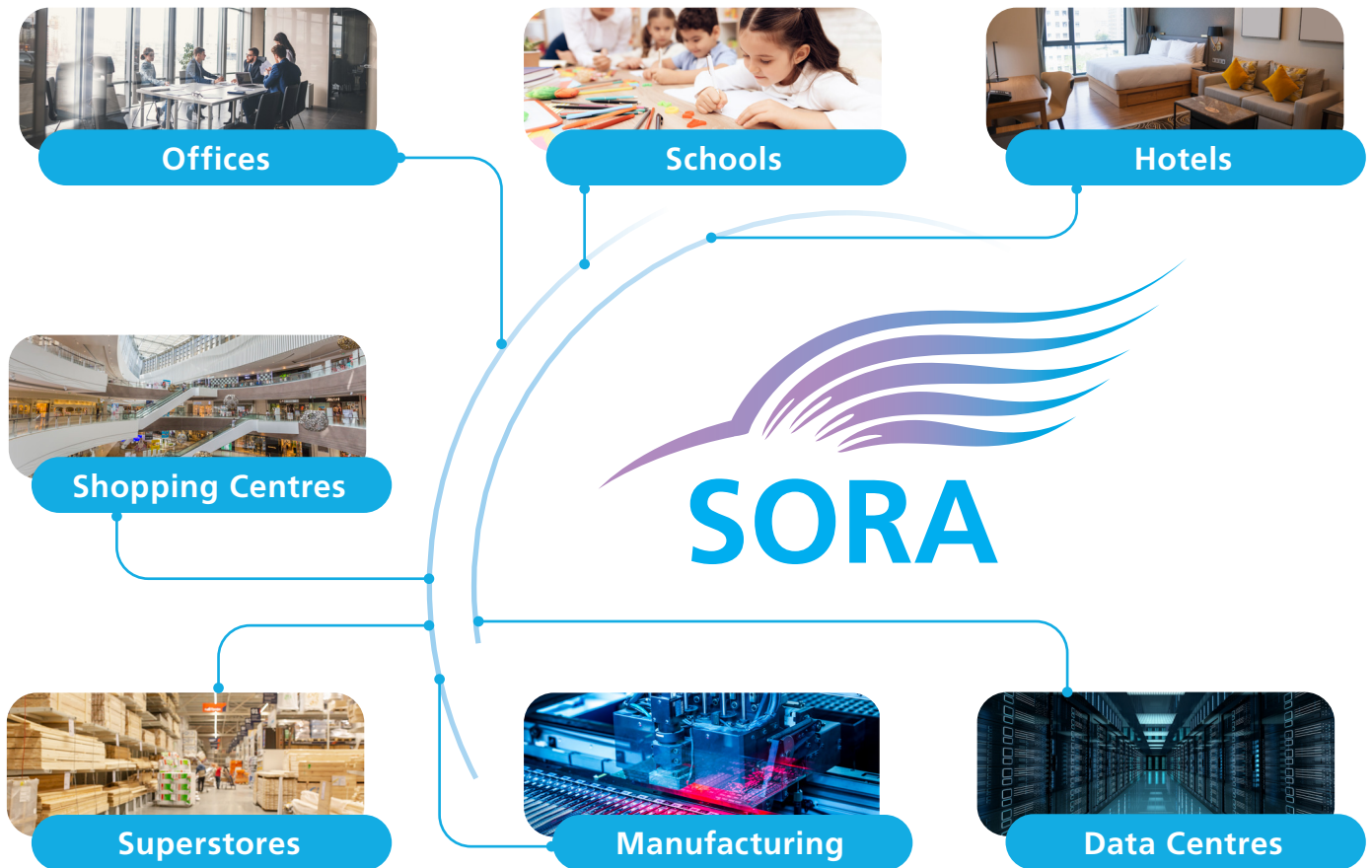
Accuracy



Range

SORA Ideal Applications

SORA provides a vast range of benefits on a variety on applications.



...anywhere that requires a simple installation with a short turnaround and minimum cost.

How far can SORA go?





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