adeunis

IOT PRODUCTS & SOLUTIONS

IoT SOLUTIONS FOR SMART BUILDINGS

Boost the energy performance,
maintenance efficiency,
and occupant comfort of your buildings.

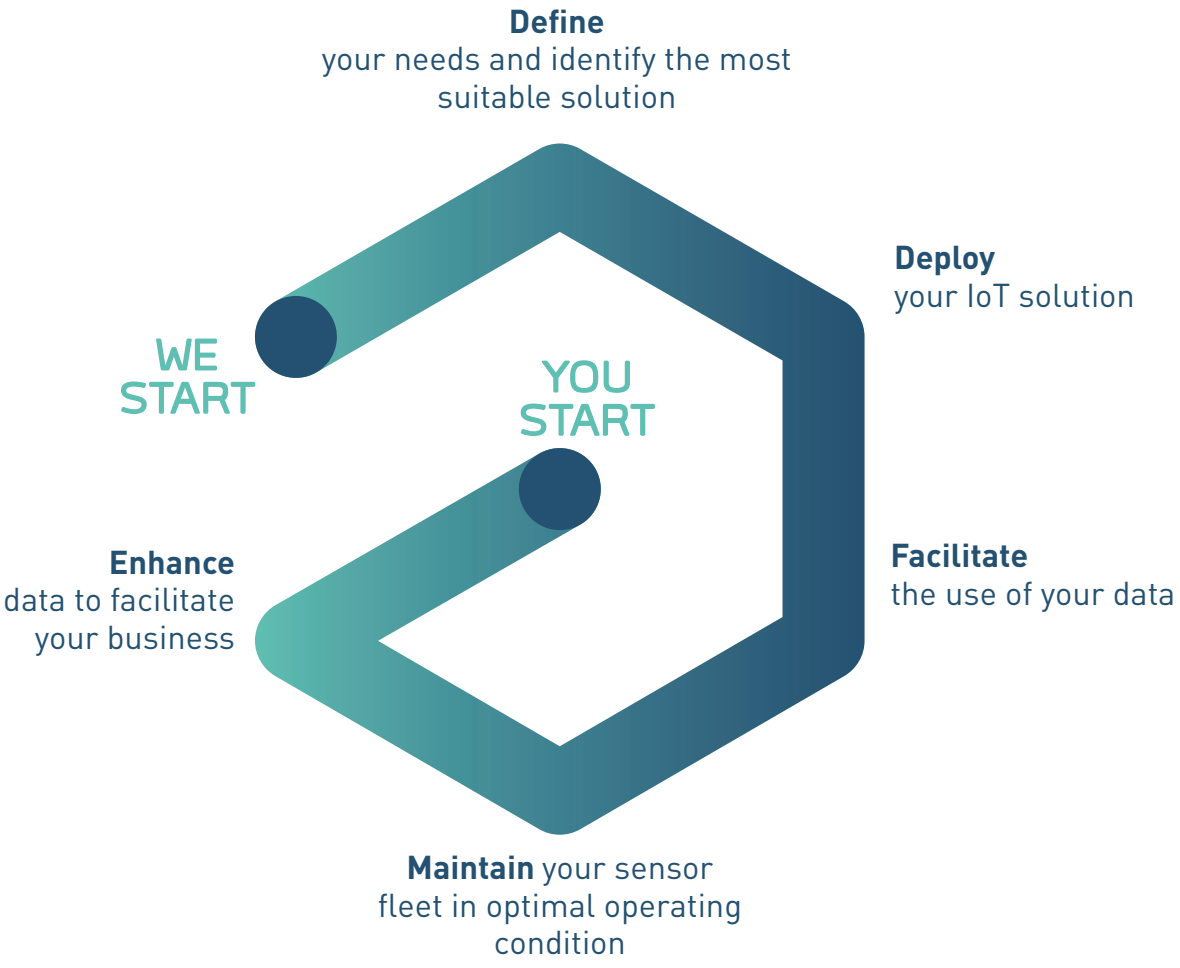
Adeunis,
IoT solutions
for digitising your buildings

In an increasingly connected world, Adeunis designs and markets IoT sensors, gateways, and solutions dedicated to Smart Buildings.

Our mission: to support you in the digitalisation of your building's equipment and services through IoT, in order to:

- improve energy performance,
- enhance occupant comfort,
- optimise the maintenance of your equipment.

With Adeunis, you benefit from a comprehensive range of products and services covering every stage of your IoT project.



OUR CONNECTED DEVICES

support you throughout your entire IoT project

Network tester

Validate the optimal placement of your connected devices.

