



# HW group

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*Solutions and applications 2020*

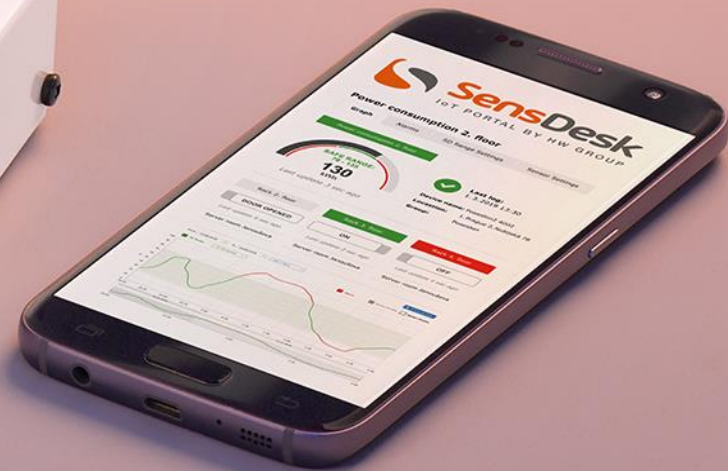


# HW group IoT solutions

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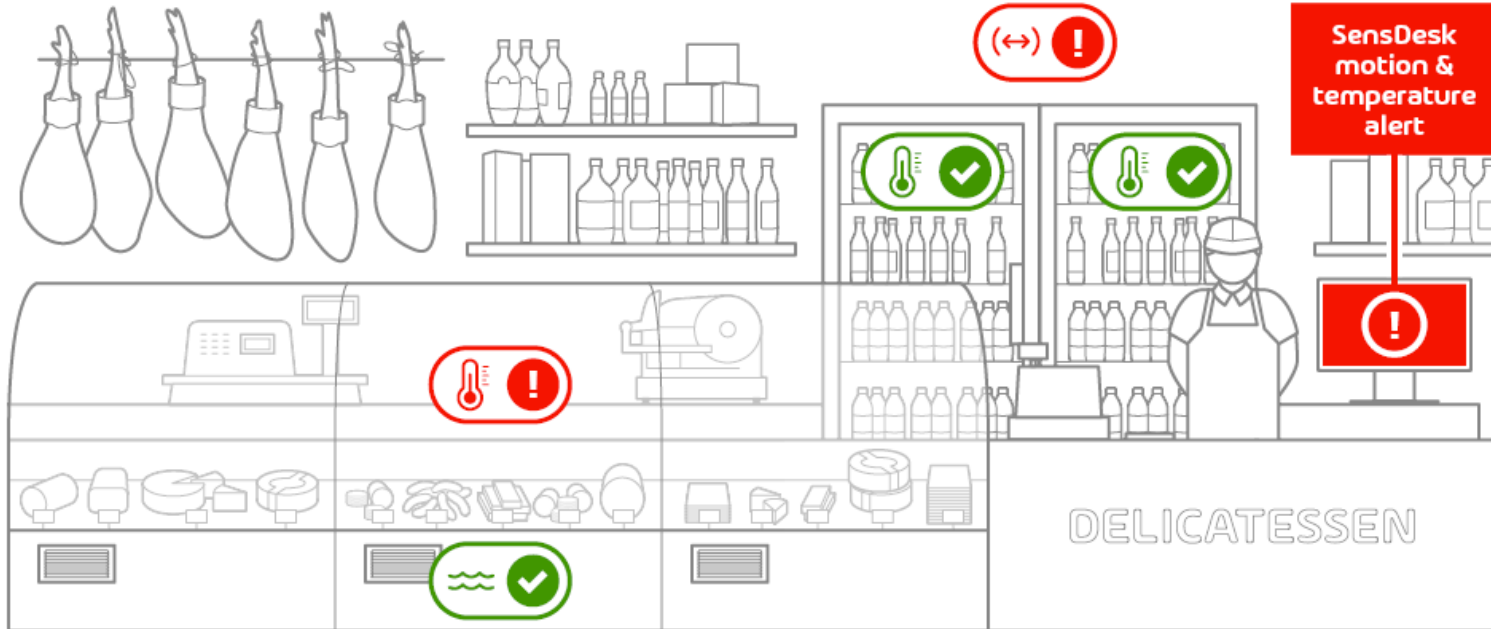
*17 years of experience  
with projects in industry and IT.*

- Solutions for small end users as well as large industrial IoT
- We can do all types of data collection:
  - Public or private cloud
  - Third party SW or cloud
  - Direct connection to devices
- Easy setup and installation, remote maintenance
- Set and forget devices, stable and proven technology



# Typical Applications

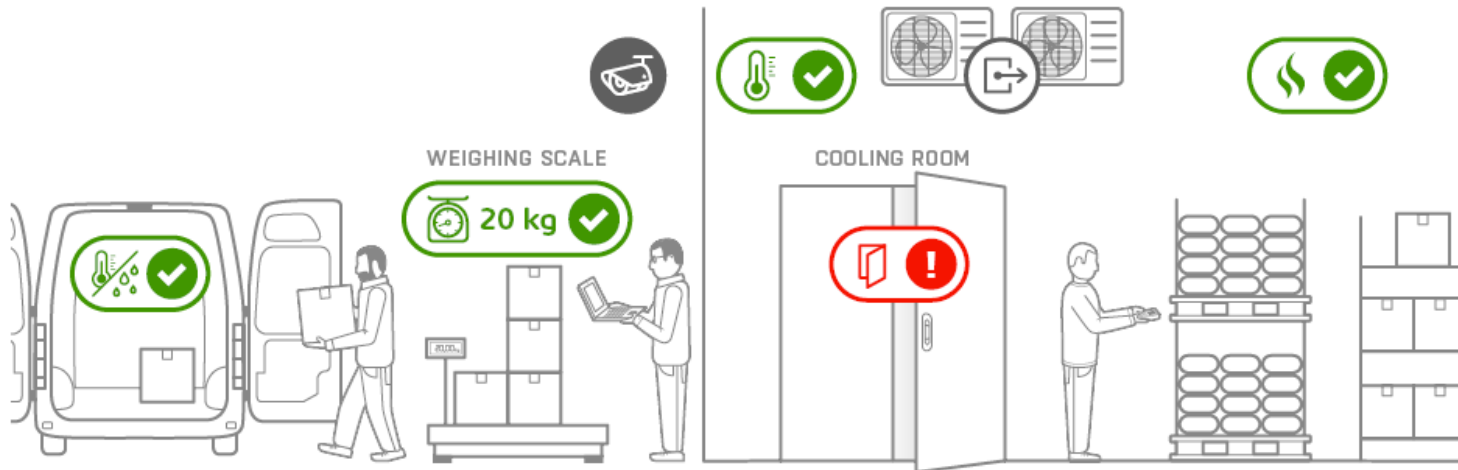
## Stores & retail



## Requirements

- Temperature and humidity
- Water leaks and fire detection
- Motion detection
- Automatic reports
- Easy installation

