

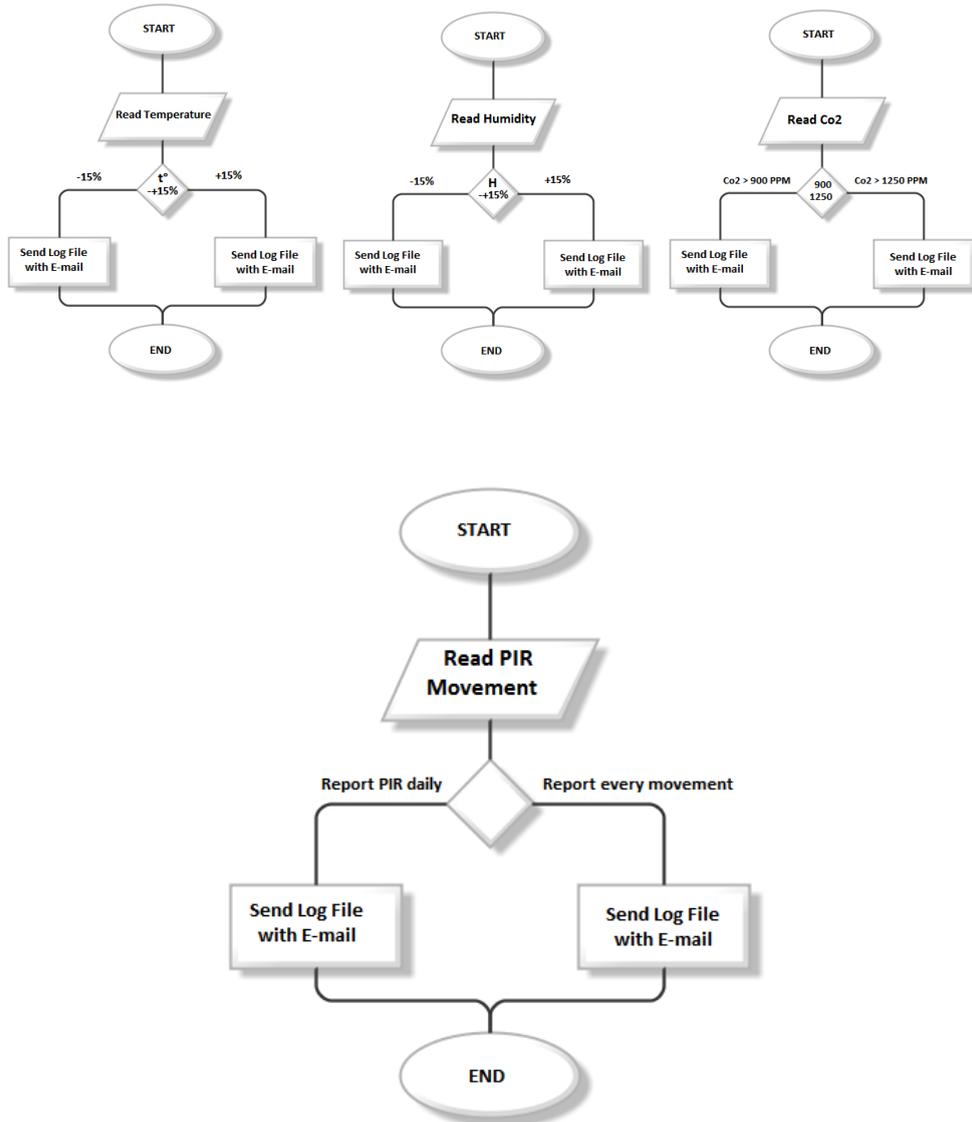


# LoRaWAN

Lorawan JONIMO Telemonitoring is a very useful website that monitors not only office buildings and workplaces but also patients in elderly care so that they can continue to live safely, comfortably and in their own homes. It connects them to an on-call doctor who can check on the patient or family members at any time and provide assistance. This service benefits elderly people by helping them to stay in their comfort zone.

Not only care for the elderly, but also surveillance of public places is very useful during the covid, but also after the vaccination campaign.

Monitoring **air quality** and **monitoring unauthorised access** or **energy monitoring** is always a good idea.



# Jonimo

Provides the possible architectures available from different LoRaWAN network server implementations.

## LoRaWAN Architecture

LoRaWAN itself defines an end-to-end data transfer solution, as illustrated below.

```
$ export LNS_KEY="your-lns-api-key"  
$ echo "Authorization: Bearer $LNS_KEY" | perl -p -e 's/\r\n|\n|\r/\n/g' > lns.key
```

End devices are mainly different types of sensors that communicate with LoRaWAN gateways using the LoRa physical layer protocol, mainly on sub-GHz bands that do not require a special licence, such as 868 MHz in the EU, 915 MHz in the US and 470 MHz in China mostly used for smart city applications.

LoRaWAN requires both a "LoRaWAN network server" and an application server and this concept may cause some confusion at first. One of the reasons a network server is required is because gateways can be considered "dumb" - transmitting all sensor data with little or no intelligence applied to what is being transmitted.

The definition of LoRaWAN Gateway(s) as "a distributed antenna, common to all networks" reinforces the Gateway as a physical layer device with a passive role in the overall network.

Here are some examples of how Jonimo does the integration of the sensors offered for building management and monitoring.

## Conclusion

There are a number of LoRaWAN implementation methodologies available and although it is a fairly detailed topic, the location of the LNS ([LoRaWAN Network Server](#)) is very important because it can significantly change the technical and commercial dynamics of a LoRaWAN-based IoT proposal.

Jonimo is an integrator of LoRaWAN Gateway systems depending on the requirements of the respective application. Most importantly, Jonimo can provide consultative help and support to ensure that the right solution is chosen and configured correctly from the start.