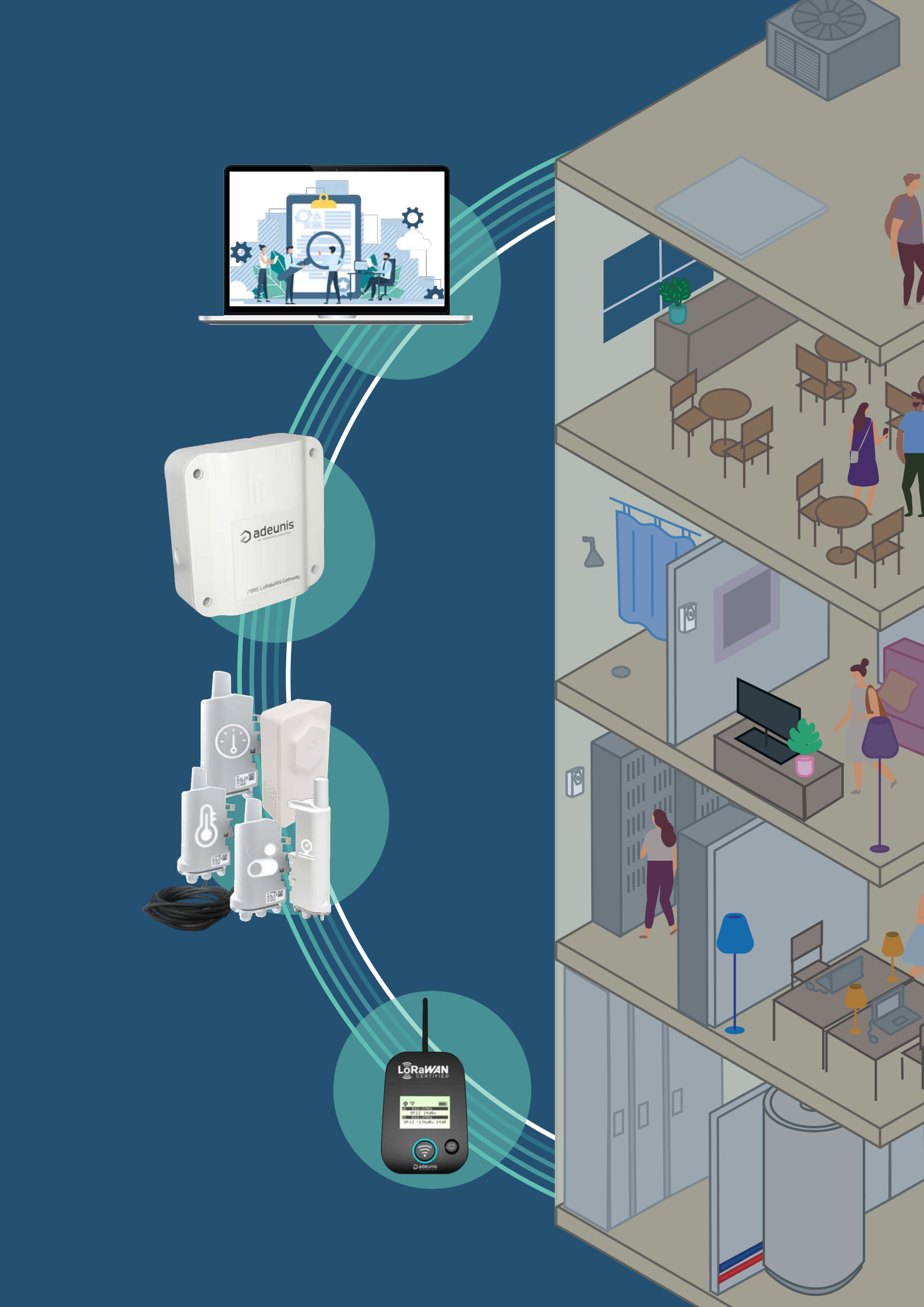
Sensors

Collect data from your building equipment.

Gateway

Connect your sensors to your IT systems or cloud platforms.

Achieve your goals and improve building management through actionable data insights.


adeunis
LoRaWAN
CERTIFIED
adeunis

THE ADEUNIS CONNECTED BUILDING

Energy performance

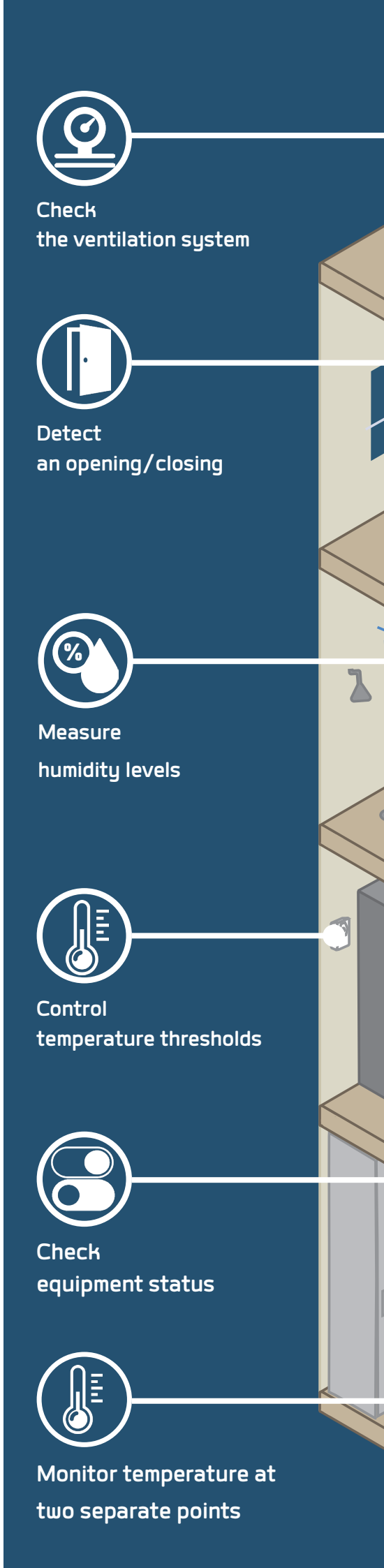
Analyse energy consumption, monitor room values (temperature, humidity, etc.) and adapt the use of equipment to improve energy performance.