## Warehouses & storage rooms

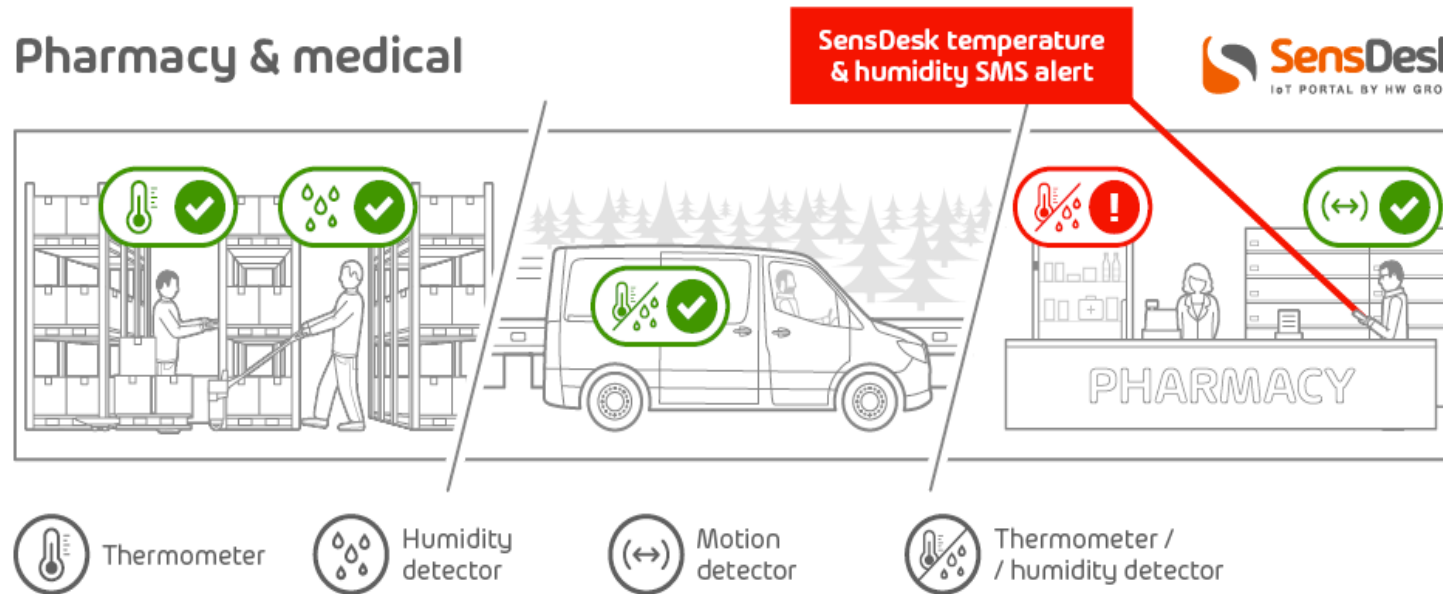


- |                       |              |                |                                      |
|-----------------------|--------------|----------------|--------------------------------------|
| Scale                 | Thermometer  | Smoke detector | Thermometer /<br>/ humidity detector |
| Door contact detector | Relay output | Camera         |                                      |

## Requirements

- Temperature and humidity
- Water leaks and fire detection
- Intrusion detection
- Remote air condition control
- Easy deployment

## Pharmacy & medical



## Requirements

- Temperature and humidity
- Precise flat sensors for fridges
- Wide temperature range (-200 °C)
- Easy installation and setup
- Multiple fridges and sites

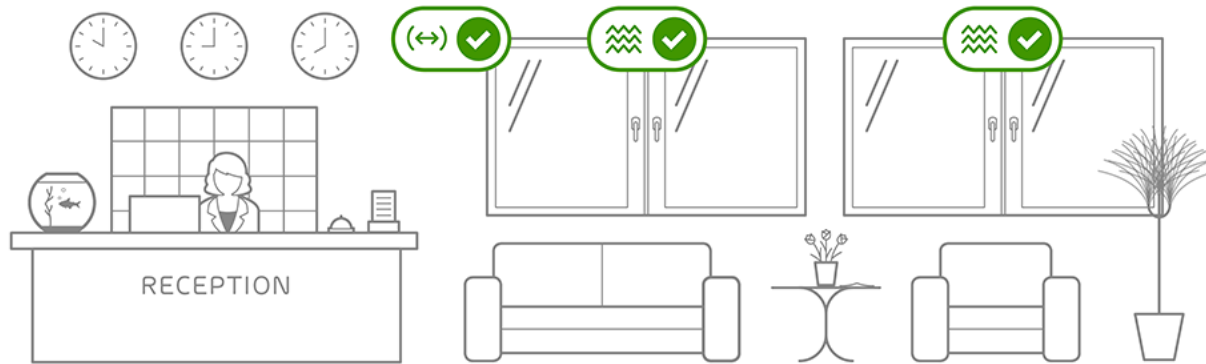
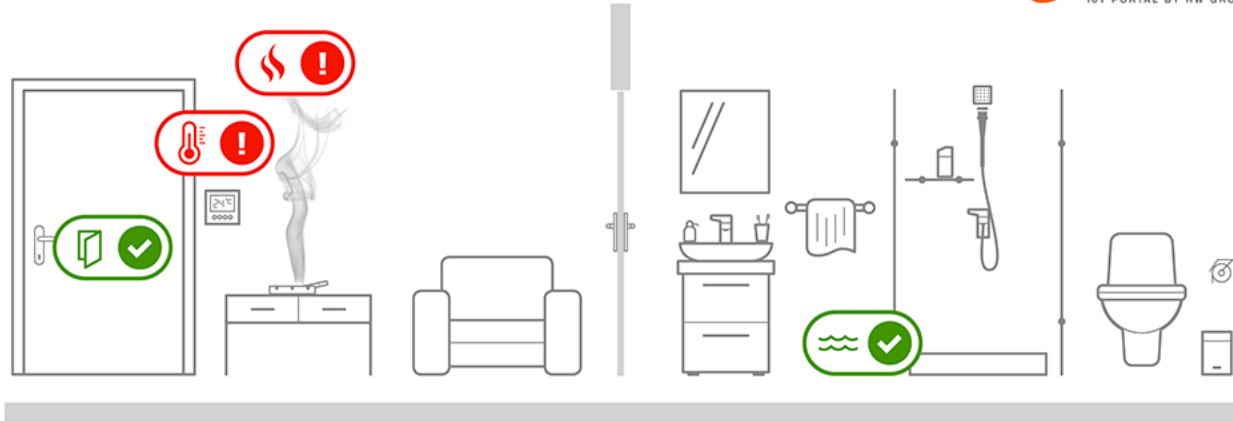
Schools & public buildings



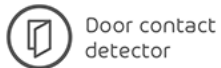
## Requirements

- Complex IoT monitoring
- Hundreds of measuring points
- Detailed analysis of data, reports
- Several layers of alarming
- Access control solution available

## Hotels & house rentals



Vibration detector



Door contact detector



Smoke detector



Water leak detector



Motion detector



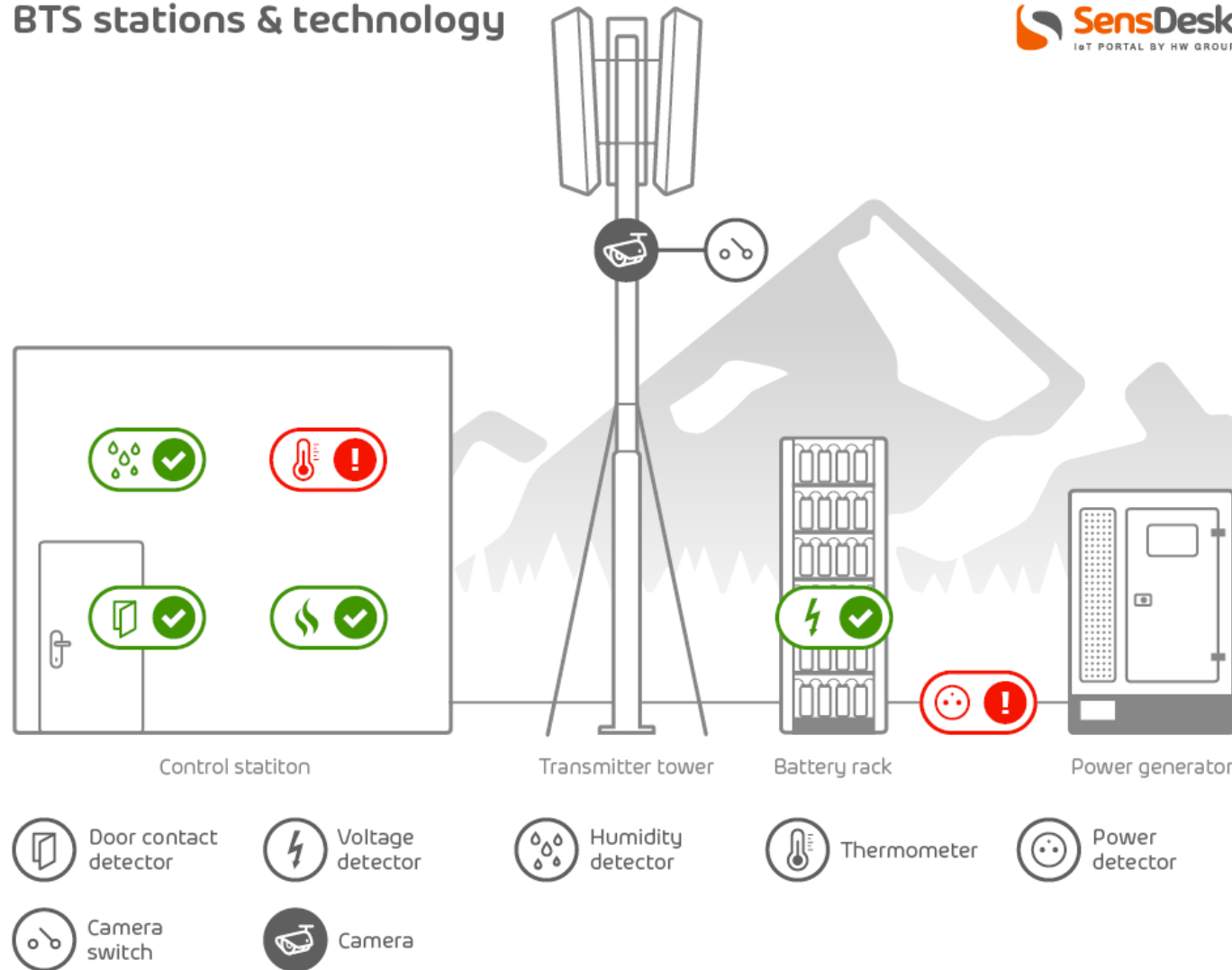
Thermometer

## Requirements

- Complex IoT monitoring
- Detailed analysis of data, reports
- Several layers of alarming
- Access control solution available
- Billing and consumption data



