ioThink® Solutions

Make IoT Simple

Our Markets

Smart Building

Smart Industry

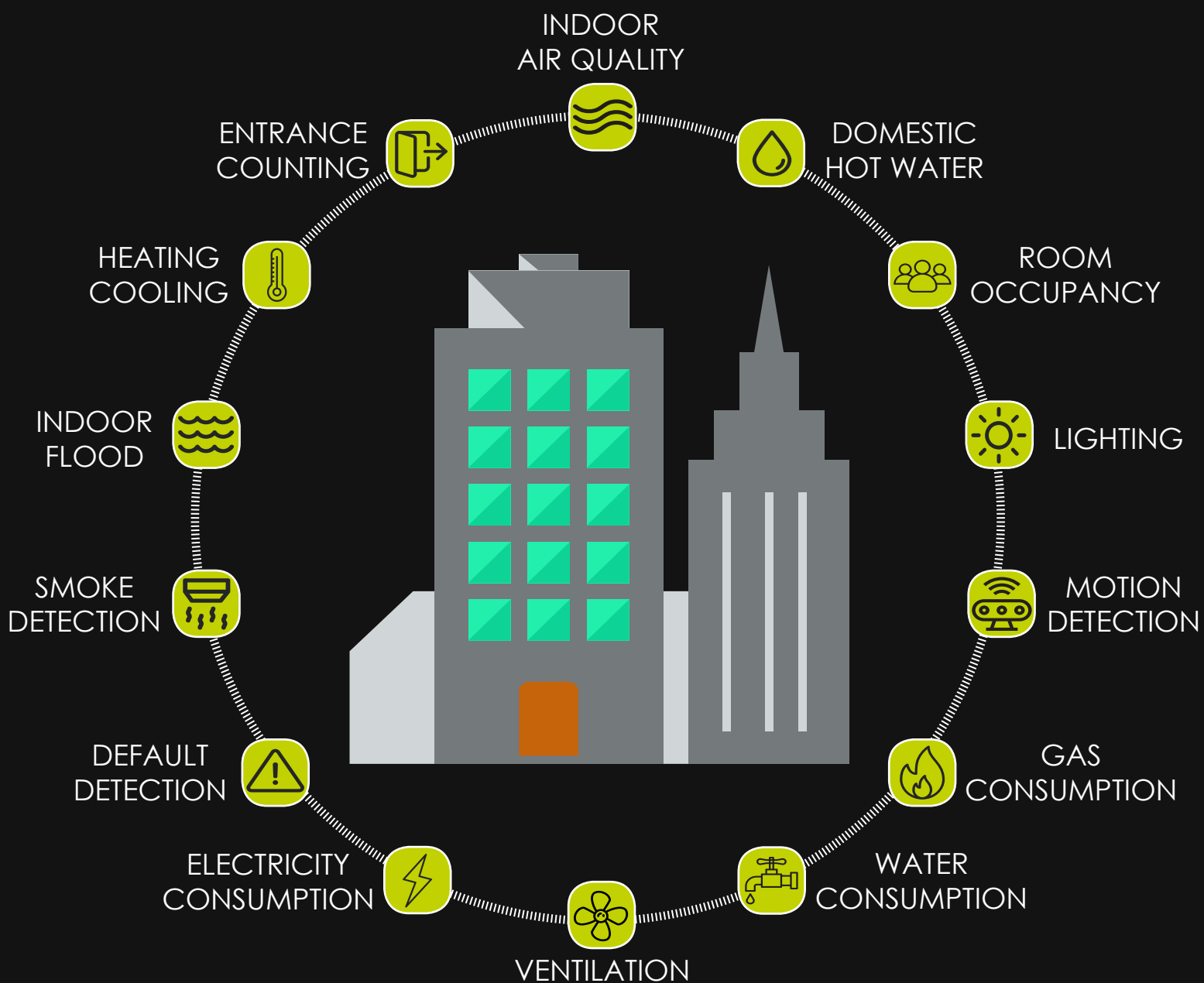**Smart City**

Smart Retail

Smart Energy

Smart Agriculture

SMART BUILDING
Examples of use cases

INDOOR AIR QUALITY

ENTRANCE COUNTING

DOMESTIC HOT WATER

HEATING COOLING

ROOM OCCUPANCY

INDOOR FLOOD

LIGHTING

SMOKE DETECTION

MOTION DETECTION

DEFAULT DETECTION

GAS CONSUMPTION

ELECTRICITY CONSUMPTION

WATER CONSUMPTION

VENTILATION

Make IoT Simple

Smart Building

Indoor Air Quality

Applications:
Indoor air quality is a crucial issue today for health and the environment. Manage your indoor environment to improve the comfort of occupants.

sigfox

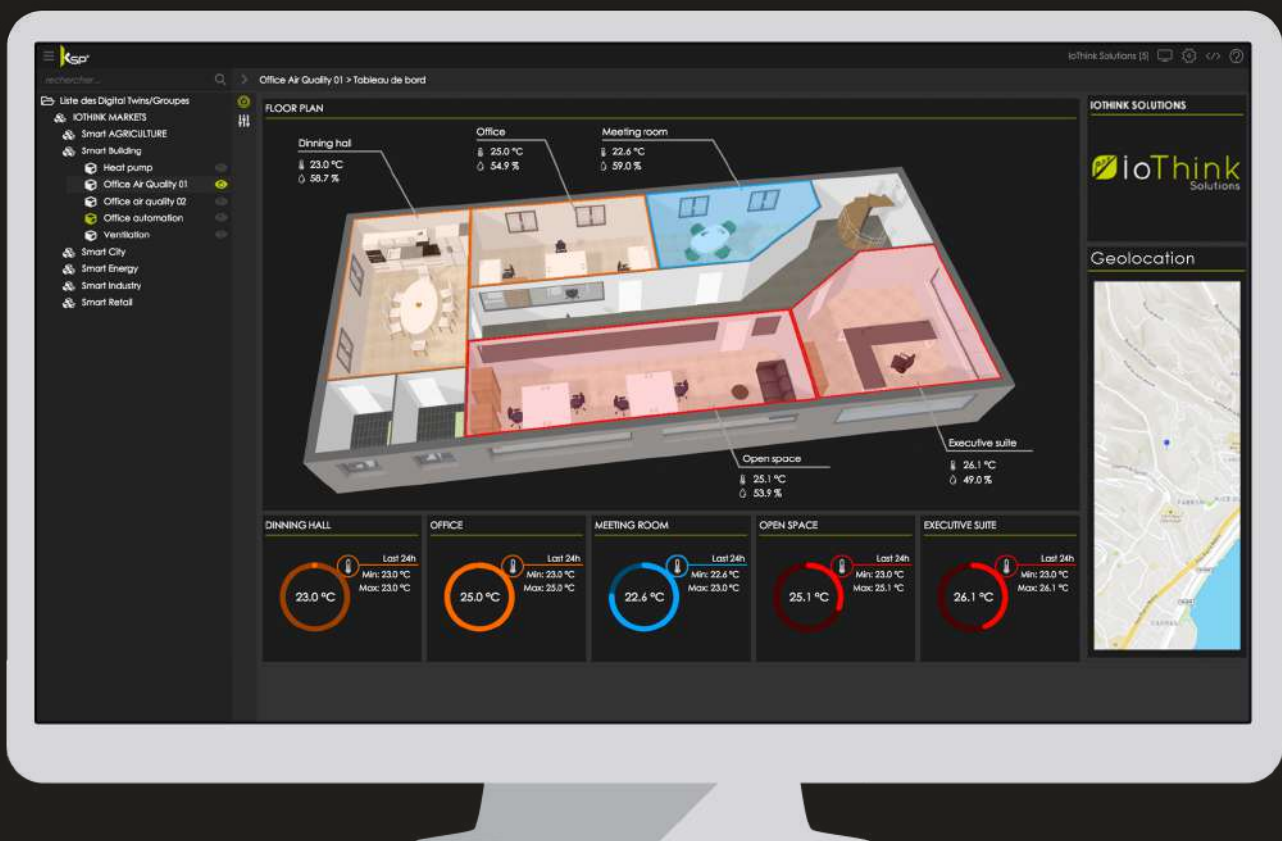| TARGETS	BENEFITS
- Schools, Universities - Offices - Public places - Cities - Hospitals - Residential homes - Property managers - Facility managers - Maintenance contract managers	- Occupant comfort - Regulatory compliance - Real time alerts on overruns - Avoid health risks - Increase performance, concentration of employees

Example: Office Air Quality

Domestic Hot Water

sigfox

Applications:
The reliability and frequency of domestic hot water readings perfectly meets the regulatory requirements related to health problems.

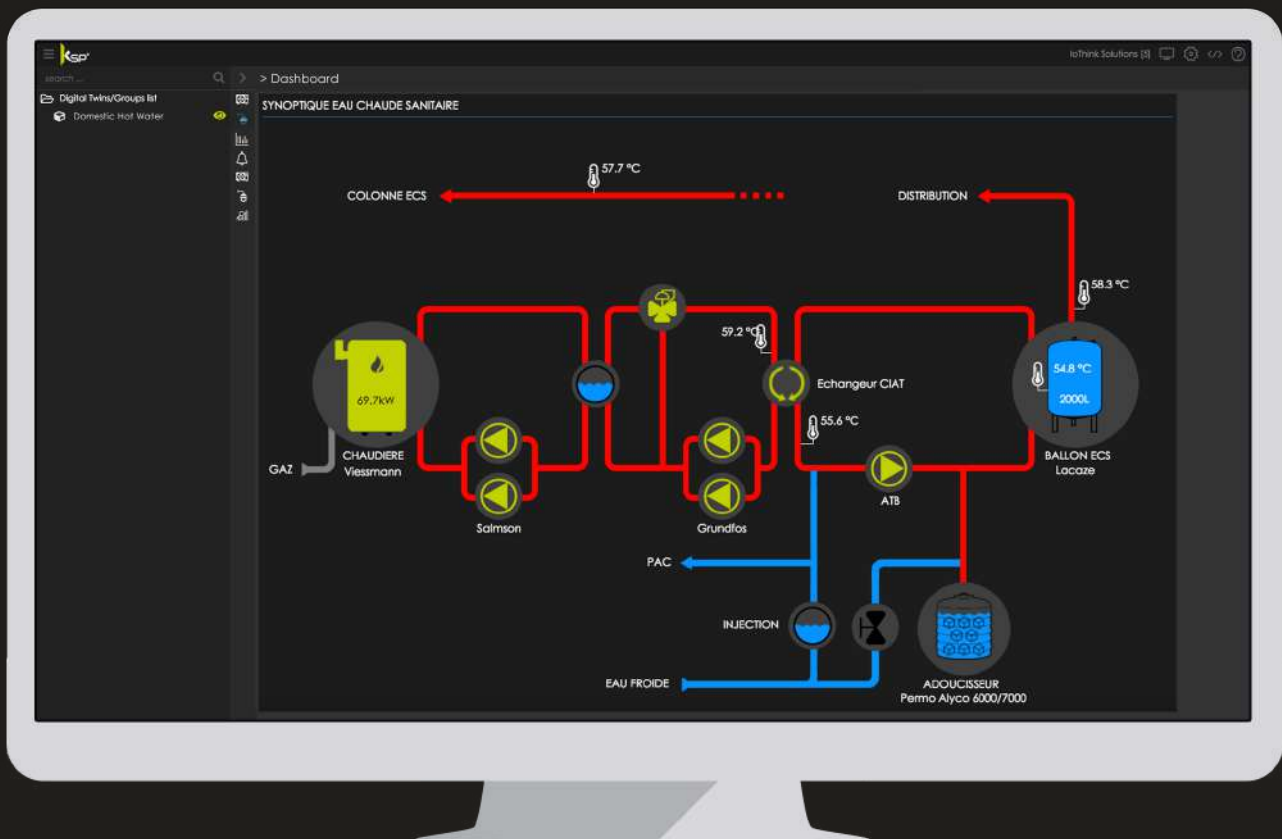| TARGETS	BENEFITS
- Health institutions - Schools, Universities - Public places - Cities - Hospitals - Residential homes - Property managers - Facility managers - Maintenance contract managers	- Automate your regulatory statements - Meet the regulatory requirements - To be alerted in case of overtaking - Limit health risks - Limit the risk of legionella - Ensure occupant comfort

Example: Hotel Domestic Hot Water

Smart Building

Room Occupancy

Applications:
Space occupancy rate surveys can help building managers to improve space use, overall user comfort, and meet regulatory requirements.