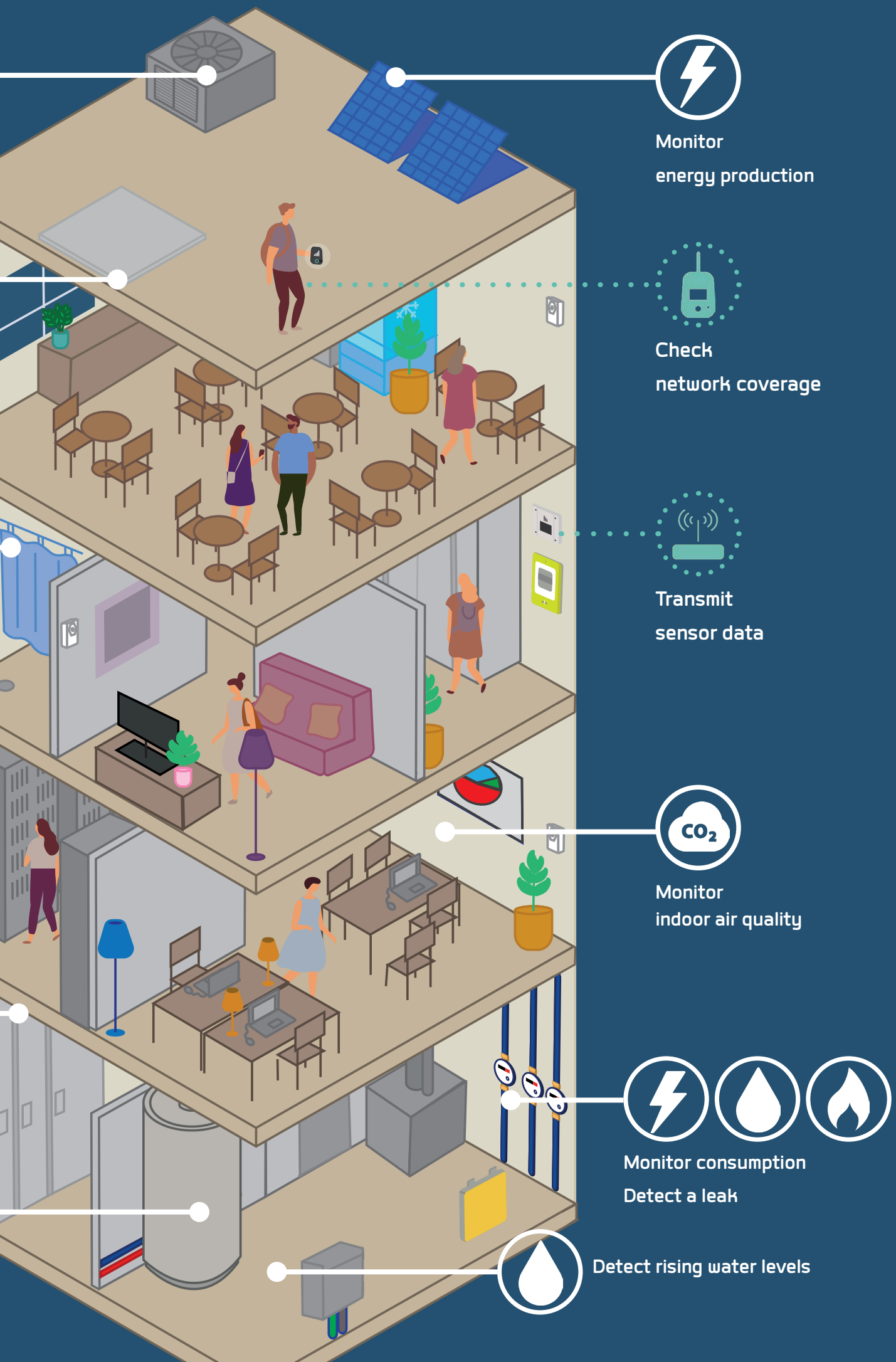
Maintenance

Remotely supervise equipment condition, adapt their operation and optimise their maintenance: boiler, domestic hot water network, ventilation system, etc.

User comfort

Collect and analyse information about a building's environment: temperature, humidity, air quality, etc. to improve the quality of life of its occupants.





Monitor
energy production

Check
network coverage

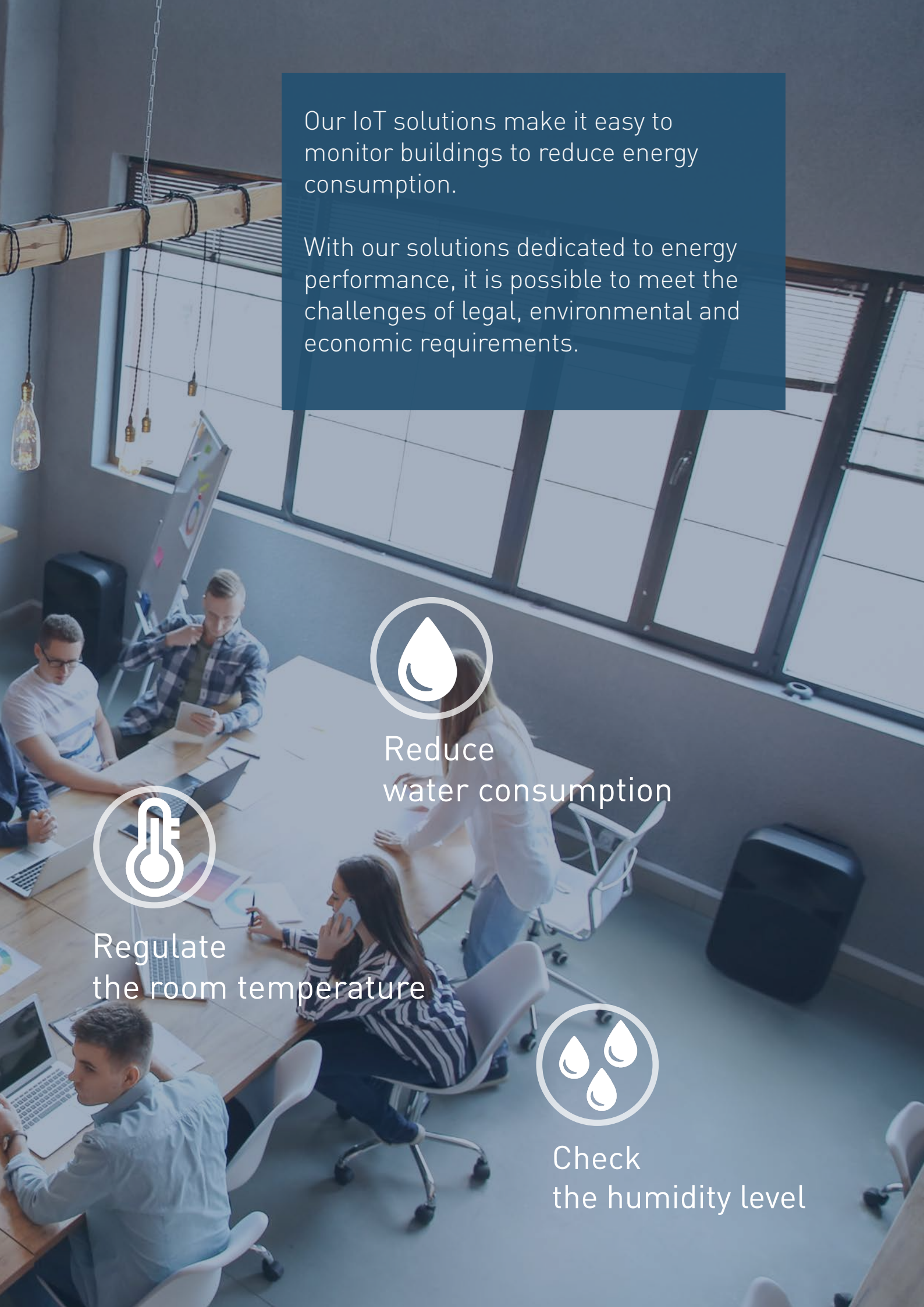
Transmit
sensor data

Monitor
indoor air quality

Monitor consumption
Detect a leak

Detect rising water levels


Optimise
the use of ventilation systems
Reduce
electricity consumption
Rationalise
gas consumption
ENERGY
PERFORMANCE



Our IoT solutions make it easy to monitor buildings to reduce energy consumption.

With our solutions dedicated to energy performance, it is possible to meet the challenges of legal, environmental and economic requirements.