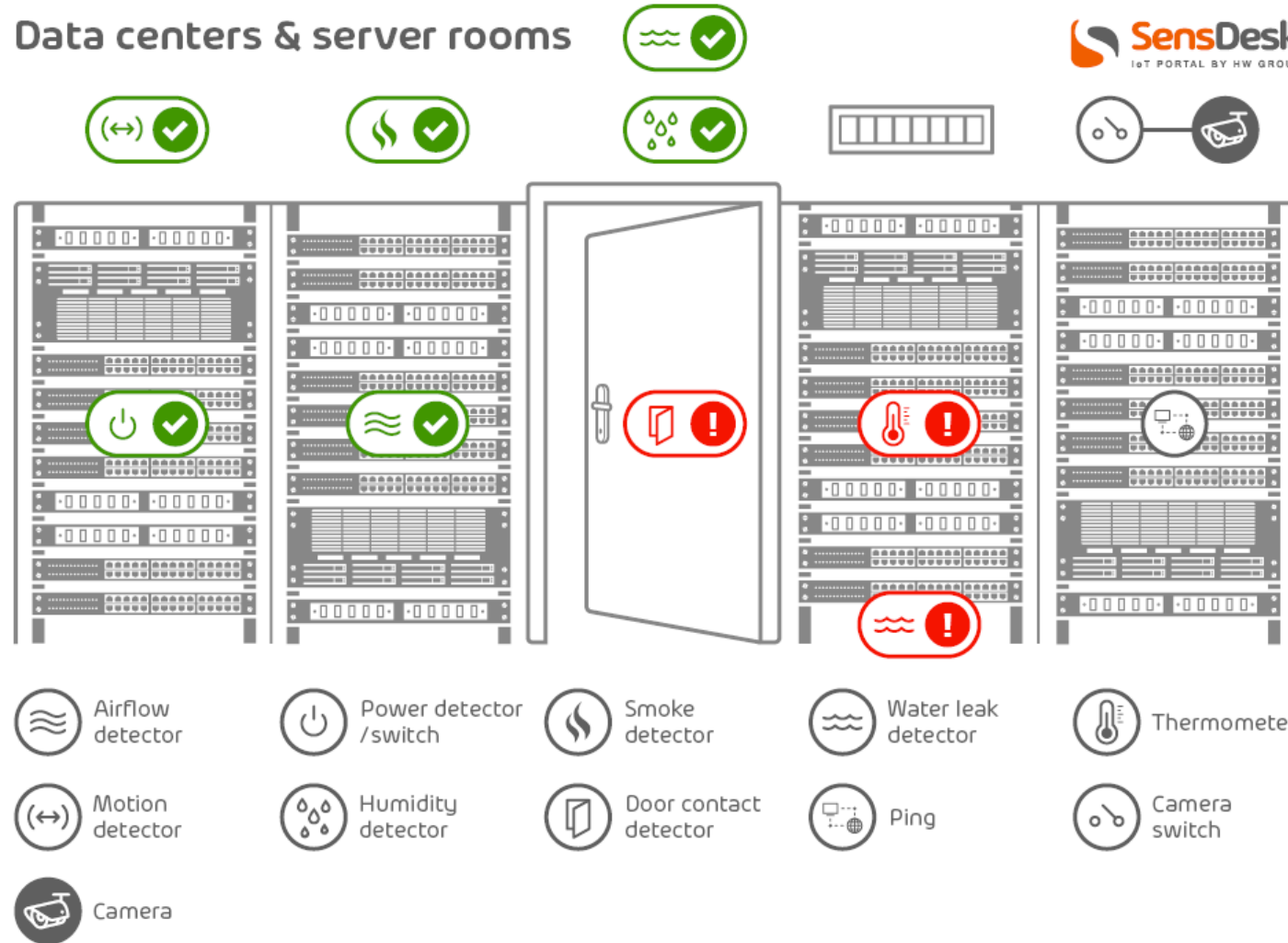
## BTS stations & technology



## Requirements

- Complex remote monitoring
- Hundreds of measuring points
- Detailed analysis of data, reports
- Several layers of alarming
- User levels and management
- Output data to other systems

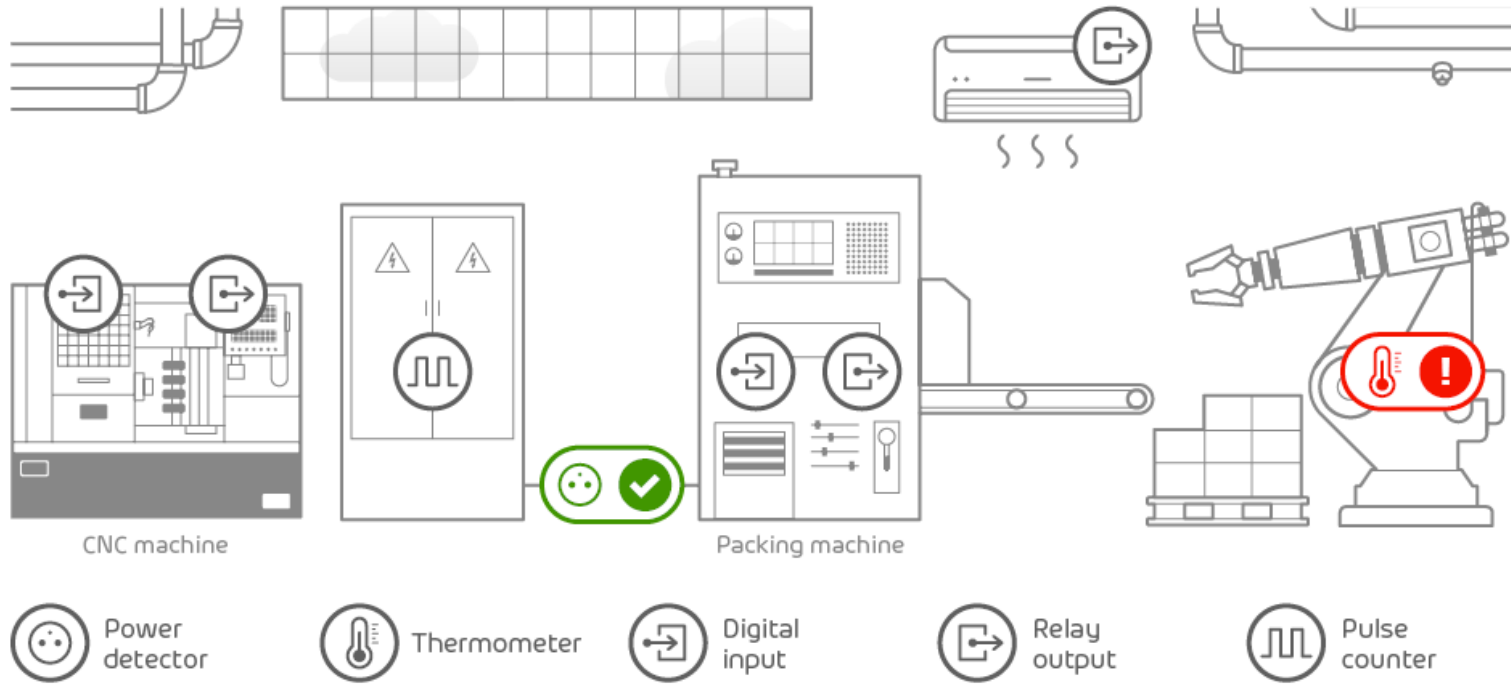
Data centers & server rooms



## Requirements

- Temperature and humidity
- Water leaks and fire detection
- Motion detection
- Access Control
- SNMP v3
- Technology can be retrofitted