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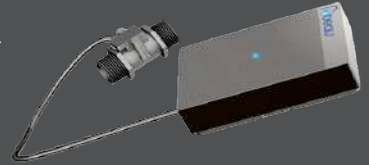| TARGETS	BENEFITS
- Schools, Universities - Offices - Shared workspaces - Hotels - Hospitals - Meeting rooms	- Optimize office space - Reduce the energy consumption according to the presence of occupants (air-conditioning / heating / lighting) - Improvement of maintenance or cleaning tours - Manage the occupancy of meeting rooms - Intrusion detection

Example: School Occupancy

Water Consumption

LoRaWAN

Applications:
Remote meter reading allows to have a global vision of these consumption and to be alerted in real time in case of leaks or overconsumption.
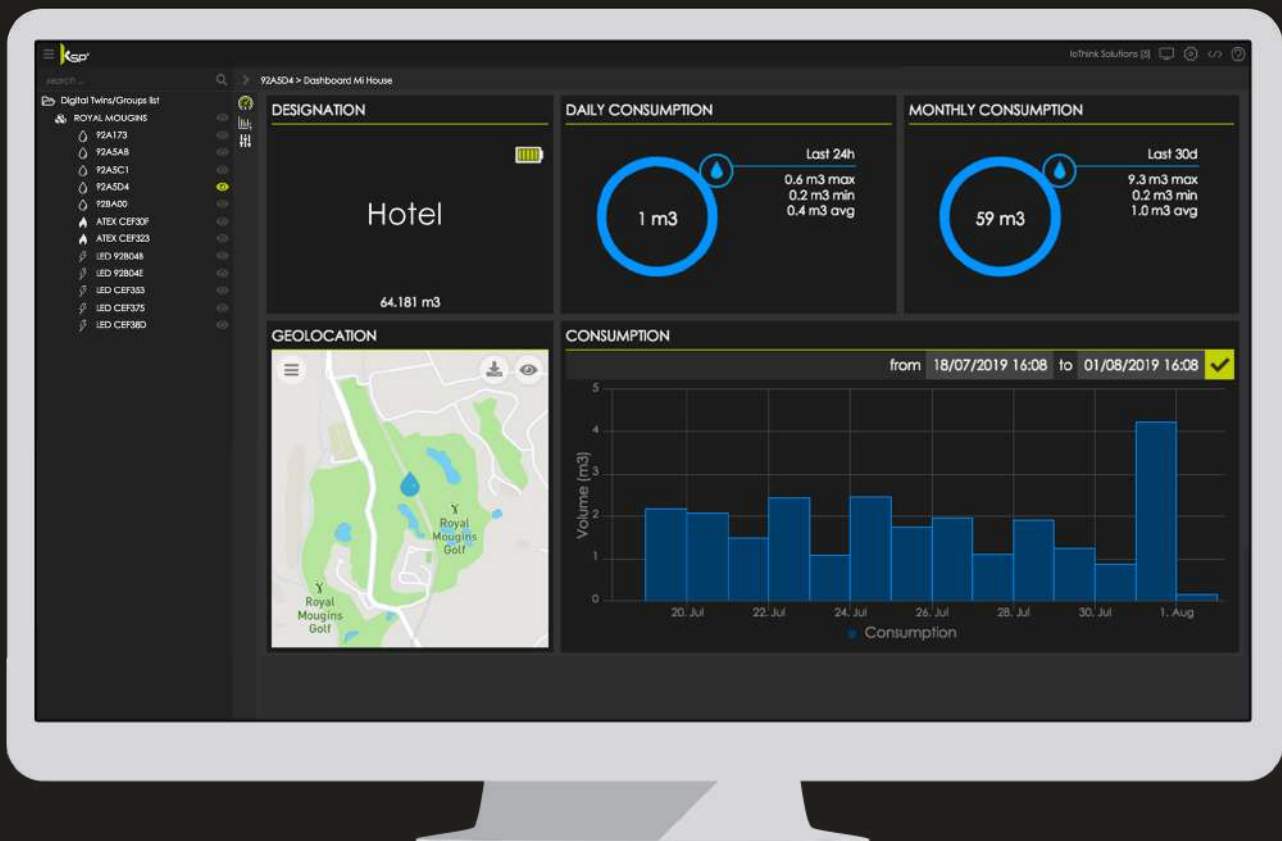
TARGETS
- Schools, Universities
- Offices
- Hotels, Restaurants
- Hospitals
- Residential homes
- Property managers
- Facility managers
- Maintenance contract managers

BENEFITS
- Remote meter consumption
- Leak detection
- Estimated monthly bill
- Avoid on-site visits
- Manage a legacy meters

Example: Hotel Consumption

Smart Building

Electricity Consumption

sigfox

Applications:
Remote electricity reading allows to have a global vision of these consumption and to be alerted in real time in case of overconsumption or breakdowns.

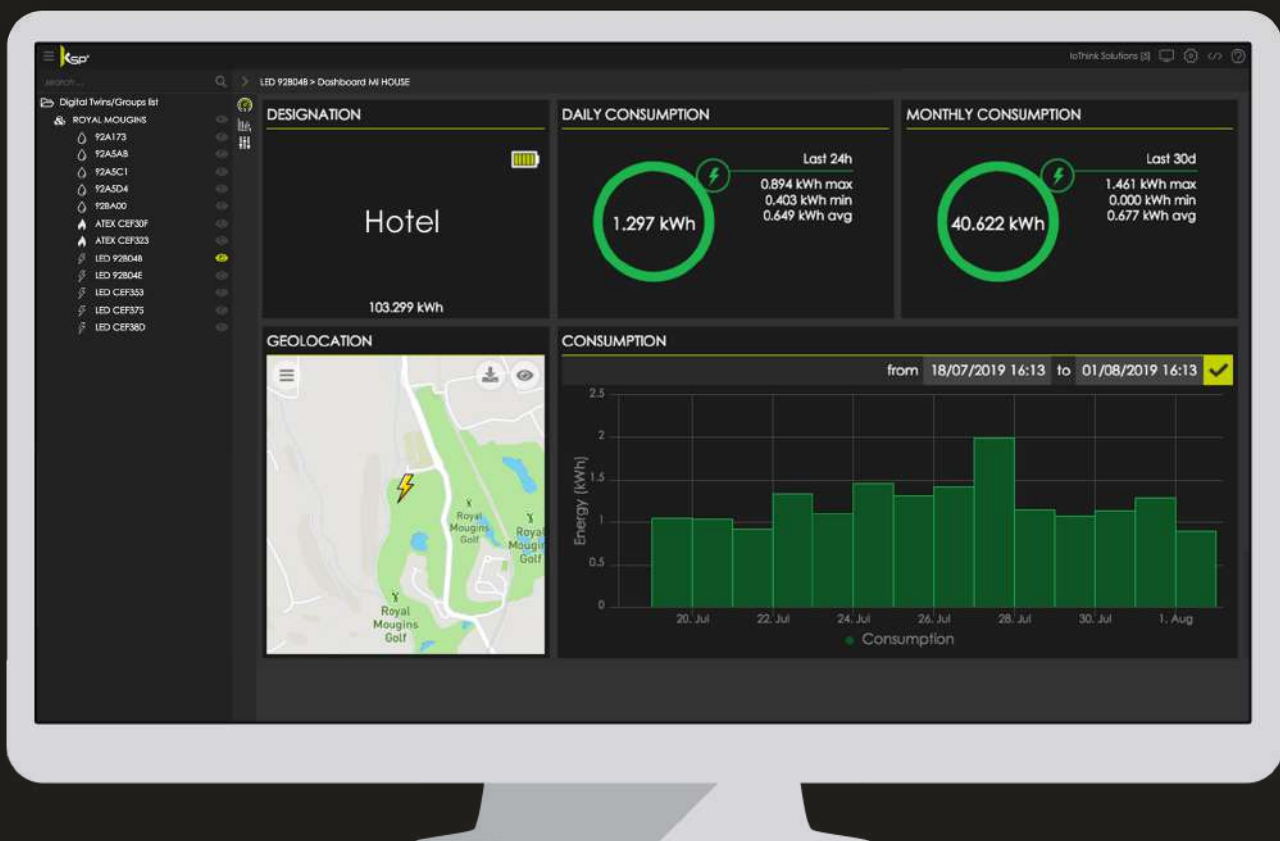| TARGETS |
| --- |
| - Schools, Universities
- Offices
- Hospitals, Restaurants
- Residential homes
- Property managers
- Facility managers
- Maintenance contract managers |

BENEFITS
- Remote meter consumption - Leak detection - Estimated monthly bill - Avoid on-site visits - Manage legacy meters

Example: Restaurant Consumption

Smart Building

Smoke Detection

Applications:
In case of smoke detection, it is very important to be alerted as soon as possible to avoid too much damage.

sigfox
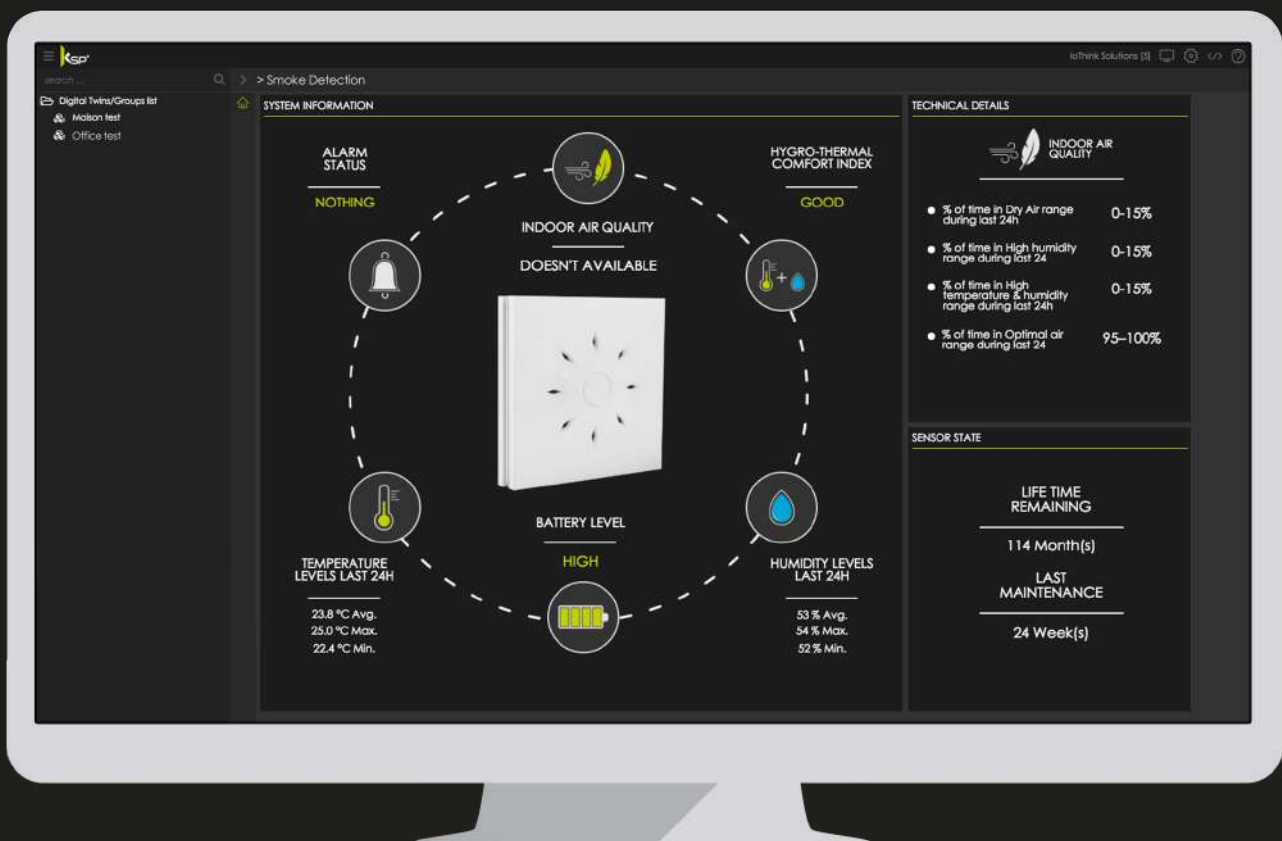
TARGETS
- Schools, Universities - Offices - Hospitals, Restaurants - Residential homes - Property managers - Facility managers - Maintenance contract managers