Reduce
water consumption

Regulate
the room temperature

Check
the humidity level

Reduce energy consumption

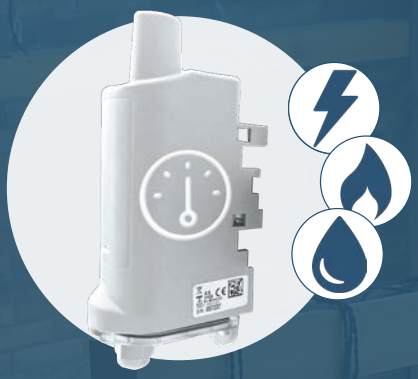
Monitoring and analysing the evolution of gas, electricity and water consumption

Objectives

- Detect a leak
- Detect abnormal consumption
- Detect high consumption items
- Recommend actions to be taken to reduce consumption

By installing IoT sensors on water, gas, electricity or thermal energy meters, it becomes possible to monitor and analyse changes in consumption. The data collected can be used to define ways of optimising the use of energy-consuming equipment.

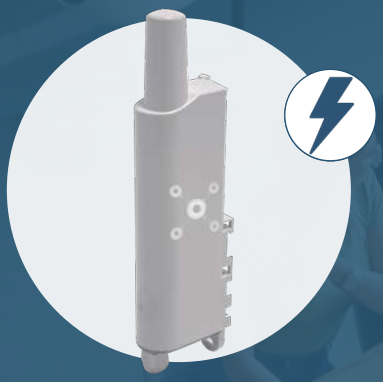
An alert system also makes it possible to be informed in the event of so-called abnormal consumption, in order to act as quickly as possible to regulate it.



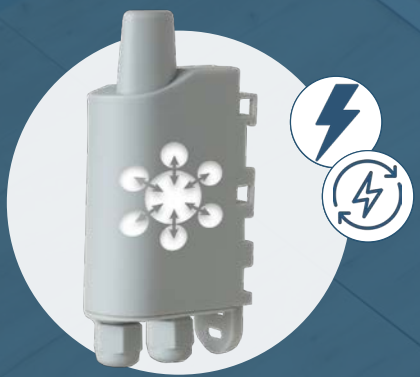
PULSE

Ideal for measuring gas consumption in ATEX zones.
The PULSE ATEX is certified for zone 1 and 21.

PULSE ATEX



TIC



MODBUS

COMFORT
SERENITY

COMFORT

DELTA P

Analyse the environmental factors and adapt the use of technical equipment to actual needs

Objectives

- Reduce electricity consumption
- Reduce gas consumption

In addition:

- Ensure user comfort
- Protect the building from potential damage

Collected data

IoT sensors can be used to record, measure and analyse the environmental factors in a room (temperature, humidity, CO2...).

Benefits

The analysis of the data collected makes it possible to adjust the use of equipment to the actual conditions of use of the building, in order to achieve energy savings.

Preserving the built environment

Monitoring temperature and humidity levels on a daily basis also helps to protect the building from potential damage and to act quickly if thresholds are exceeded.

The IoT makes it possible to remotely collect data on the operation of technical equipment. There is no longer any need to travel, as the information is automatically and regularly collected. An alert system also makes it possible to be informed and to intervene as soon as a malfunction appears.

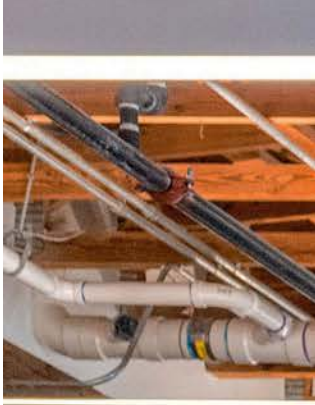
The implementation of IoT systems offers many benefits to maintenance teams, including: anticipation of maintenance operations, increased reactivity in the event of breakdowns, guarantee of the reliability of an installation, improvement of the service provided, etc.

1. Check the proper functioning of ventilation systems

2. Check the temperature on technical equipment

3. Track the change of state of an equipment

4. Act remotely on a machine or a setpoint



TECHNICAL PERFORMANCE

Optimising maintenance

Checking and analysing the correct functioning of **ventilation systems**

The ventilation system is essential in a building: it ensures the renewal of air and the protection of the structure against deterioration due to humidity and mould.

IoT devices monitor the ventilation boxes and allow you to anticipate possible malfunctions. Thus, professionals in the sector can:

- detect a drop in the pressure delta between the inside of the box and the atmospheric pressure,
- anticipate an engine failure,
- detect a repetitive malfunction.

DELTA P

On curative aspects, an alert can be issued when:

- an engine stops working,
- a filter is clogged,
- a problem with the belt operation appears,
- a pressure switch is faulty.

Improving responsiveness

Ensure the proper functioning of your equipment

Reduce maintenance costs

Monitor, control **the temperature on a technical equipment**

Balancing of the domestic hot water (DHW) network

With their temperature sensors, IoT sensors measure and read the temperature at various points in a DHW network. The data collected allows for hydraulic balancing of the network.

Objectives:

- Reduce health risks
- Save energy and water (by reducing temperatures and waiting time)
- Contribute to a better life span for the installations
- Optimise the organisation of maintenance operations

Controlling the non-proliferation of legionella

Thanks to IoT solutions, it is possible to control, without having to go on site, the maintenance of the water temperature in the DHW networks at least 55°C, between the point of distribution point and the drawing point.
An alert is also issued when the threshold is exceeded, allowing rapid action to be taken to prevent the spread of the bacteria.

Objectives:

- Reduce health risks
- Meet legal obligations
- Optimise the organisation of maintenance operations
- Reduce maintenance costs
- Improve responsiveness

TEMP

TEMP2S

Monitor / act on the change of state of an equipment

Monitor the status change of an equipment

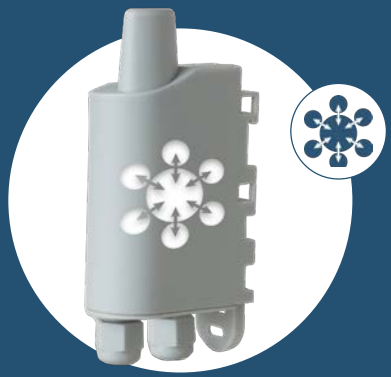
- Digitalise maintenance monitoring operations
- Guarantee the proper functioning of equipment
- Ensure continuity of service for an equipment

With IoT solutions, it is possible to detect any change in the status of a piece of equipment and act accordingly.