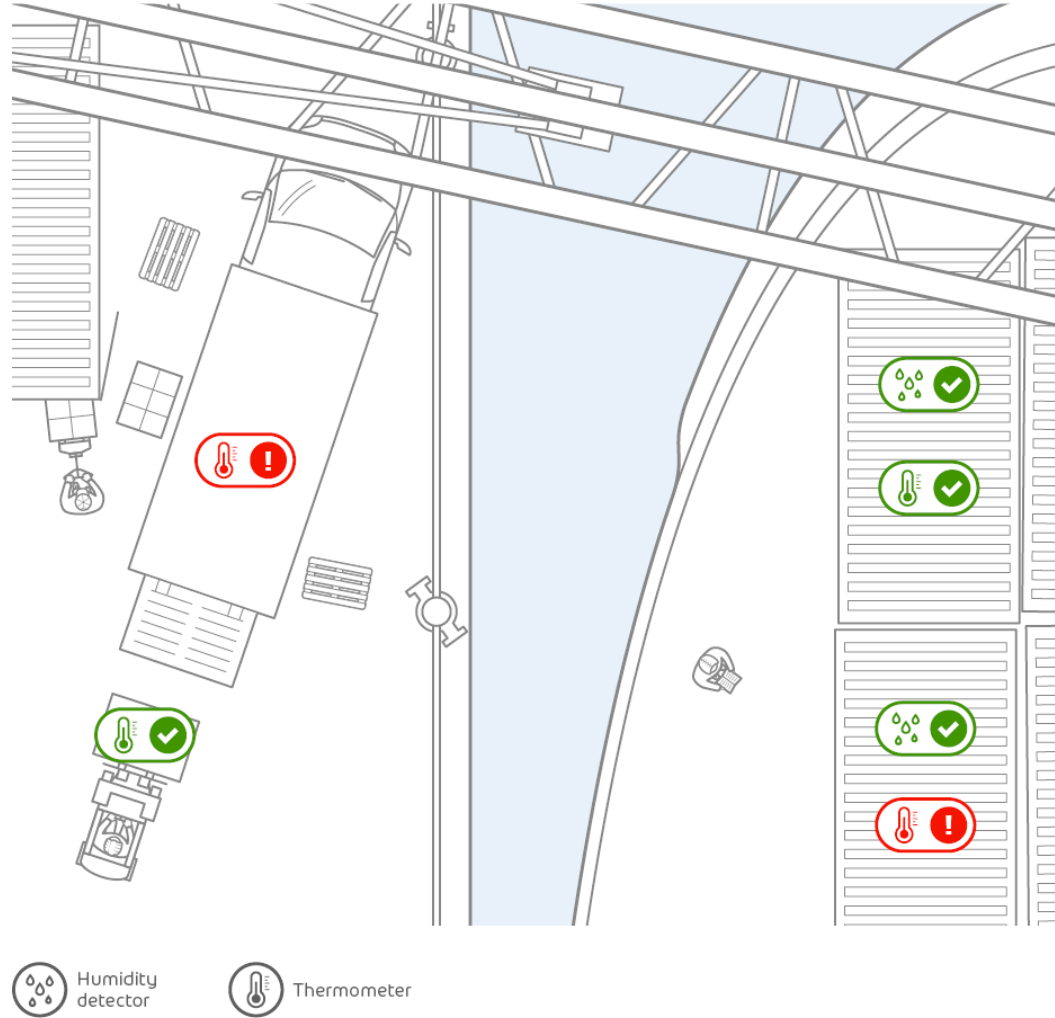
## Industry & manufacturing



## Requirements

- Industrial I/O and RS-232
- Pulse counters
- Motion detection
- Industrial grade devices
- Connectivity to 3<sup>rd</sup> party systems

## Logistics & transportation



## Requirements

- Temperature and humidity
- Water leaks and fire detection
- Intrusion
- Automatic reports
- Battery backup
- LTE or NB-IoT connectivity

# IoT solutions and hardware



# Designing a project

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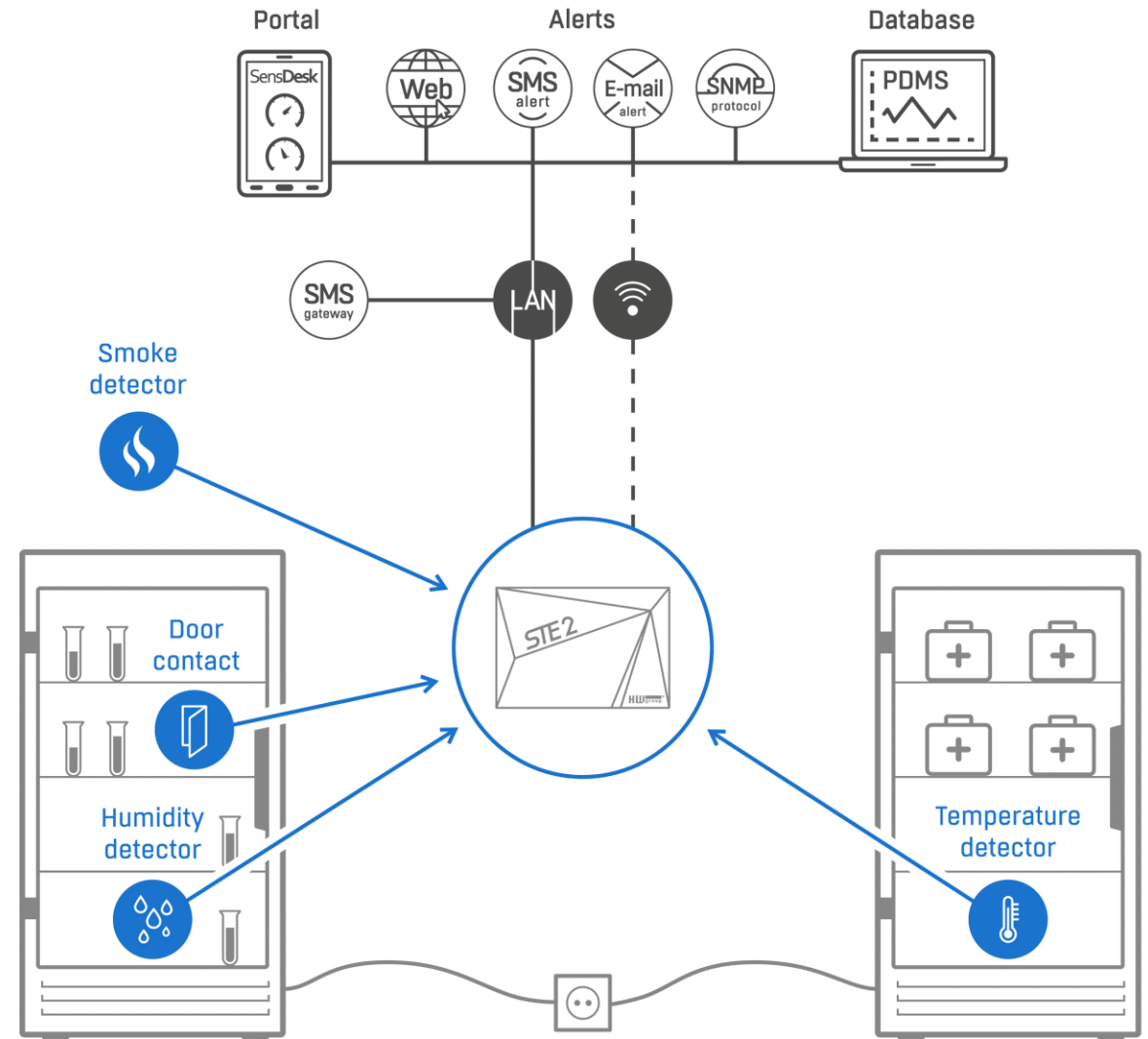
*There are many ways to design a HW group system.*

- We usually start with:
  - What is the available connectivity?
  - What is the topology of measurement points?
  - What sensors and ranges do we need?
  - How are the sensors and devices mounted?
  - What alarming is required?
  - How do we see the data?
- Some typical solutions examples follow.