BENEFITS
- Remotely alerted - Localization on plan - Reactivity in case of intervention - Centralized tracking of detectors - Battery levels in real time

Example: Office Smoke Detection

Ventilation

Applications:
Building ventilation contributes to comfort and air quality by removing pollutants (odors, moisture, combustion products from heaters, microbes, etc.).

LoRaWAN

sigfox

TARGETS
- Schools, Universities - Offices - Public places - Cities - Hospitals - Residential homes - Property managers

BENEFITS
- Verification of ventilation - Dirty filters - Preventive maintenance - Opening trap detection - Monitor a fleet of controlled mechanichal ventilations

Example: Ventilation Box

Heating / Cooling

Applications:

Remotely manage your thermal energy equipment in your building. Monitor your temperature in real time and save energy.
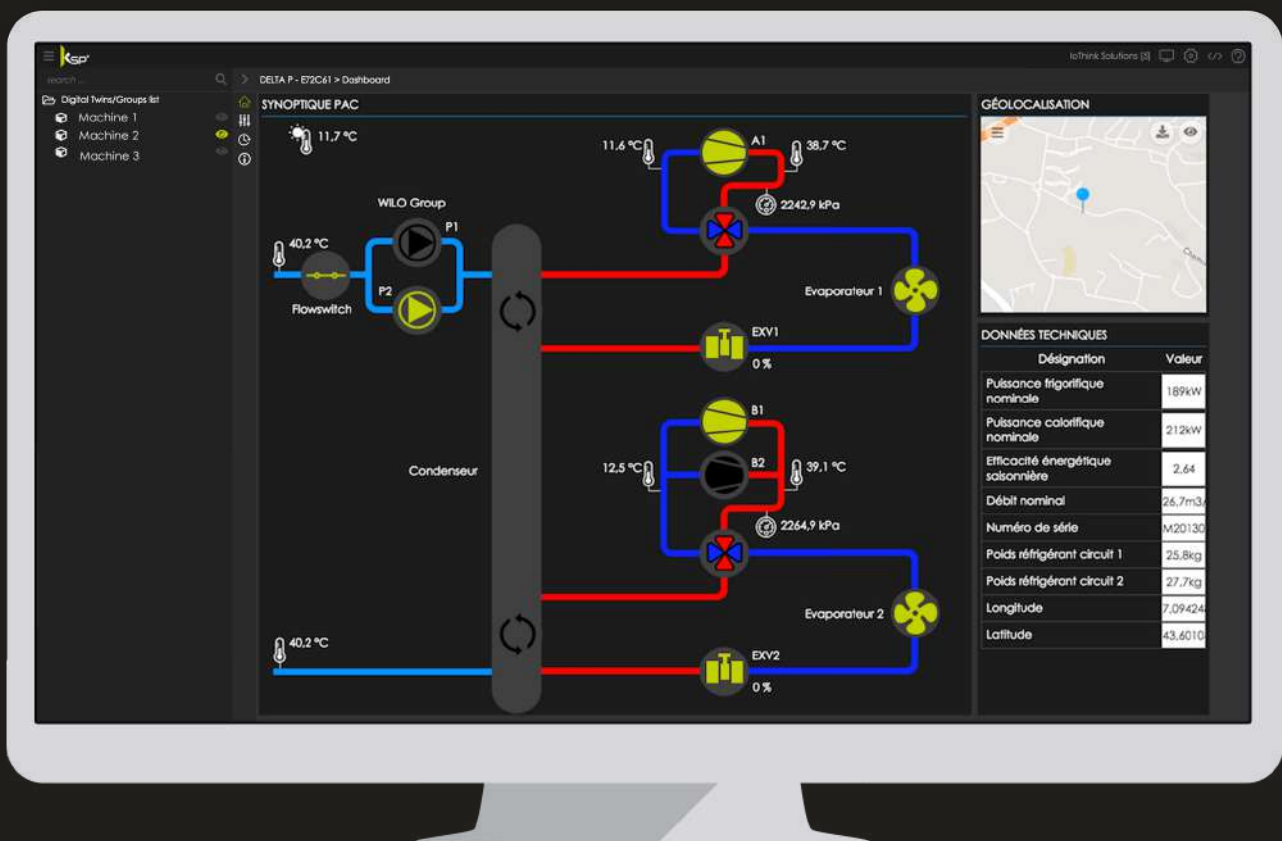
LoRaWAN

sigfox

TARGETS
- Schools, Universities - Offices - Public places - Cities - Hospitals - Residential homes - Property managers

BENEFITS
- Temperature inlet / outlet - Improve occupant comfort - Control change over / set points - Faults detection - Preventive maintenance

Example: Heat Pump

SMART CITY
Examples of use cases

OUTSIDE
AIR QUALITY

ENTRANCE
COUNTING

WASTEWATER
TREATMENT
PLANT

FLOOD
MONITORING

WASTE
MANAGEMENT

TANKS
MONITORING

STREET
LIGHTNING

DOMESTIC
HOT WATER

GARDEN
WATERING

VEHICLES
TRACKING

GAS
CONSUMPTION

ELECTRICITY
CONSUMPTION

WATER
CONSUMPTION

PARKING
MANAGEMENT

Make IoT Simple

Smart City

Tank Monitoring

Applications:
Manage your inventory more efficiently, improve your internal organization save time for you technicans team.

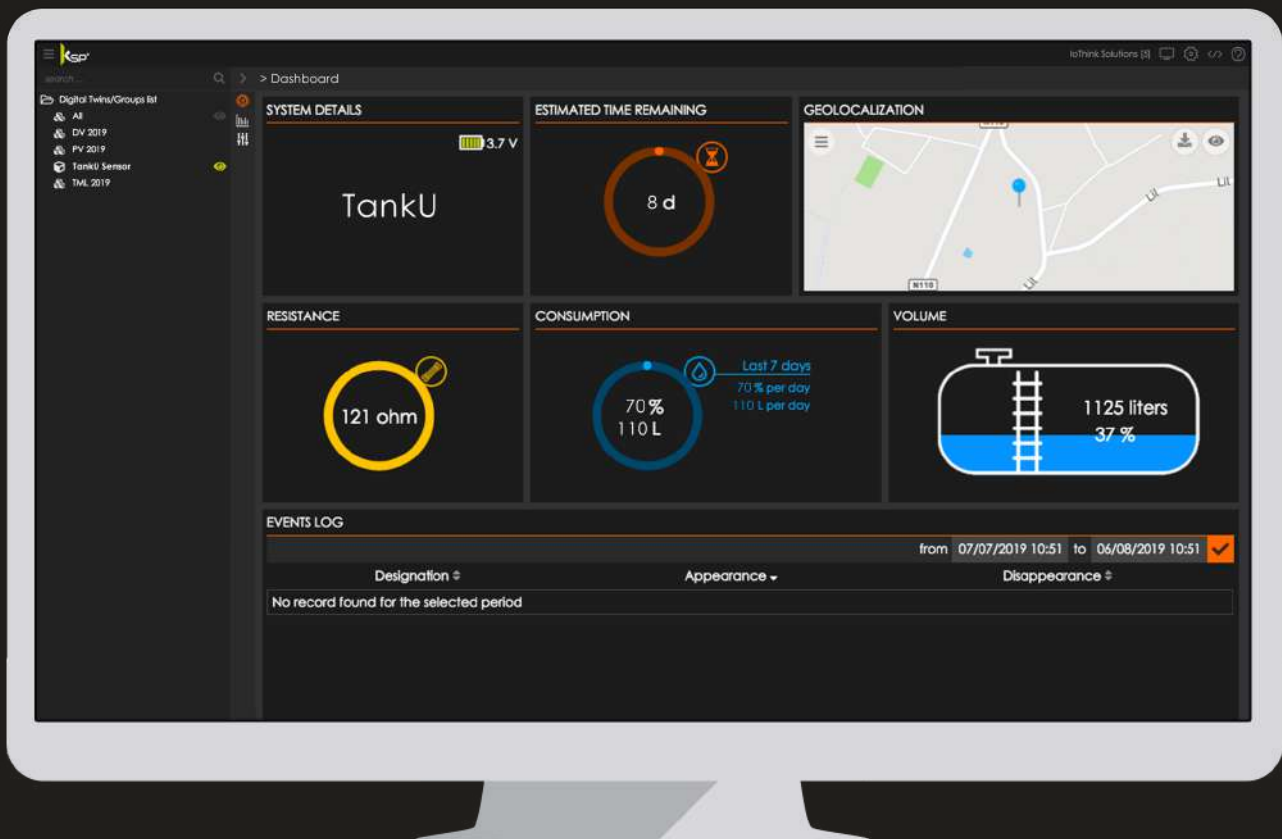sigfox

TARGETS
- Operators of different products (Oil, fuel oil, water, sanitation products) - Cities

BENEFITS
- Status of legacy tanks - Optimization of tours - Geolocation of tanks - Calculation and prediction of autonomy - Volume calculation of tanks - Reduce logistic costs - Avoid emergency interventions

Example: Water Tank Monitoring

Smart City

Tracking

Applications:
Track valuable assets and create new service opportunities. Manage inventory and improve operations with real-time information.