DRY CONTACTS

Depending on the needs, the solutions used allow you to:

- detect a fault,
- be alerted of a development (change of state, triggering of an action, etc.),
- control a state and its duration,
- monitor changes in state over time,
- measure the time of use of an equipment,
- remote control of equipment.



MODBUS

Act remotely on a piece of equipment or a setpoint

- Reduce travel
- Gain in reactivity
- Optimise maintenance costs

Some IoT sensors can be used to act remotely on equipment to activate or deactivate a setpoint.
It is thus possible to act in real time following the triggering of an event.
The IoT solution also allows the user to be informed that the setpoint has been taken into account.
The setpoint can be activated for a defined period of time or until a new action is triggered.

Telecom equipment

To be informed quickly of a fault in order to ensure business continuity.

Exhaust outlet

Monitor or be alerted of a change in the open/ closed status of the door and act accordingly.

Presence of water

Detect abnormal water presence to prevent the risk of water damage.

Defibrillator

Remotely monitor the status of the defibrillator and be alerted in case of malfunction.

Act on equipment

Switching a light on or off, controlling a valve, opening or closing a network

Lifts - Escalators - Automatic doors

Be alerted quickly to an operational stop.

Taking into account the comfort of the occupants of a building is essential. Whether they are customers, residents, employees, schoolchildren or users of an activity, taking into account their comfort has a non-negligible impact on the main activity of the building.

Temperature, humidity, air quality, all these factors must be taken into account for a better quality of life.

Improve
thermal comfort

Monitor Indoor Air
Quality

Ventilation

Check the humidity and CO2 levels and adjust the operation of the ventilation system.

Heating - Air conditioning

Analyse the ambient temperature in different parts of a room and regulate the use of heating and cooling equipment accordingly.

QAI

Analyse CO_2 levels, TVOCs, fine particles, temperature, and humidity to assess indoor air quality.

OCCUPANT COMFORT

Ensuring good **indoor air quality**

Today, all buildings are concerned with indoor air quality.

Beyond the CO2 concentration rate, data relating to temperature, humidity, fine particles or VOCs can provide a concrete response relating to the comfort of occupants in the building.

The analysis of this data and the implementation of concrete actions resulting from it allow you to respond to legal obligations, health issues or economic issues.

Control health risks

Act in real time on identified risks

Ensure user comfort

Comply with legal obligations

Analyse environmental factors and adapt the use of technical equipment to real needs

COMFORT
SERENITY

COMFORT

BREATH

DELTA P

Objectives

- Ensure user comfort
- Protect the building from potential damage
- Reduce energy consumption

In order to ensure the comfort and satisfaction, as well as the productivity of the users of a building, it is important to analyse the different environmental factors of a room.

To obtain conclusive results, these factors can be monitored at different locations in the same room. IoT sensors can easily be placed in a room to measure temperature, humidity or lighting levels. This data can also be coupled with presence indicators for added relevance.

The combined analysis of these data allows for the improvement of equipment settings according to the actual use of the building.

Our sensors

LoRaWAN

	PULSE	TEMP	TEMP2S	DRY CONTACTS
				
Usage	Pulse meter	Temperature 1 ambient + 1 remote probes	Temperature 2 remote probes	Dry contacts, Control
Sensor features				
Technical specifications	Up to 2 pulse inputs Configurable for pulse output type: dry contacts, REED, open collector or S0 Input frequency <100 Hz Fraud and leak detection Flow monitoring Data logging Available in: PULSE CBL 2 cables / 3 wires	Room sensor - Temperature range: -25°C / +70°C Remote sensor - Sensor temperature range: -55°C / + 155°C Remote sensor - Cable temperature range: -30°C / +105°C Remote probe - Cable length: 2m Accuracy [0°C / +60°C]: +/- 0.2°C Accuracy [-35°C / 0°C]: +/- 0.5°C Data logging		4 digital inputs/outputs Maximum input voltage: 24 Vdc Max. output current: 100 ma Available in a pre-wired version for monitoring: - Fluid level - Presence of water - Opening
Data transmission	Periodic and/or event-driven (programmable thresholds exceeded)			
Class	LoRaWAN: A	LoRaWAN: A and C (with external power supply 5V)		LoRaWAN: A and C
Mechanical characteristics				
Weight (including battery)	107.2 g	148 g	185 g	128 g
Dimensions	132 x 62 x 34 mm	132 x 62 x 34 mm	132 x 62 x 34 mm	132 x 62 x 34 mm
IP	IP68	IP68	IP68	IP68
Mounting options	DIN-rail, tube, wall, clamp			
Operating conditions				
Temperature	-25°C / +70°C			
Humidity	0 to 85% RH			
Power supply	1 connectorised battery pack	1 connectorised battery pack or external 5V power supply		1 removable battery or external 5V power supply
Configuration	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+
Certifications				
Certifications	Directive 2014/53/UE (RED) | US: FCC- Title 47 CFR Part 15 | Canada: RSS-247 Issue 2 | AS/NZS 4268			
Zones / Networks and corresponding part numbers				
LoRaWAN	EU863-870 US902-928 AU915-928 AS923	ARF8230ARA ARF8230BRA ARF8230IRA ARF8230JRA	EU863-870 US902-928 AU915-928 AS923	ARF8180ARA ARF8180BRA ARF8180IRA ARF8180JRA	EU863-870 US902-928 AU915-928 AS923	ARF8180ARB ARF8180BRB ARF8180IRB ARF8180JRB	EU863-870 US902-928 AU915-928 AS923	ARF8170ARA ARF8170BRA ARF8170IRA ARF8170JRA