# MEDICAL AND HEALTHCARE

*Most of the time the customer request a portal to analyse the data and get alarms.*

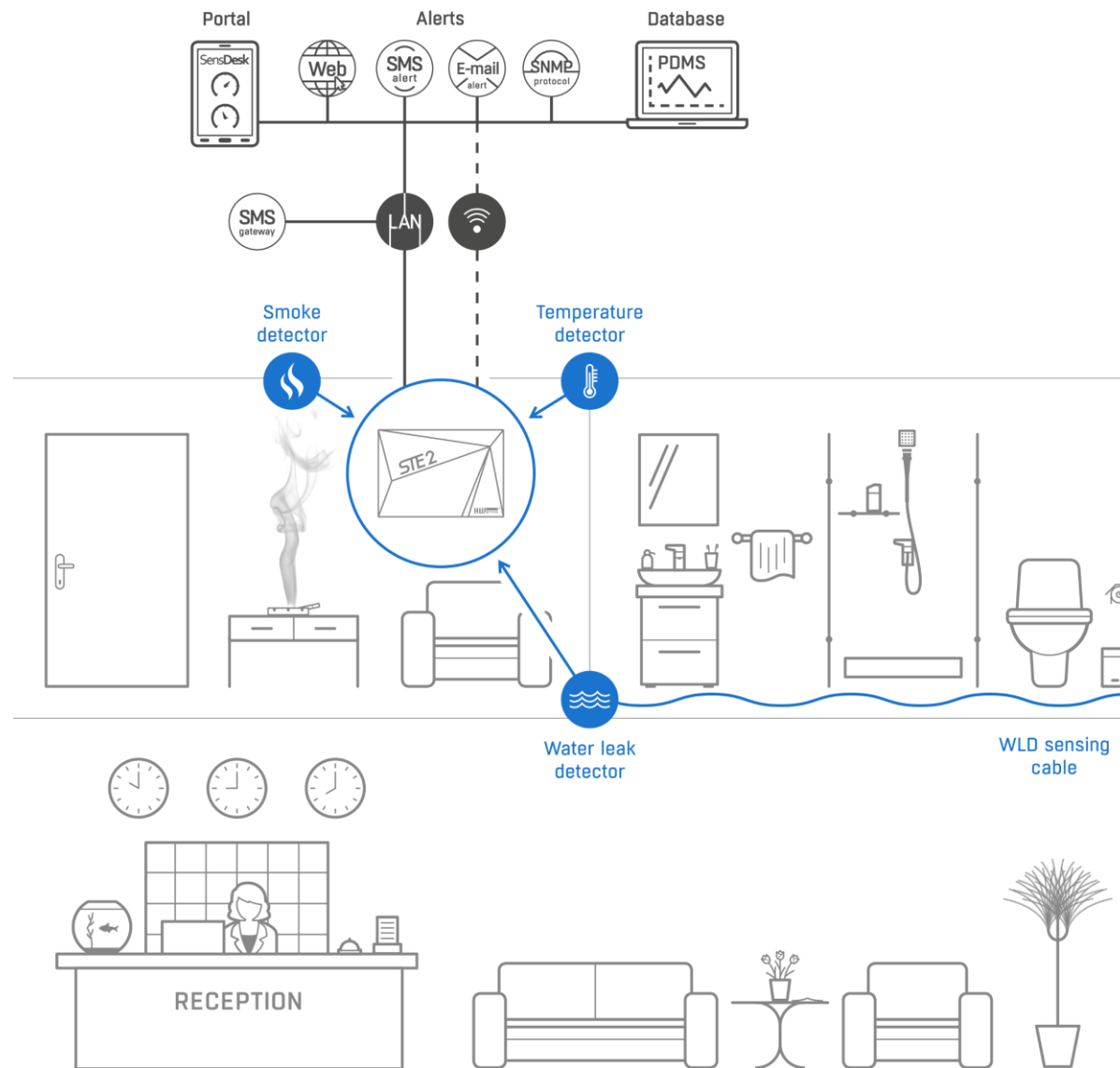
*The STE2 is a cost effective device capable of connecting 2 T/H sensors and 2 door contacts.*



# HOTELS AND RESIDENTIAL

*Usually an STE2, SD or Poseidon device based on the topology.*

*Data is collected to a portal or existing SW. Simple SMS and email alarms for the staff.*