sigfox
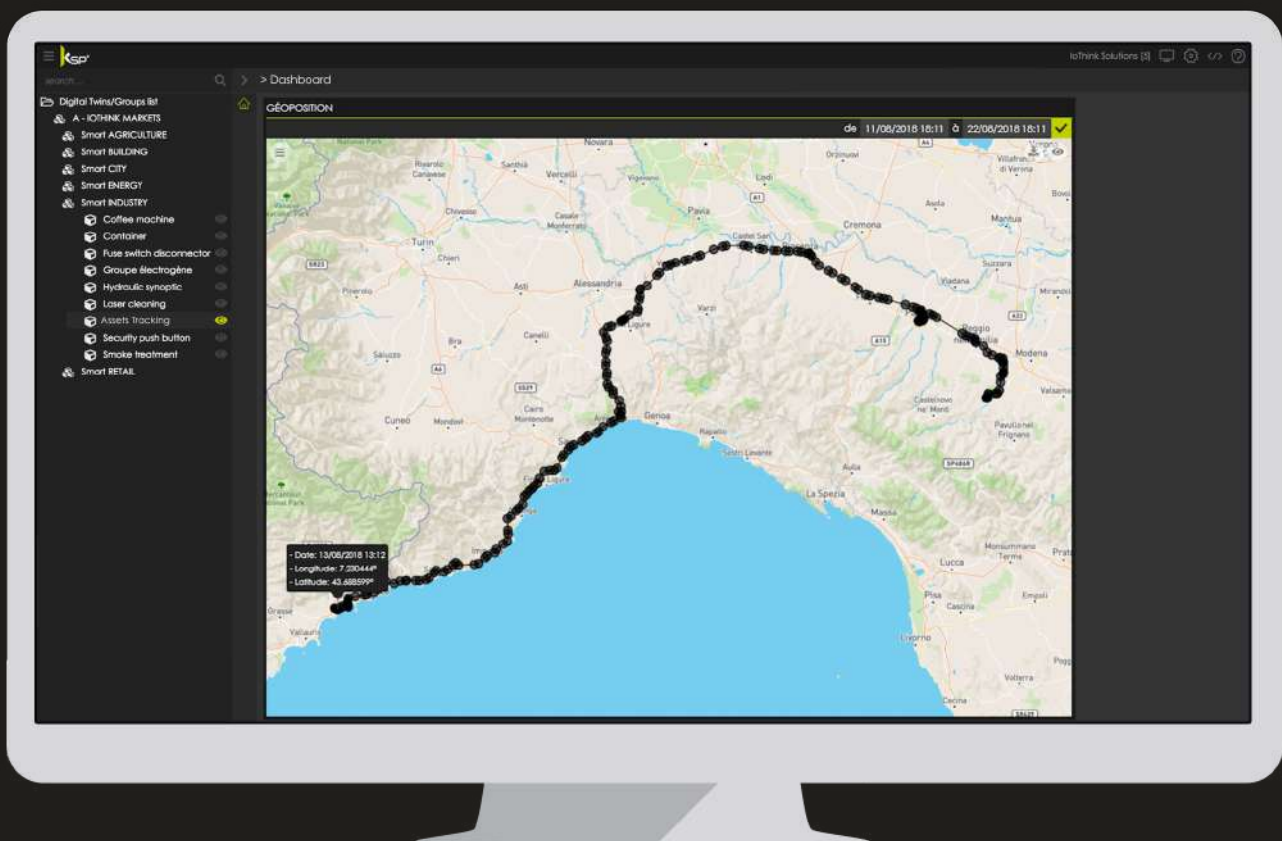
TARGETS
- Operators - Cities - Carriers - Industrials - Farmers

BENEFITS
- Locate assets in real time - Geofencing / alerts - Robbery Detection - Shock detection - Optimization of logistic - Manage inventories - Status of legacy assets in real-time

Example: Assets Tracking

Garden Watering

LoRaWAN

Applications:

Remote management of watering in public gardens, save water and improve public places management.
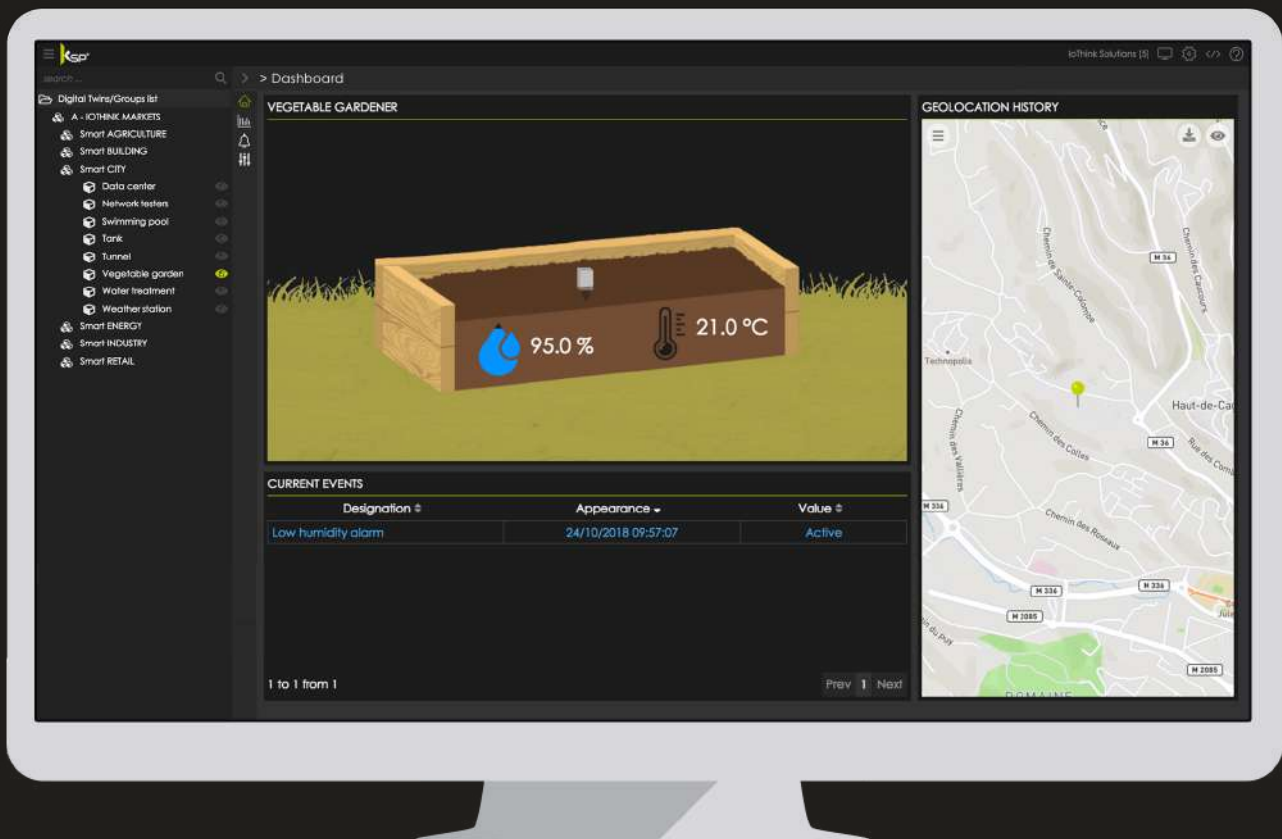
TARGETS	BENEFITS
- Gardens - Public parks - Zoos - Cities	- Optimize water consumption - Leak detection - Coupling with hygrometry, rainfall - Irrigation by zones - Remote manual control - Measurement of consumption - Estimated monthly bill

Example: Public Garden Watering

Parking Management

Applications:

Visualization of the occupancy rate, manage parking and offer parking spaces in an underground car park or on public roads.

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TARGETS	BENEFITS
- Public car parks - Shopping centers - Cities - Company parkings	- Parking map - Real time fill rate - Availability of cars places in real time - Geolocation of places - Sharing urban space

Example: Company parking

Gas Consumption

Applications:

Remote gas reading allows to have a global vision of these consumption and to be alerted in real time in case of over-consumption or leaks.

TARGETS	BENEFITS
- Schools, Universities - Offices - Hospitals, Restaurants - Residential homes - Property managers - Facility managers - Maintenance contract managers	- Remote meter consumption - Leak detection - Estimated monthly bill - Avoid on-site visits - Manage legacy meters

Example: Gas Consumption

Wastewater Treatment Plan

3G

Applications:

The connected wastewater treatment plants are able to respond to major territorial and economic issues. Remotely manage your wastewater treatment plant and detect malfunctions in real time.
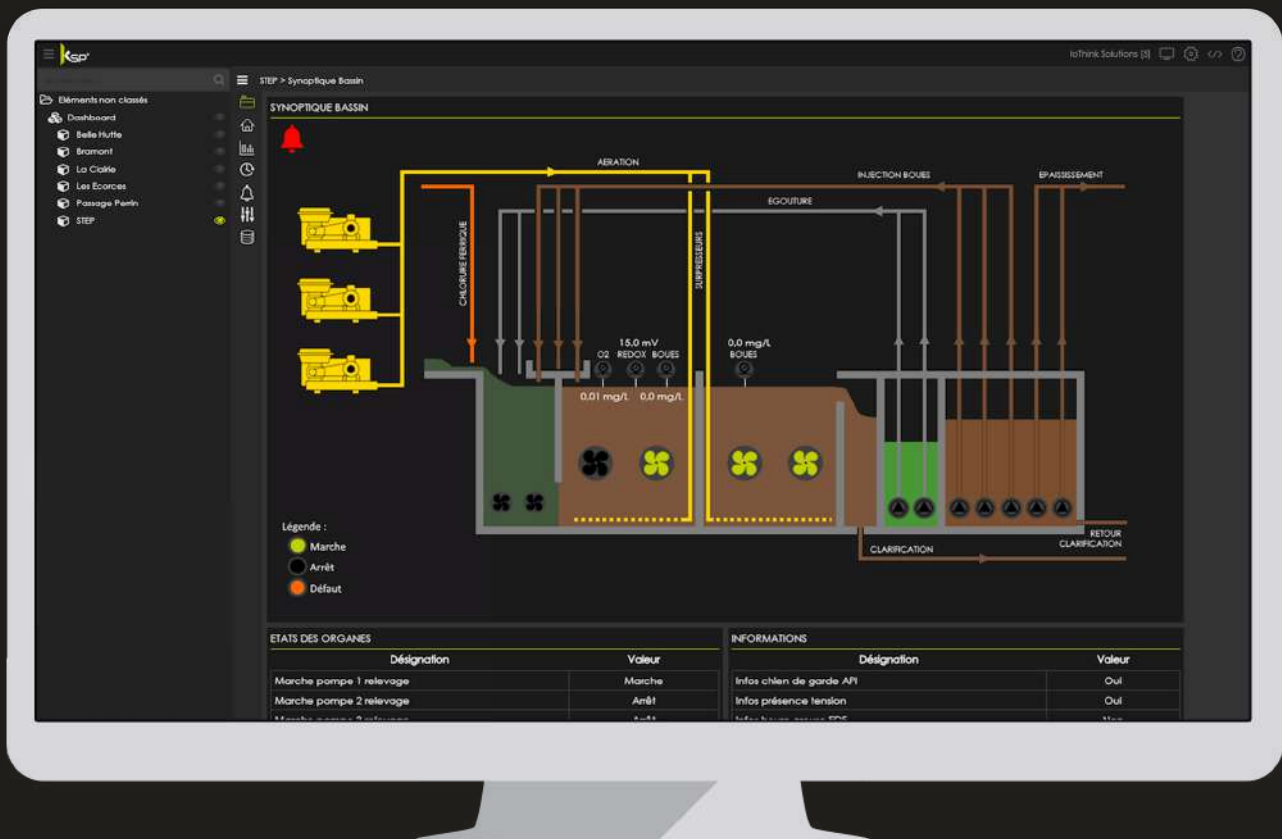
TARGETS
- Wastewater treatment plan