LoRaWAN

	ANALOG	PULSE ATEX	MODBUS	DELTA P
		 ATEX: Zone 1, Groupe IIC and Zone 21 ATEX II 2 G D / Ex ib IIC T4 Gb / Ex ib IIIC T135°C Db / -20°C<=-Ta<=40°C		
Usage	Analog input	ATEX Pulse meter	Interface for «Modbus slaves	Maintenance of ventilation systems
Sensors features				
Technical specifications	2 analog inputs: configurable as 4-20 mA or 0-10 V Analog input resolution 12 bits Available in pre-wired version: - 50A current measurement - 100A current measurement Or - External power supply Measurement and transmission controlled by digital input(s)	Up to 2 pulse inputs Configurable for pulse output type: dry contacts, REED, open collector or S0 Input frequency <100 Hz Flow monitoring Data Logging Available with BINDER or GAZPAR connectors	Modbus RTU, RS485/RS232 compatible Supervision of up to 20 slaves Possibility to read and write registers (Modbus function 3,4 and 10) Transfer and control of power to the slave 6 configurable periodic frames Downlink read request	2 digital inputs 1 analog input 0-10V Pressure delta Measuring range: -500/+500 Pa Data Logging
Data transmission	Periodic and/or event-driven (programmable thresholds exceeded)			
Class	LoRaWAN: A	LoRaWAN: A	LoRaWAN: A and C	LoRaWAN: A
Mechanical characteristics				
Weight (including battery)	70 g	70 g	97g	145 g
Dimensions	105 x 50 x 27 mm	105 x 50 x 27 mm	105 x 50 x 27 mm	200 x 63.5 x 34 mm
IP	IP67	IP67	IP67	IP68
Mounting options	DIN-rail, tube, wall, clamp			
Operating conditions				
Temperature	-25°C / +70°C (with battery) -25°C / +40°C (supplied power version)	-25°C / +70°C		
Humidity	0 to 85% RH			
Power supply	1 removable battery	1 soldered battery	External power supply 6-30V DC	1 connectorised battery pack
Configuration	IoT Configurator Via network KARE	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+
Certifications				
Certifications	Directive 2014/53/UE (RED)	Directive 2014/53/UE (RED)	Directive 2014/53/UE (RED) US: FCC- Title 47 CFR Part 15 Canada: RSS-247 Issue 2 AS/NZS 4268	Directive 2014/53/UE (RED)
Zones / Networks and corresponding part numbers				
LoRaWAN	EU863-870 : Battery Ext.supply ARF8190BA ARF8200AA	EU863-870 ARF8230FA	EU863-870 US902-928 AS923 ARF8240AA ARF8240B ARF8240J	EU863-870 ARF8283AA

Our sensors

LoRaWAN

	COMFORT	COMFORT SERENITY	BREATH
			
Usage	Temperature, Ambient humidity	Temperature, Humidity, CO2, VOCT	PM1, PM2.5, PM10 and VOCT
Sensor features			
Technical specifications	1 Alert button + 1 Dry contacts input		
	4 in 1 product: temperature, humidity, alarm button, dry contact input Measuring range: Temperature: -40 to +125°C Humidity: 0 to 100 RH% Redundancy Data logging	6 in 1 product: temperature, humidity, CO2, VOC, alarm button, dry contact input Measuring range: Temperature: -40 to +125°C Humidity: 0 to 100 RH% CO2: 400 to 5000 ppm (technology NDIR) Automatic or manual CO2 calibration Indicator light on the case	Measuring range: Fine particles: Typical: 0 / 1000 µg/m3 Max: 65534 µg/m3 VOCT: 0 / 270 mg/m3 Data logging Redundancy Indicator light on the case
Data transmission	Periodic and/or on events (programmable thresholds exceeded)		
Class	LoRaWAN: A	LoRaWAN: A	LoRaWAN: A and C
Mechanical characteristics			
Weight (including battery)	102 g	146 g	107,5 g
Dimensions	111 x 61 x 40 mm	111 x 61 x 40 mm	111 x 61 x 40 mm
IP	IP20		
Mounting options	Wall		
Operating conditions			
Temperature	-20°C / +60°C	0°C / +50°C	0°C / +50°C
Humidity	0 to 85% RH		
Power supply	1 connectorised battery pack	1 dual connectorised battery pack	External power supply included
Configuration	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+	IoT Configurator Via network KARE+
Certifications			
Certifications	Directive 2014/53/UE (RED) | US: FCC- Title 47 CFR Part 15 | Canada: RSS-247 Issue 2 | AS/NZS 4268		Directive 2014/53/UE (RED)
Zones / Networks and corresponding part numbers			
LoRaWAN	EU863-870 US902-928 AU915-928 AS923 — ARF8275ARA ARF8275BRA ARF8275IRA ARF8275JRA	EU863-870 US902-928 AU915-928 AS923 — ARF8373ARA ARF8373BRA ARF8373IRA ARF8373JRA	EU863-870 — ARF8377AA

NB-IoT / LTE-CAT-M1

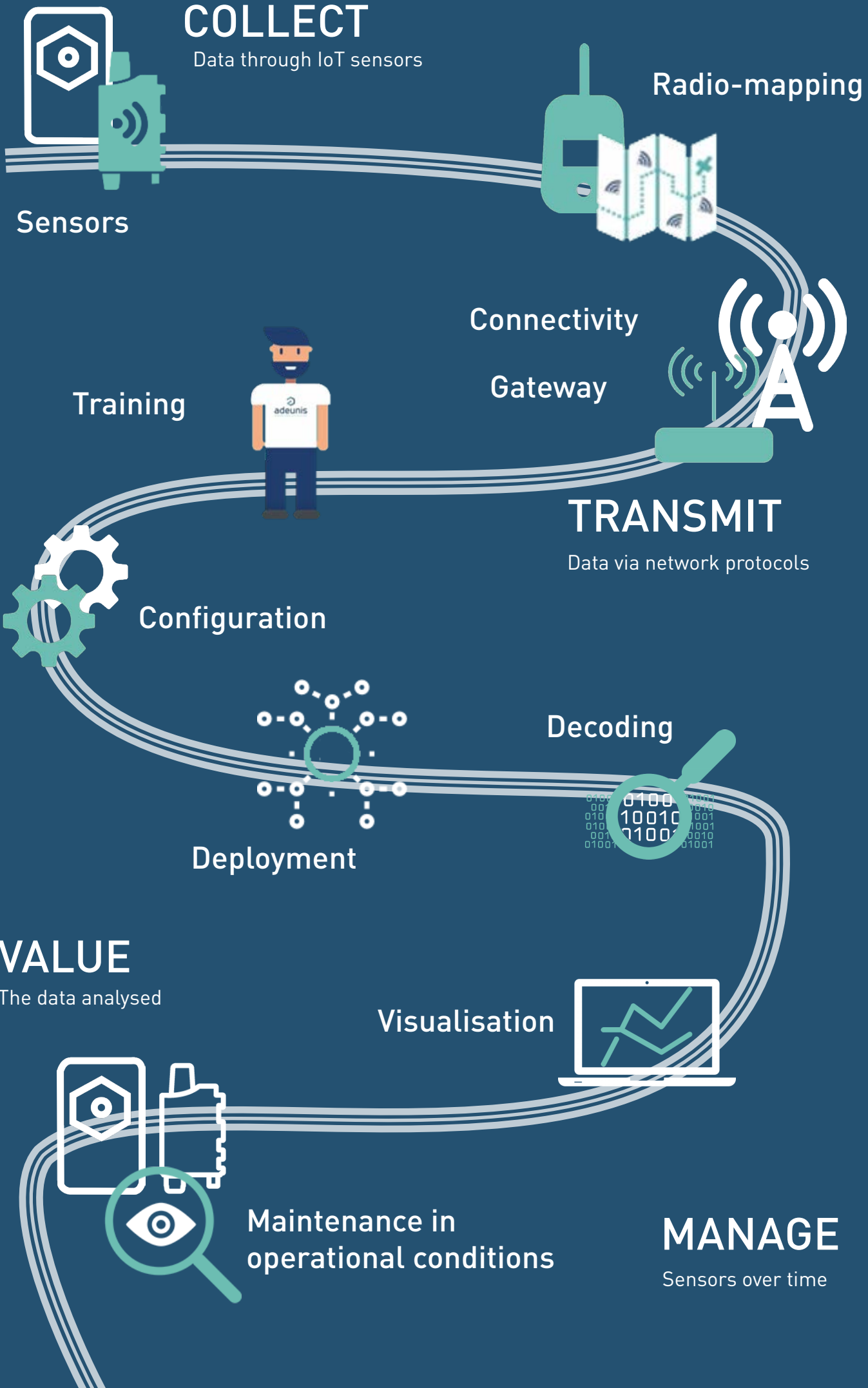
	COMFORT	COMFORT SERENITY	PULSE	DRY CONTACT
				