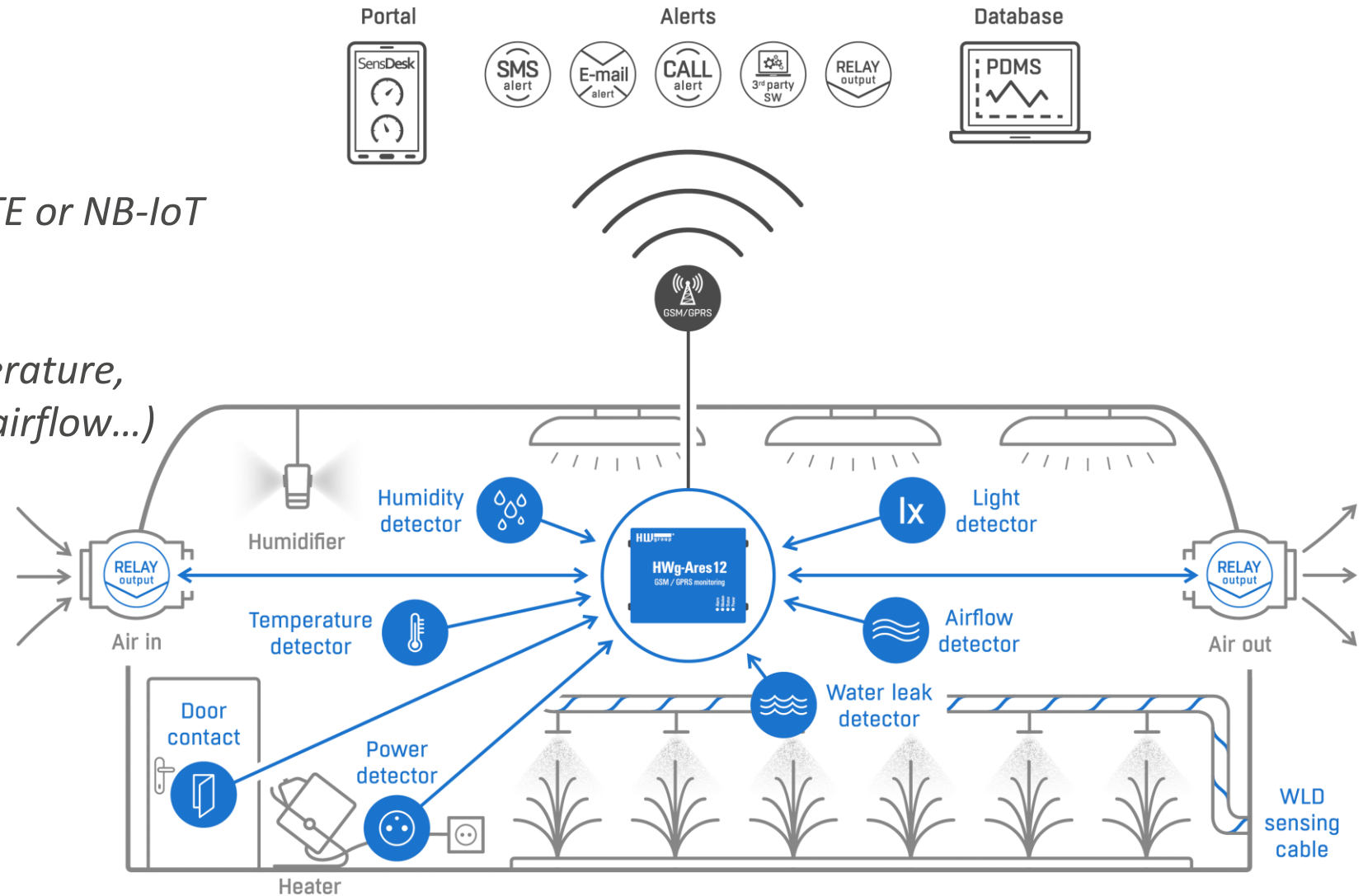




# AGRICULTURE

*No cable connectivity, GPRS, LTE or NB-IoT required (Ares, NB devices).*

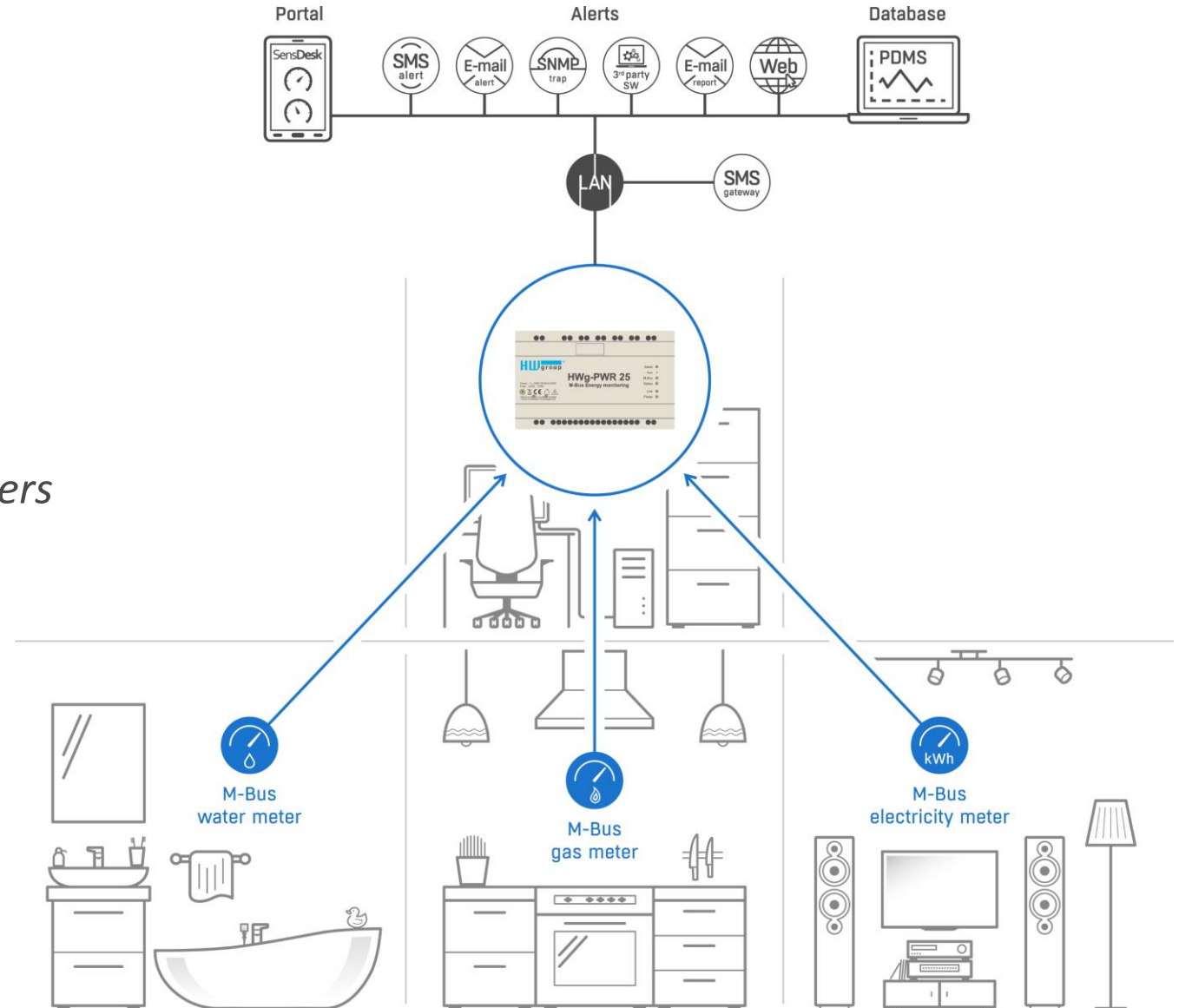
*A lot of sensors needed (temperature, humidity, light, power supply, airflow...)*



# ENERGY CONSUMPTION

*Electrical energy, gas and water monitoring for smart buildings and home.*

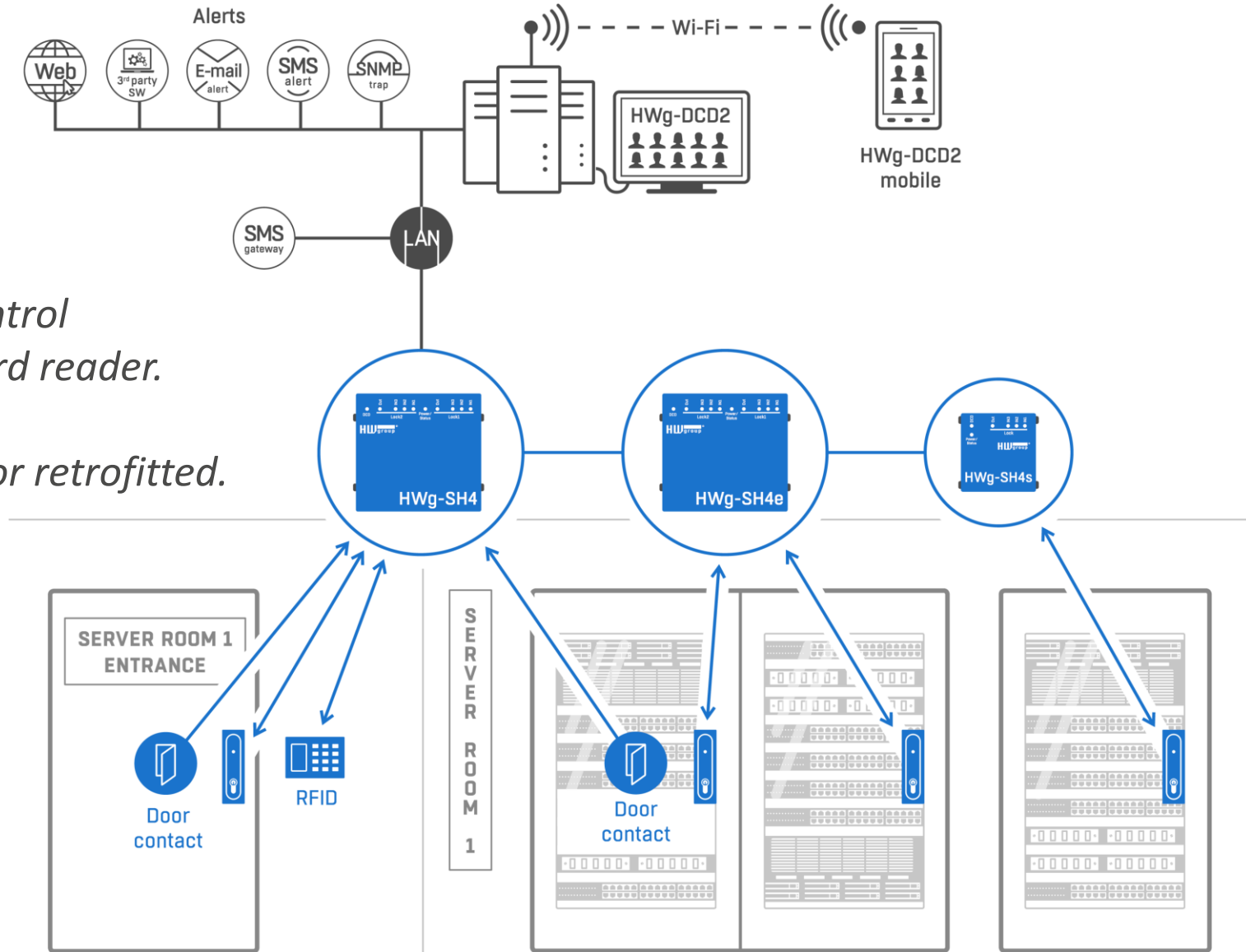
*Solved using the PWR device with M-Bus meters and SO impulse counters.*



# ACCESS CONTROL

*Datacentre and residential access control that works with any lock and RFID card reader.*