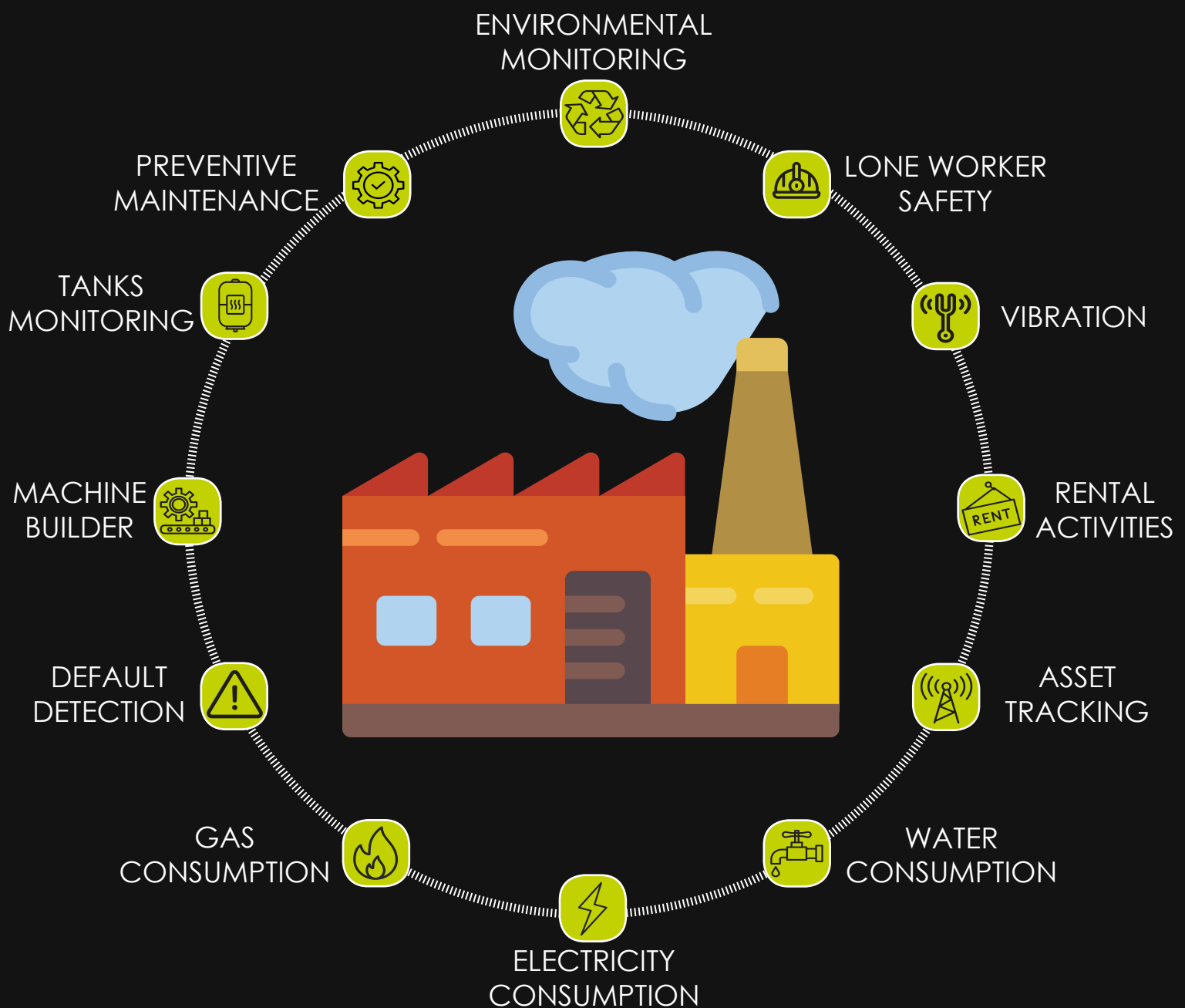| BENEFITS |
|---|
| - Real time status of the plant |
| - Remote manual control |
| - Faults detection |
| - Preventive maintenance |
| - On-call management |
| - Regulatory records |
| - Reporting |

Example: Waste Treatment Plan

SMART INDUSTRY
Examples of use cases

ENVIRONMENTAL MONITORING

PREVENTIVE MAINTENANCE

LONE WORKER SAFETY

TANKS MONITORING

VIBRATION

MACHINE BUILDER

RENTAL ACTIVITIES

DEFAULT DETECTION

ASSET TRACKING

GAS CONSUMPTION

WATER CONSUMPTION

ELECTRICITY CONSUMPTION

Make IoT Simple

Rental Activities

Applications:

The remote management of a fleet of rental equipment is an added value for rental companies. Visualize in real time the geolocation and the operation of your equipment.
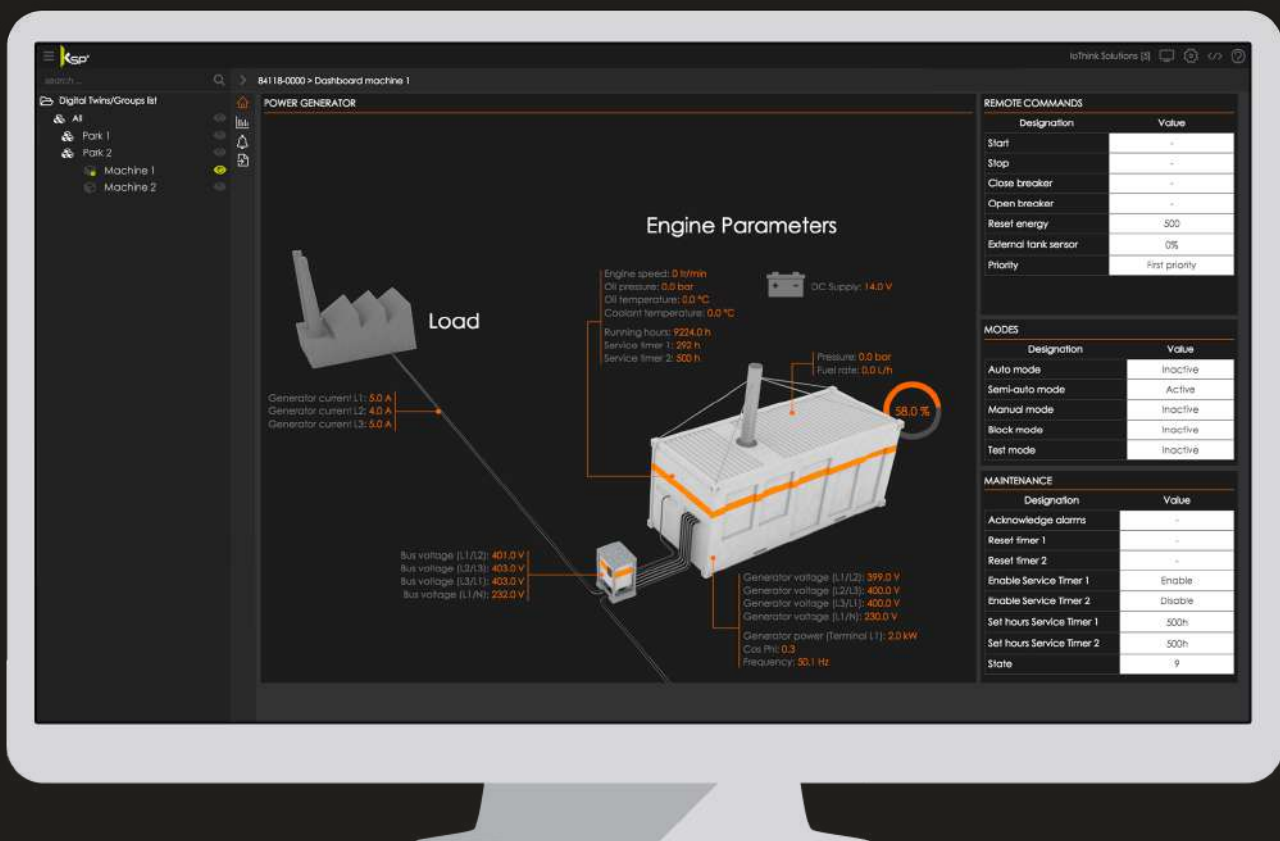
4G

TARGETS
- Power generators
- Cranes
- Forklifts
- Chillers
- Pumps
- Gateways

BENEFITS
- Real time geolocation of the fleet
- Increase the machine availability rate
- Reporting at end of rental period
- Geofencing / robbery detection
- Taking remote Control
- Real time inventory

Example: Power Generators

Assets Tracking

Applications:
Define virtual barriers for your assets and be alerted in case of zone overruns.

3G sigfox

TARGETS
- Machines builders - Carriers - Warehouses and logistic - Rental machines - Operators - Heavy machines - Agricultural equipment

BENEFITS
- Locate assets in real time - Geofencing: entry / exit of authorized perimeter - Robbery detection, shocks - Movement detection outside allowed perimetre - Manage inventories

Example: Geofencing

Machine Builder

3G

Applications:

The industrial equipment sector describes a diverse set of industries. Create added value by connecting your industrial machines.
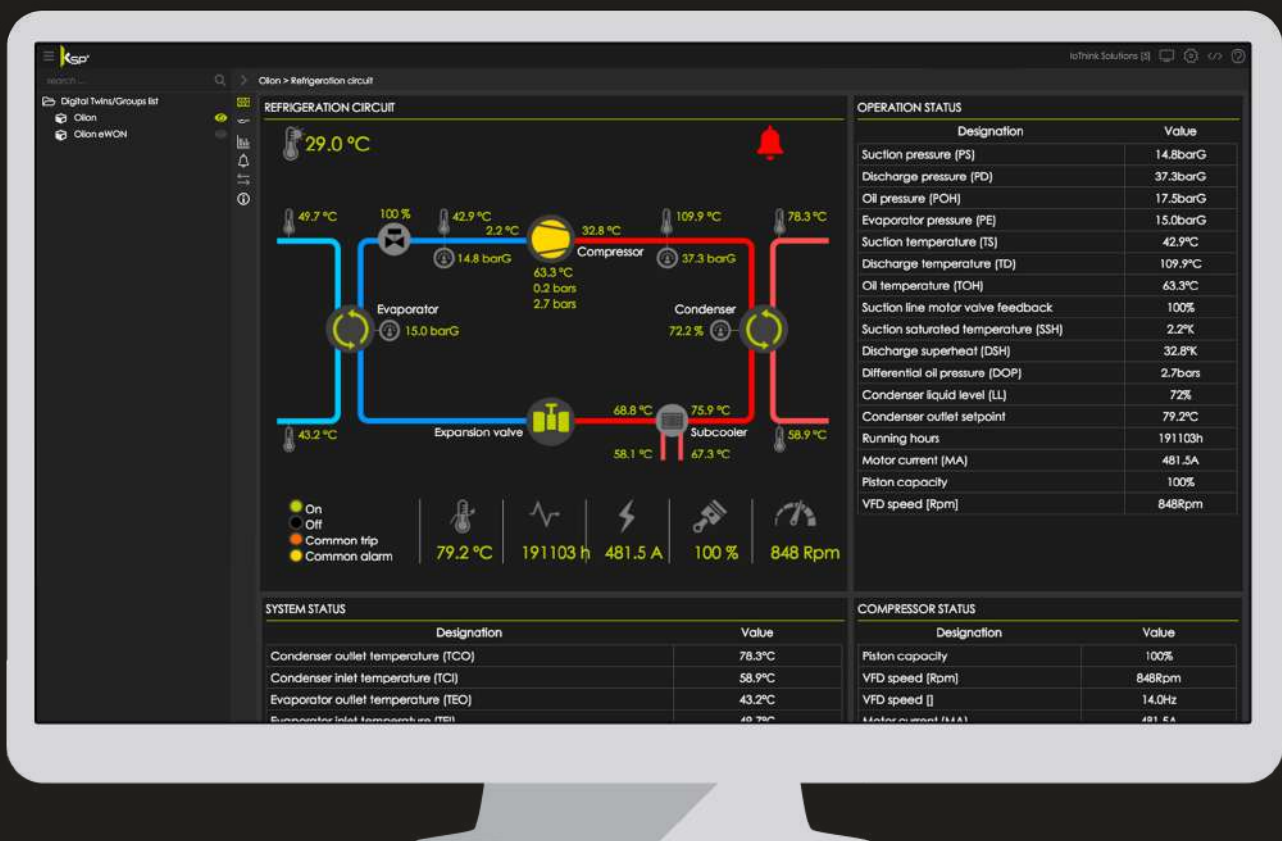
TARGETS
- Power generators
- Chillers, heat pumps
- AHU
- Rooftops
- Boilers
- Lasers cleaning machine
- Pumps