Usage	Temperature, Ambient humidity	Temperature, humidity, CO2, VOCT	Pulse meter	Dry contacts
Technical features				
Technical specifications	Measuring range: Temperature: 0 to +65°C Humidity: 10 to 90 RH% Compatibility with LwM2M and MQTT protocols Data logging Black out Time stamping Automatic diagnosis of network quality	Measuring range: Temperature: 0 to +65°C Humidity: 10 to 90 RH% CO2: up to 10 000 ppm VOCT : Index scale from 1 to 500 points Compatibility with LwM2M and MQTT protocols Data logging Black out Time stamping Automatic diagnosis of network quality Indicator light on the box	Up to 2 pulse inputs Configurable for pulse output type: dry contacts, REED, open collector or S0 Input frequency <50 Hz Compatibility with LwM2M and MQTT protocols Data logging	Remote monitoring of simple data such as: Detect states (on/off), Count events, Count time spent in a state. 2 configurable digital inputs, read 0/1 status (dry contact), allowing connection to 2 independent sensors
Data transmission	Periodic and/or on events (programmable thresholds exceeded)			
Protocol				
Network	NB-IOT LTE-CAT-M1			
Mechanical characteristics				
Weight (including battery)	140 g	146 g	163 g	163 g
Dimensions	111 x 61 x 40 mm	111 x 61 x 40 mm	200 x 63,5 x 34 mm	200 x 63,5 x 34 mm
IP	IP20	IP20	IP68	IP68
Mounting options	Wall	Wall	DIN-rail, tube, wall, clamp	DIN-rail, tube, wall, clamp
Operating conditions				
Temperature	-10°C /+70°C		-25°C / +70°C	-25°C / +70°C
Humidity	0 to 85% RH			
Power supply	Double battery pack or external power supply	Double battery pack or external power supply	Double battery pack 8000 mAh	Double battery pack 8000 mAh
Configuration	NFC IoT Configurator Via network			
Certifications				
Certifications	Directive 2014/53/UE (RED) US: FCC- Title 47 CFR Part 15 Canada: RSS-247 Issue 2 AS/NZS 4268			
Part numbers				
Part number	ARF8394AA	ARF8394AB	ARF8420AA	ARF8420ABA

ACCOMPANYING YOU IN THE REALISATION OF YOUR IOT PROJECTS

A comprehensive offering to ensure the success of your IoT projects:

Sensors,
gateways,
network testers,
training services,
and a device management platform
...

To ensure the smooth execution of your digitalisation projects, we have developed a wide range of solutions. We support you at every stage of your IoT project: from radio site surveys through to final deployment.


COLLECT
Data through IoT sensors
Sensors
Radio-mapping
Connectivity
Gateway
Training
adeunis
TRANSMIT
Data via network protocols
Configuration
Decoding
Deployment
VALUE
The data analysed
Visualisation
Maintenance in
operational conditions
MANAGE
Sensors over time

Transmit data

IRIS LoRaWAN gateway

The bridge between IoT sensors and IT or cloud platforms.

At its core, a **LoRaWAN gateway is the bridge between IoT sensors and IT or cloud platforms**, collecting data from the field and forwarding it securely to network servers and applications.
With IRIS, customers can choose the deployment mode that fits their needs:

- **Packet forwarder – Integration with existing networks:** Transmission of radio frames to an external LoRaWAN network server. IRIS is compatible with leading LoRaWAN servers such as Actility, Loriot and The Things Stack, ensuring seamless integration into existing LoRaWAN ecosystems.
- **Embedded LoRaWAN server – Local autonomy:** Complete local network management, including sensors, data decoding and downlink management. This mode ensures fully autonomous operation, without reliance on an external LNS.

Flexible Architecture
Forward data to external LNS platforms or operate with the embedded Network Server.

Optimised Integration
Direct connection to application servers via MQTTs / HTTPs.

Fewer Gateways, Lower Costs, Better Coverage
IRIS combines a competitive price point with high-quality, wide-area coverage.

Robust and Ease of Deployment
With its IP67 enclosure IRIS ensures long-term operation in indoor and outdoor environments.

Always Connected
Reliable data transmission via Ethernet or 2G/3G/4G cellular networks.

All your sensors connected
Compatible with all LoRaWAN sensors on the market (Class A and C).

KEY FEATURES

- **EU868** channel plan
- SX1302 **8-channel** LoRa baseband processor
- **Ethernet & 2G/3G/4G (LTE)** backhaul
- Integrated **cellular and LoRa antennas** (external as options)
- Configurable forwarding software **(UDP, Basics Station)**
- **MQTT(s) and HTTP(s)** integration with application servers
- Embedded **LoRaWAN Network Server**
- **Built-in Codec Manager** includes Adeunis' decoder library and supports JavaScript payload decoder setup
- **IP67** white enclosure
- Made in **France**

Collect and transmit data

Prepare your project well to ensure its success over time

On-site radio-mapping

Radio mapping is an essential step in any IoT project. It ensures the success of the project on the ground and avoids disappointment when the sensors are deployed.