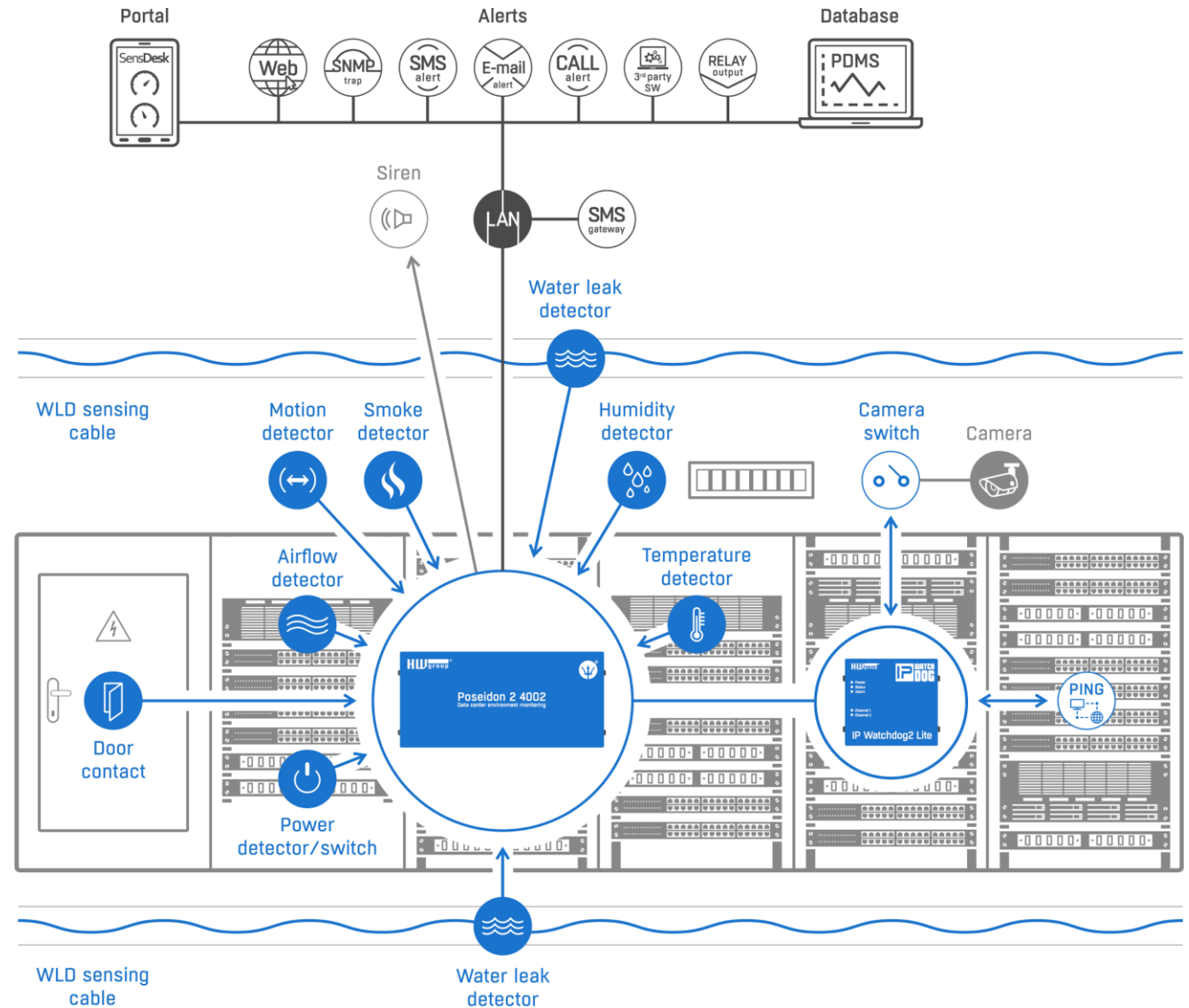
*Our solution can be installed as new or retrofitted.*



# DATACENTERS

*Critical infrastructure and large EMC means cable solution is preferred.*

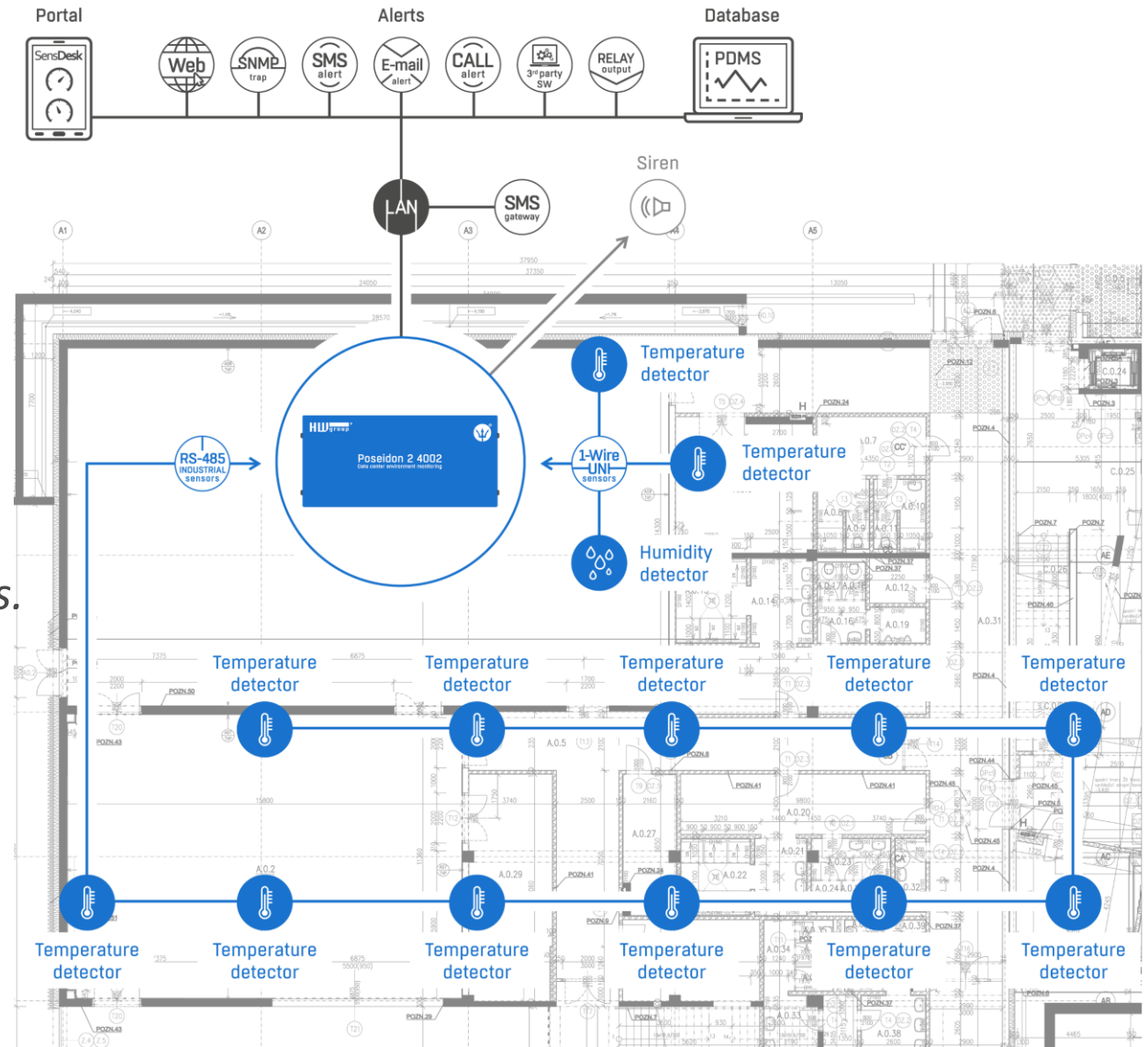
*Temperature and humidity sensors, door contacts, motion, smoke and water leaks. SNMP is a must, portal is a nice addition.*