BENEFITS
- Increase availability rate
- Faults detection
- Preventive maintenance
- Operation / maintenance reports
- Remote settings
- Machine maintenance reporting

Example: Refrigeration Machine

Smart Industry

Tank Monitoring

Applications:

Optimize the management of your fluids and monitor the filling levels remotely. Manage your single tanks and your stockyard.
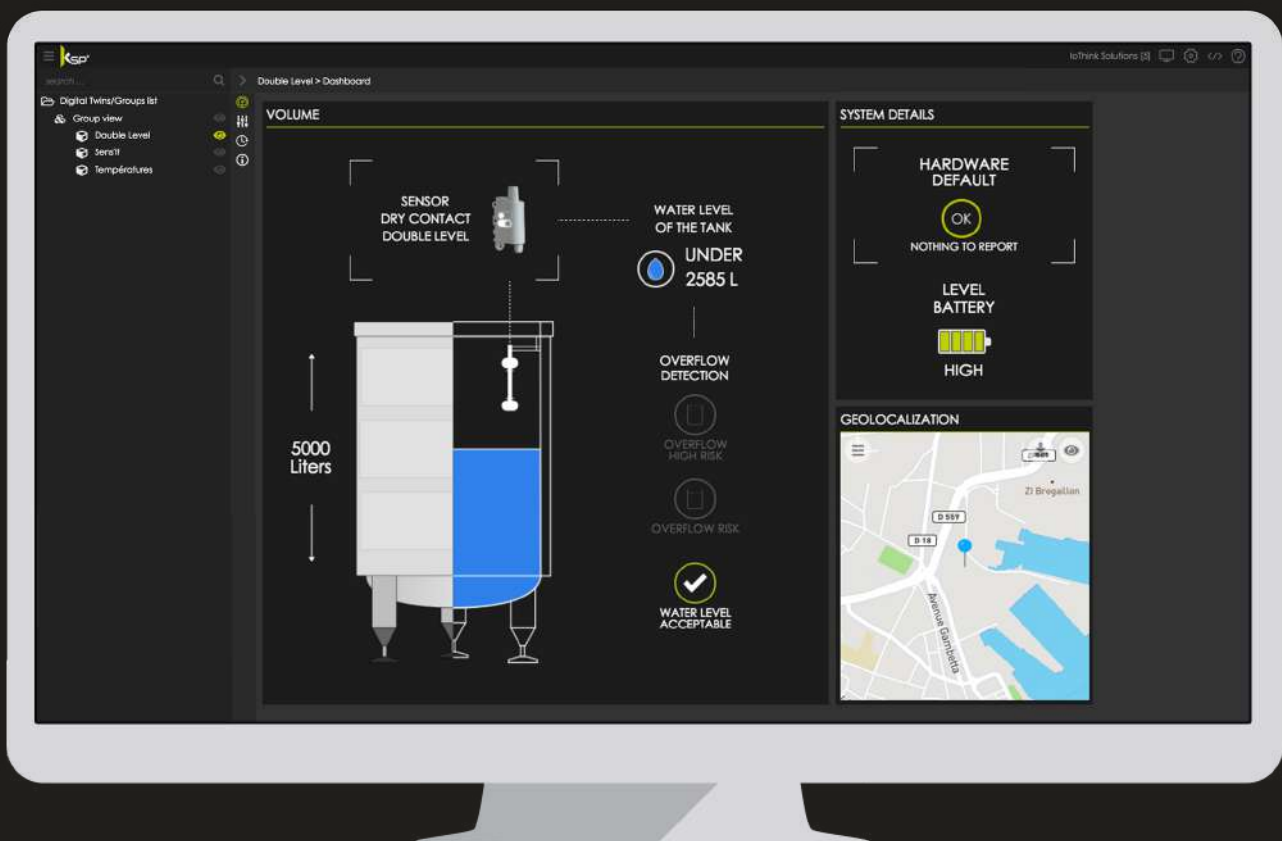
sigfox

TARGETS

- Industrial lubrication tank
- Gas & oil bulk tank
- Cryogenic tank
- Hazardous chemical tank
- Waste oil industry

BENEFITS

- Status of legacy tanks
- Optimization of tours
- Geolocation of tanks
- Calculation and prediction of autonomy
- Volume calculation of tanks
- Reduce logistic costs
- Avoid emergency interventions

Example: Water Level

Fault Detection

Applications:

Detect in real time the faults and malfunctions of your equipment. Save time and improve the security of your facilities.
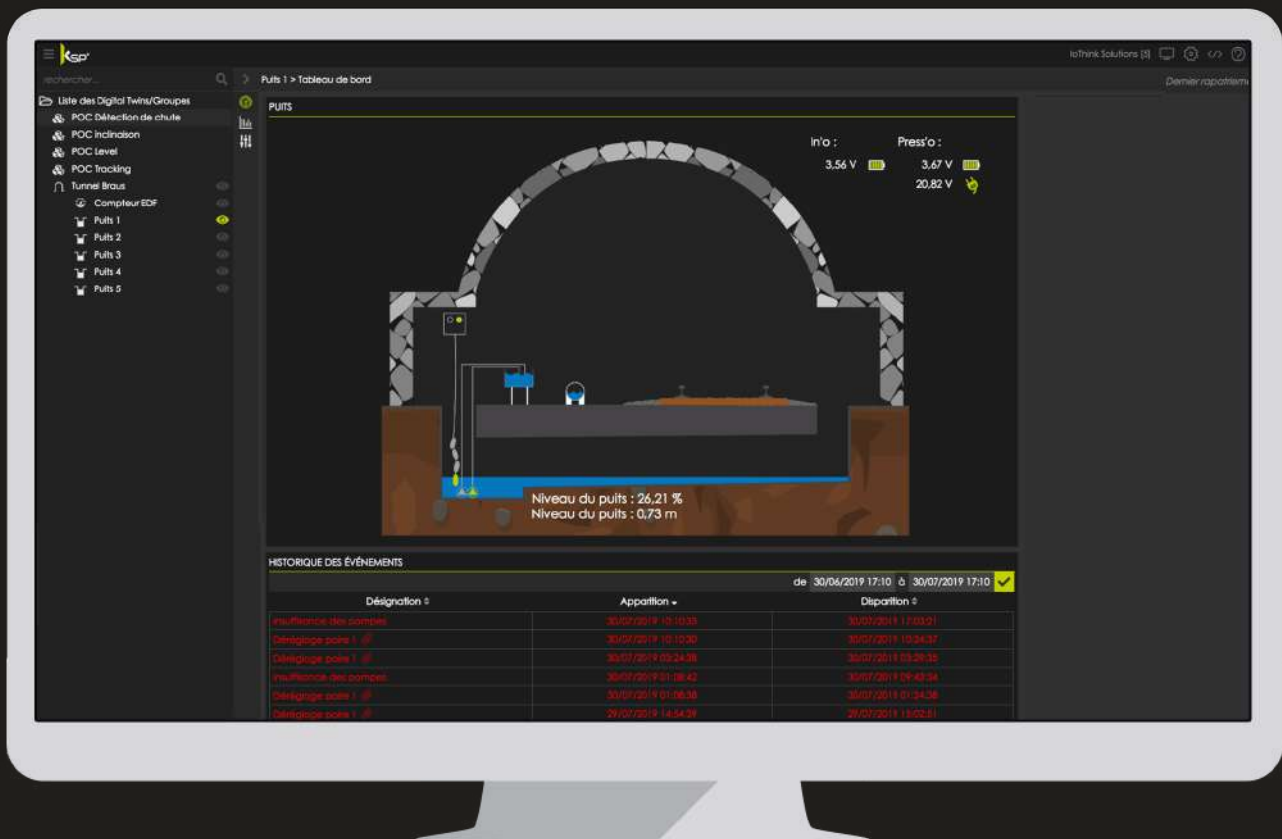
LoRaWAN

3G

TARGETS	BENEFITS
- Power generators - HVAC machines - Pumps - Submersible pumps	- Real-time status of a fleet of equipment - Faults detection - Quick intervention on site - On-call management - Increase the machine availability rate - Geolocation of equipment

Example: Submersion Detection

SMART RETAIL
Examples of use cases

COLD
CHAIN MONITORING

PREVENTIVE
MAINTENANCE

ENTRANCE
COUNTING

DEFAULT
DETECTION

COLD
ROOM

ASSET
TRACKING

FRIDGE

ELECTRICITY
CONSUMPTION

Make IoT Simple

Cold Chain

Applications:
The cold chain involves the transportation of temperature sensitive products along a supply chain.

sigfox

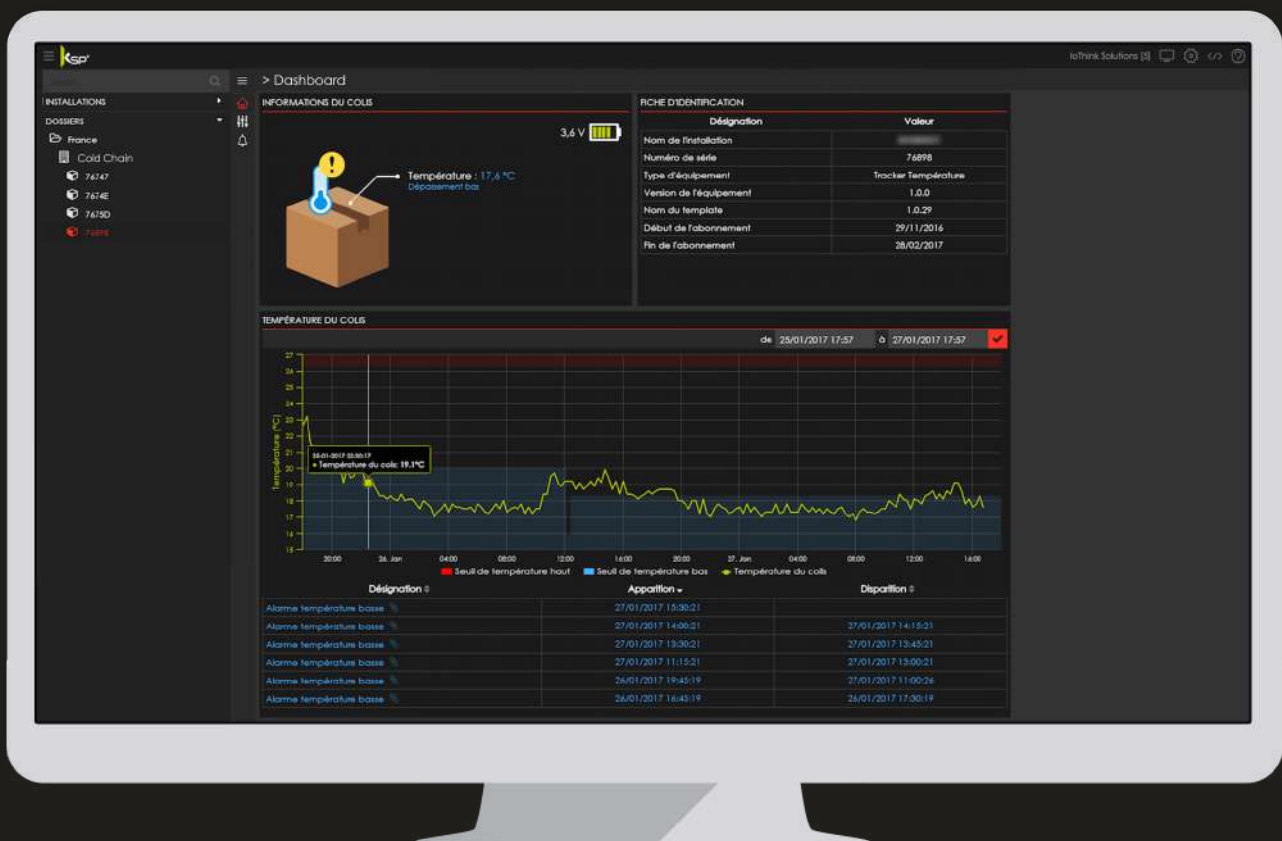| TARGETS	BENEFITS
- Refrigerated packages - Refrigerated trucks - Carriers	- Regulatory records - Automated reports - Traceability of temperatures - Overrun alerts temperature - Limitation of loss - Fast intervention - Real time geolocation

Example: Supply Chain

Cold Room

Applications:

Monitor with accuracy the temperature and operation of your cold rooms for your food products and meet sanitary requirements.