This study is carried out on site, with the help of the Adeunis network tester, the FTD (Field Test Device). It determines the network availability at different measurement points.

Connectivity

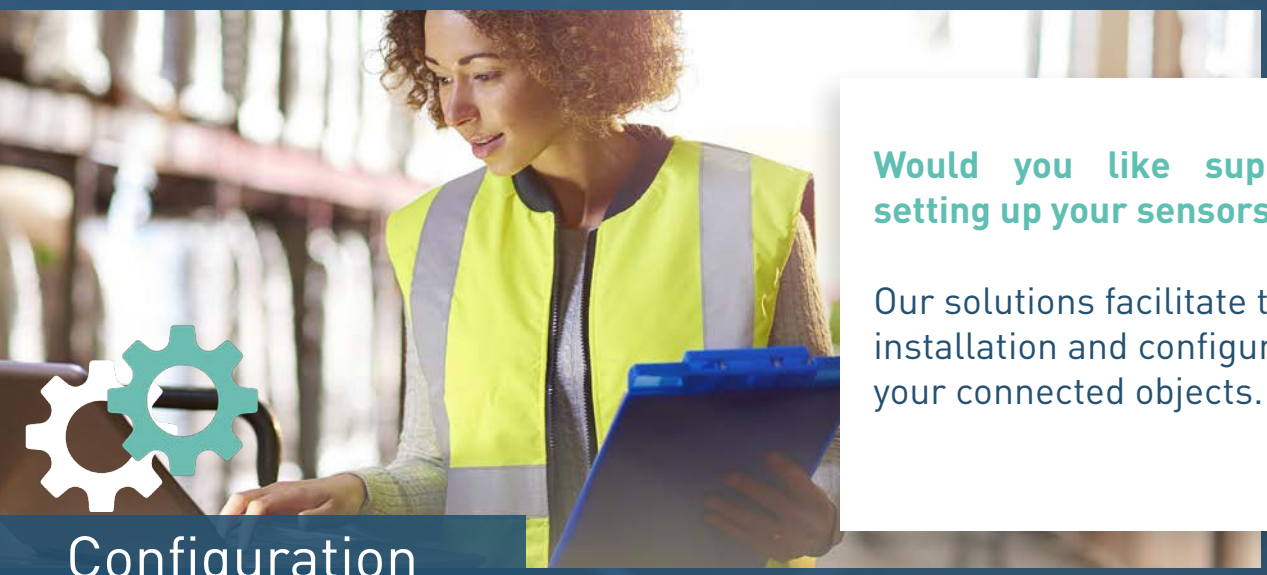
You need to deploy IoT sensors and choose the most suitable network(s) for your project?

Together, we'll define the network solution and operator best suited to your needs. Private network? Public network? We take into account your needs, usage and target environment.

LoRaWAN CERTIFIED NB-IoT LTE-M

Technical set-up

Deploy connected objects easily thanks to configuration tools



Would you like support in setting up your sensors?

Our solutions facilitate the installation and configuration of your connected objects.

Configuration

Pre-Configuration
Delivery of ready-to-use products already configured.

NFC / IoT Configurator
Local configuration via USB port on your sensor.

KARE +
Remote sensor monitoring and configuration by fleet.

Field deployment

If you would like us to provide you with personal support, we can come to your site to carry out the installation and deployment of your sensors and solutions. Our experts will provide you with their knowledge to facilitate these steps.

Training

Adeunis offers generic IoT training courses designed to the world of connected objects, as well as dedicated support for the dedicated support for the development of each solution.

Data processing

Quickly decode the data to exploit it over time

Decoding

Save precious time on the data decoding phase, thanks to our Codecs and the KARE platform.

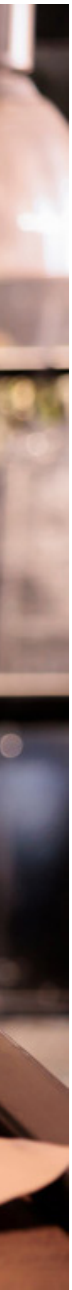
Data processing

Take advantage of our partnerships to choose the IoT data visualisation and processing platform that best suits you.

Maintenance in operational condition

Guarantee the performance, proper functioning and data security of the sensors

Adeunis provides device management tools enabling you to manage your sensors centrally. Using these tools simplifies configuration, monitoring and maintenance.



KARE+
LoRaWAN sensors

A Device Management platform and Over The Air (OTA) update application, designed by Adeunis, to visualise, analyse and act on the performance and configuration of Adeunis sensor fleets.

LwM2M
NB IoT / LTE-M

A protocol from the Open Mobile Alliance, specifically designed for operational management, data feedback, provisioning and lifecycle management of Internet of Things (IoT) devices.

Optimize your operating costs
By taking action on site at the right time and avoiding unnecessary trips

Consolidate your business model
By ensuring the proper lifetime of the products and adjusting their configuration.

Increase the satisfaction of your end customers
By allowing continuity in the service provided.

Can’t find the answers to your needs in our catalogue range?

Our expertise and experience enable us to deliver tailored design solution for you.

WA+ System is a joint engineering service provided by Adeunis and Webdyn. It combines the flexibility and deep industrial IoT expertise of both brands to design and manufacture your custom-made connected solution.

From R&D to certification, from prototyping to mass production, WA+ System manages your entire project and stays by your side during the whole product lifecycle.

Whether you need to develop a brand new device or upgrade an existing one by adding connectivity, WA+ System helps you create your ideal solution.

We turn your ideas into ready-to-deploy industrial connected solutions.

Expert in connected industrial products

Our teams have in-depth expertise in a wide range of radio technologies and know how to combine them into compact and robust designs. With a strong understanding of system integration challenges, we develop connected building blocks that seamlessly fit into your existing architectures.

End-to-end support for your project

With WA+ System, you're supported at every stage: scoping, design, prototyping, production, follow-up... You benefit from a dedicated contact and a team of experts to turn your needs into a fully operational product, without wasting time.

Robust and sustainable industrialisation

Our processes are designed to ensure reliable, long-term, and scalable production, from a few hundred units to 100,000 per year. From the design phase, we take into account industrialisation, certification, and lifecycle challenges. The result: a solution ready for production and built to last.

WA+ SYSTEM

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