# INDUSTRY AND MANUFACTURING

*Long range sensor cabling requires RS-484 bus.  
Poseidon2 4002 is used.*

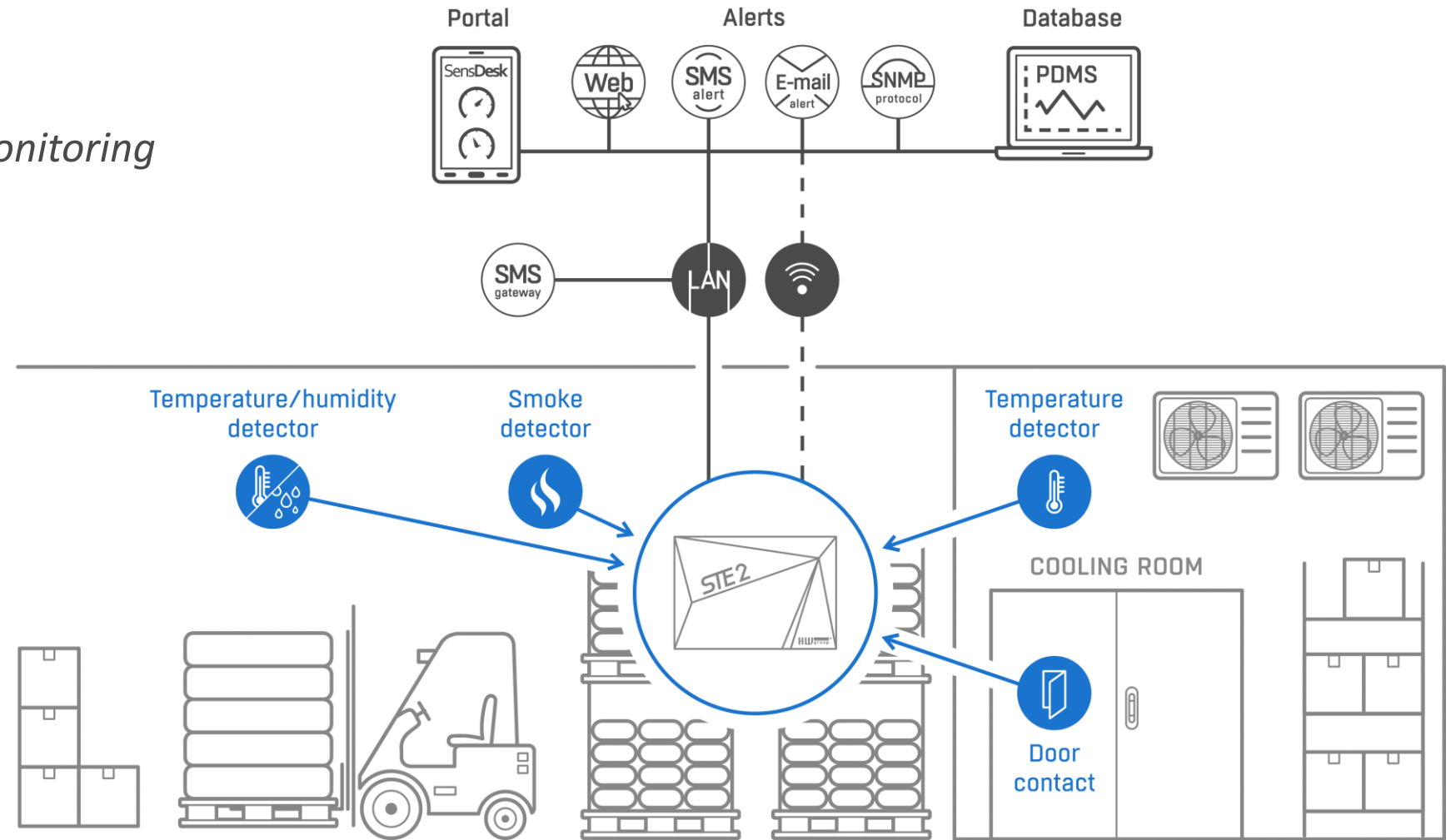
*Lot of I/O points, temperature sensors, water leaks.*



# WAREHOUSES

*Multi point temperature monitoring with STE2 or SD devices.*

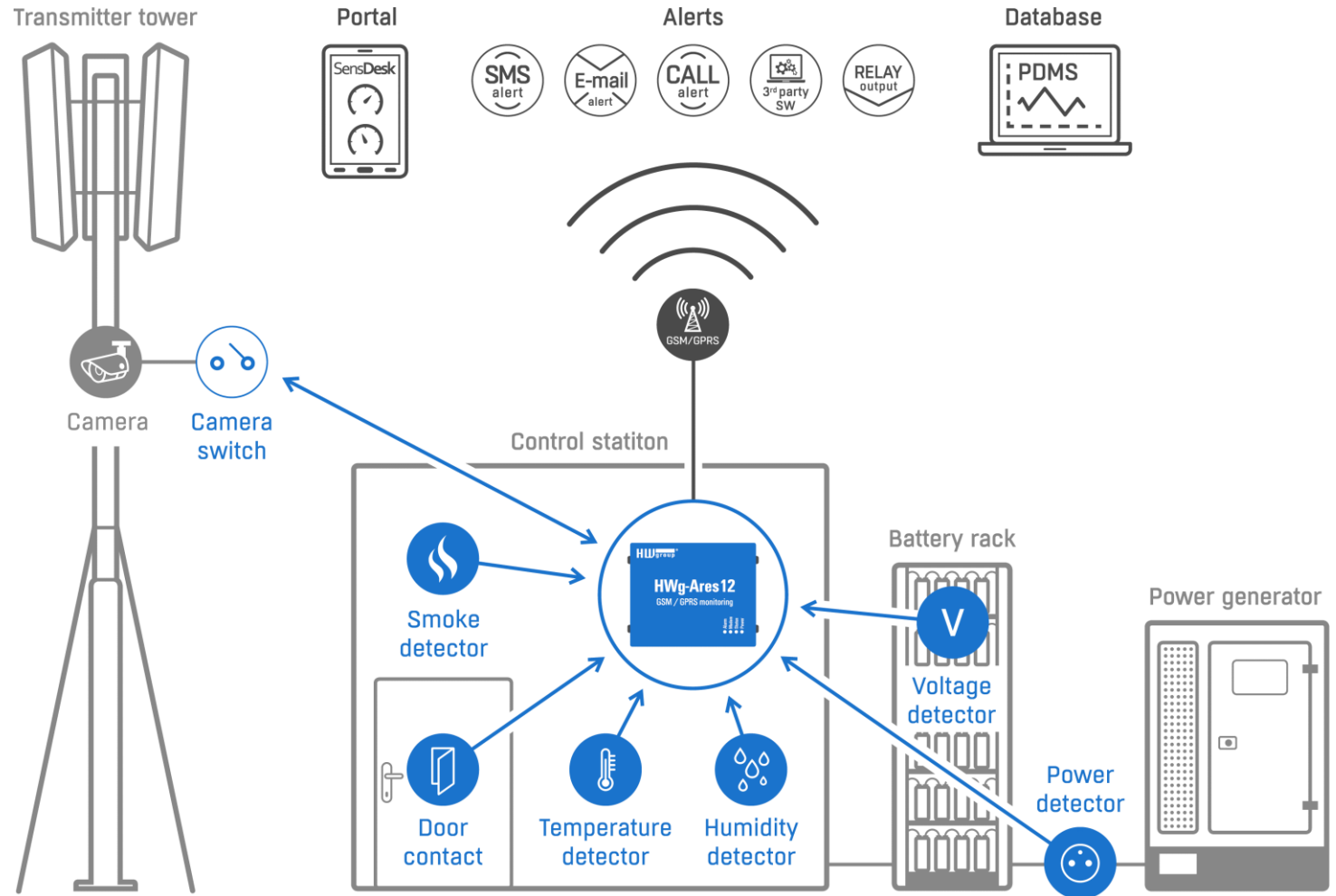
*Door contacts, smoke, fire, air conditioning control.*



# CELL PHONE TOWERS

*Remote locations require LTE, GPRS or NB-IoT. Remote upgrade and management is a must.*

*Usually a monitoring of temperature, intrusion, smoke, UPS, power supply....*







# SensDesk portal

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*You can do with or without the portal. But here is how it makes things easier for you.*

- Ultimate scalability:
  - **SensDesk.com** – end users and small projects
  - **SensDesk Pro** – private and company installations
  - **SensDesk DC** – for distributors and enterprise
- Easy topology and deployment
- Portal for everything:
  - Monitoring, reporting and analysis
  - Alarming and output control
  - Device management and setup
  - Mass operations and upgrades
  - Connects to third party systems

# SensDesk portal

*IoT monitoring portal that you can resell.*

- Robust technology  
(SensDesk.com - over 50000 sensors)
- 8 years of development and testing
- Frequent upgrades and new features.

**Machine**  
Simple se  
all HWg c  
protocol i

**Sensor In alert**

**Solution**

**SensDesk**  
IOT PORTAL BY HW GROUP

Login: John Newman | Help | My account | License | Log out

Dashboard | My Dashboard | Sensors & Detectors | Devices | Groups | **Locations** | My Graph

SensDesk > Locations

### Locations

**Prague - Jažlovická**  
138 Sensors

65 ✓  
27 !  
37 ?  
9 ✕

8 Sublocations

Sublocations	Sensors
Not Assigned	10
Storage	1
1. Floor	3
2. Floor	2
3. Floor	1
Dock	5
Cabin	1
Office	1
Server room 2. floor	1

**10 Devices** + Add Device

**Milan - Via Monte Velino**  
58 Sensors

38 ✓  
12 !  
2 ?  
6 ✕

6 Sublocations

Sublocations	Sensors
Not Assigned	2
Stock	2
Freezer room	1
Server room	3
Server room 2	1
1. Floor	1
2. Floor	1

**8 Devices** + Add Device

**Göteborg - Ekländagatan**  
57 Sensors

42 ✓  
5 !  
9 ?  
1 ✕

2 Sublocations

**5 Devices** + Add Device

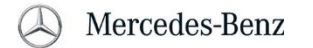
**Create new Location**

+ Add Device

# CUSTOMER REFERENCES

*For the last 17 years we were lucky enough to provide services to the following companies.*

*We would be thrilled if your customers were next.*



Thank you for your  
attention.



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