TARGETS	BENEFITS
- Restaurants - Cities - Butchers - Florists - Hotels - Ice creams - Pharmaceutical industries - Cosmetics	- Regulatory records - Automated reports - Traceability of temperatures - Overrun alerts temperature - Limitation of loss - Door opening detection - Fast intervention

Example: Restaurant Cold Room

Smart Retail

Fridge

Applications:

Improve the efficiency of your fridge, remotely control your equipment and detect faults or failures in real time.
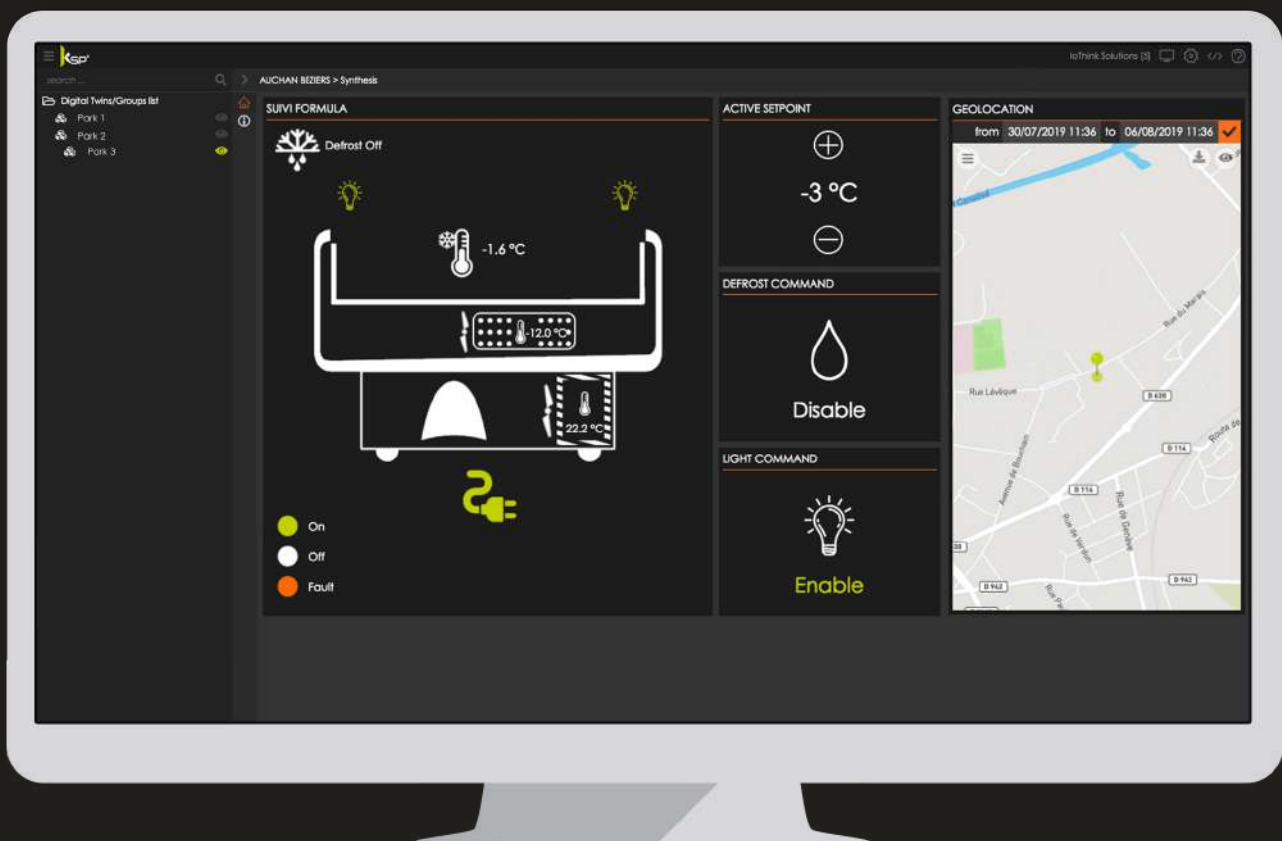
3G

TARGETS
- Supermarkets, Hypermarkets - Butchers - Fishmongers - Ice creams

BENEFITS
- Regulatory records - Automated reports - Traceability of temperatures - Overrun alerts temperature - Limitation of loss - Fast intervention - Real time geolocation

Example: Supermarket Fridge

Faults Detection

Applications:
Be alerted in real time in case of failure, malfunction of your installation. Save time and efficiency in your maintenance.

3G

TARGETS
- Supermarkets, Hypermarkets - Butchers - Fishmongers

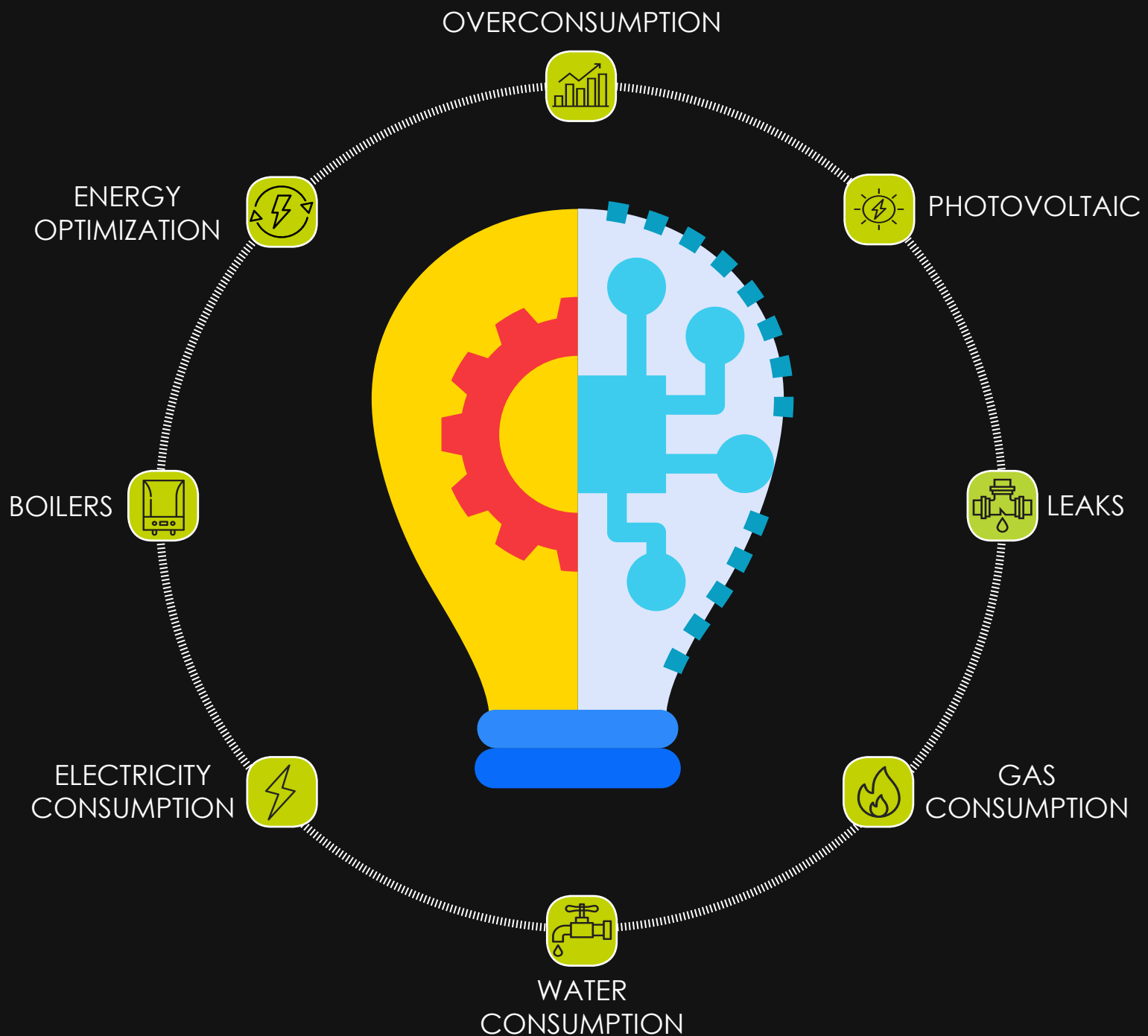| BENEFITS |
|---|
| - Real-time status of your fleet
- Faults detection
- Quick intervention on site
- On-call management
- Increased machine lifetime
- Increase the availability rate of the machine
- Geolocation of equipment |

Example: Operation Check

SMART ENERGY
Examples of use cases

OVERCONSUMPTION

ENERGY OPTIMIZATION

PHOTOVOLTAIC

BOILERS

LEAKS

ELECTRICITY CONSUMPTION

GAS CONSUMPTION

WATER CONSUMPTION

Make IoT Simple

Smart Energy

Photovoltaic

LoRaWAN

Applications:

Photovoltaic power generation is a global stake for the ecology and saving of electrical energy. Manage your energy production and save money.

TARGETS	BENEFITS
- Buildings - Property managers - Facility managers - Industries - Cities	- Production automatic recording - Faults detection - Diagnosis of breakdowns - Revenue optimization - Avoid on-site visits - Manage a fleet of facilities

Example: PV Energy Production

Smart Energy

Main Low Voltage Panel

Applications:

Protect and secure your electrical installation, follow your consumption in real-time according to your usages and detect damages or faults.

sigfox

TARGETS

- Buildings
- Property managers
- Facility managers
- Industries
- Cities

BENEFITS

- Production automatic recording
- Consumption by tariff slots
- Consumer offloading
- Reduction of penalties
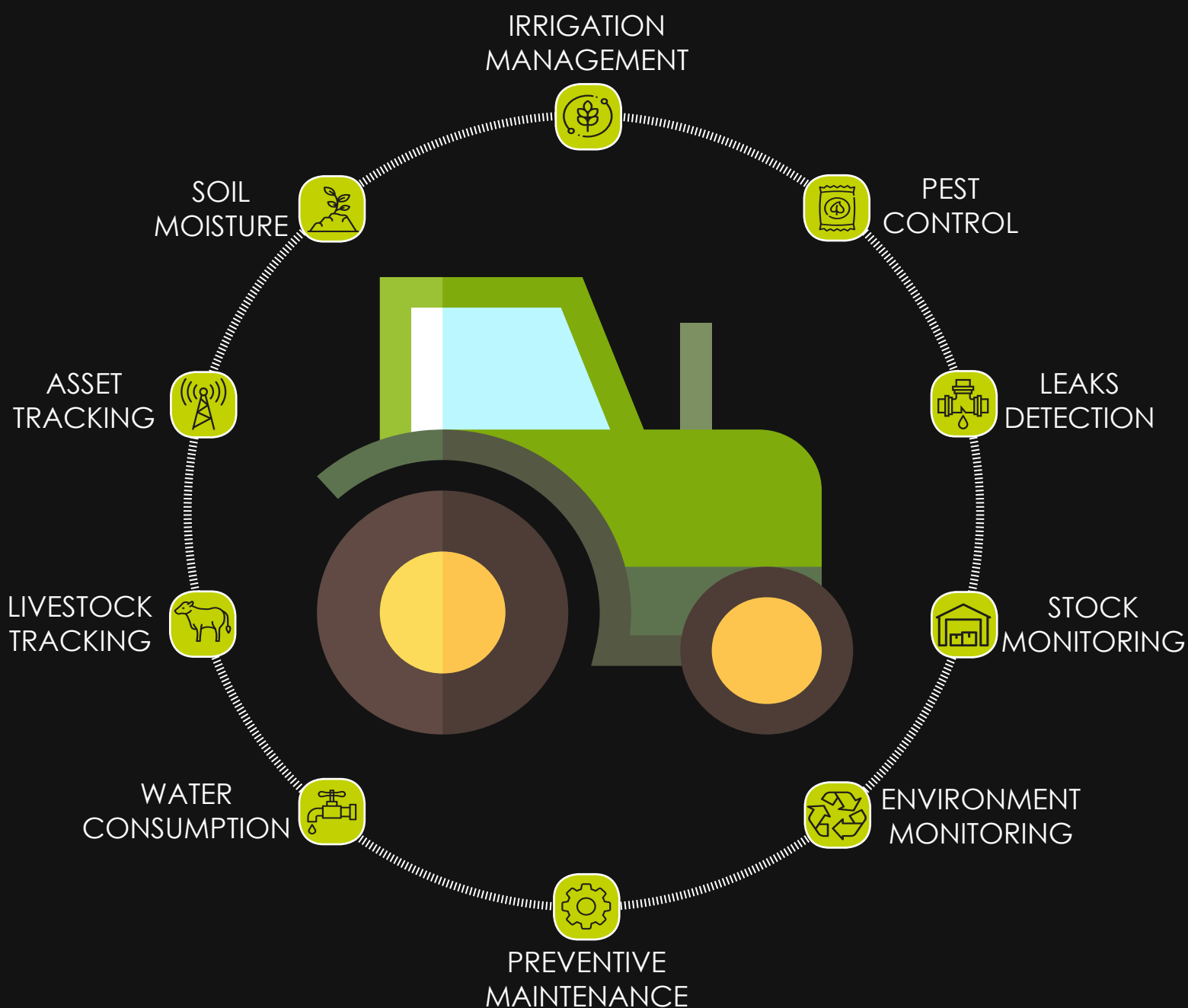- Failure detection, power outages
- Manage fleet of legacy countners

Example: Electrical Consumption
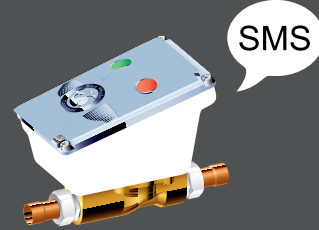
Smart Agriculture

Irrigation

Applications:
Real-time supervision of the operation of your irrigation network. Program your irrigation cycles and remotely control.
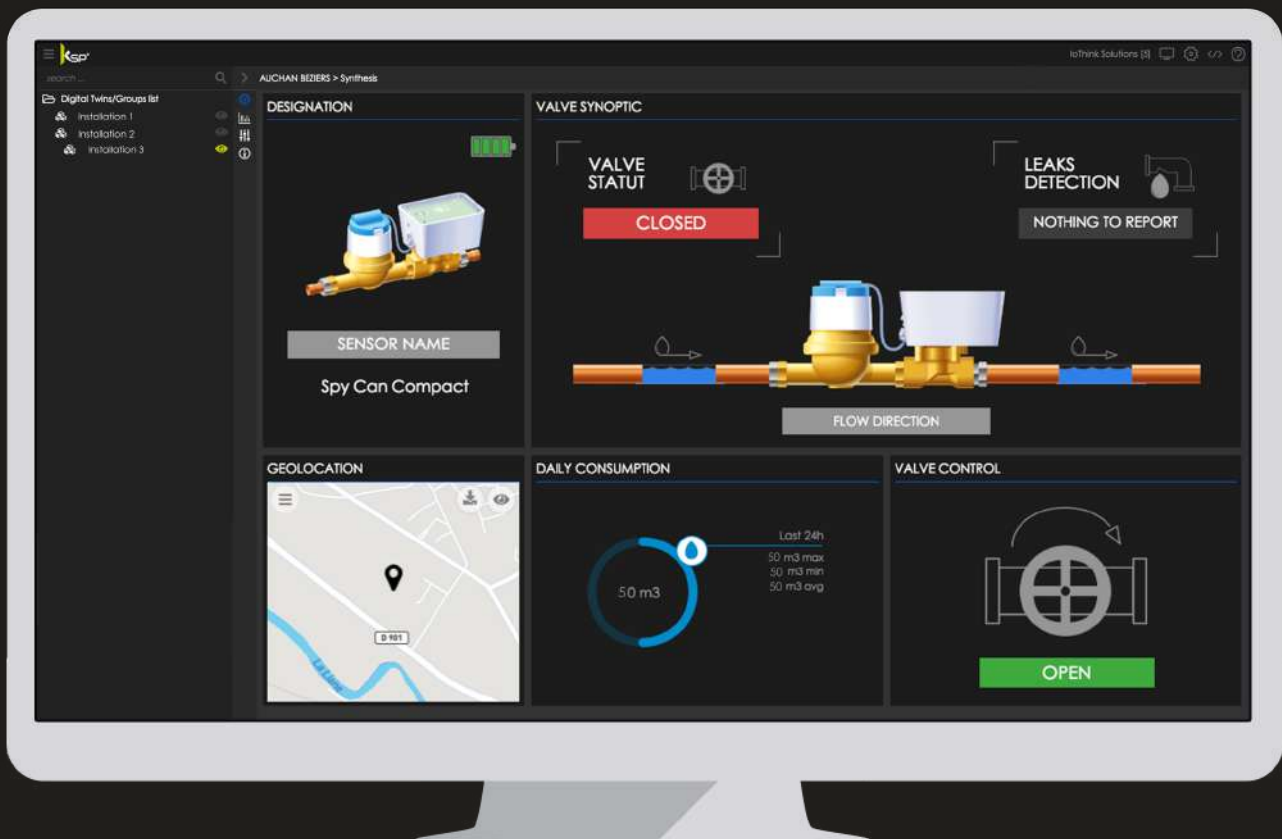
SMS

TARGETS
- Agricultural parcels - Parcs - Gardens - Fountains

BENEFITS
- Hourly schedule - Watering by area - Leak detection - Water saving - Coupling with humidity sensor, water meter

Example: Agricultural Parcel

Pest Control

LoRaWAN

Applications:
Limit the risk of pest intrusion. Set up control points and be alerted in case of pest trapped.

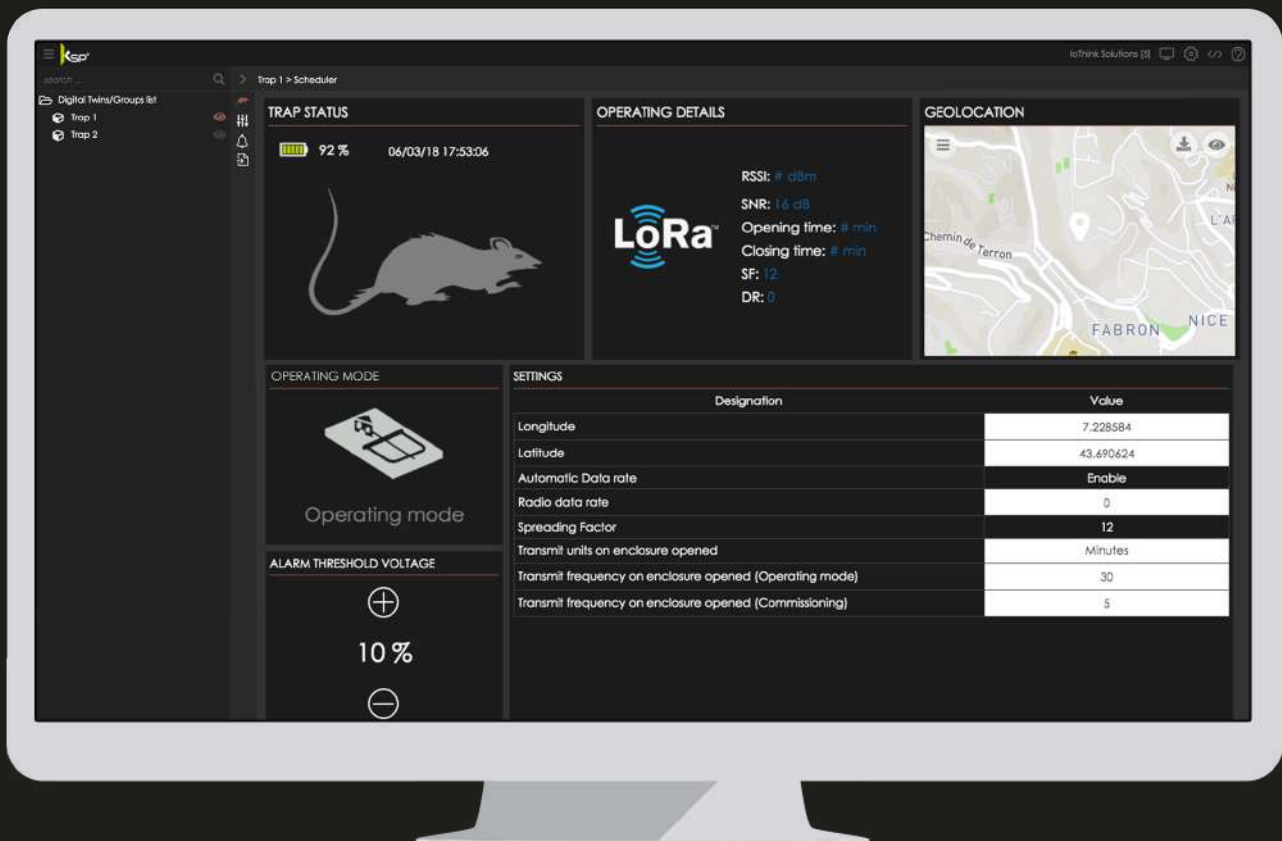| TARGETS |
|---|
| - Warehouses
- Cities
- Attics |

BENEFITS
- Real-time status of traps - Alerts if harmful trapped - Geolocation of traps - Reduction of the workforce

Example: Pest control

Smart Agriculture

Soil Moisture

Applications:
Remotely maintain plant quality and health with smart integrated irrigation systems.

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TARGETS
- Agricultural parcels - Parcs - Gardens

BENEFITS
- Real-time status of zones - Water saving - Geolocation - Optimization of irrigation tours

Example: Agricultural Soil

Smart Agriculture

Stocks Monitoring

Applications:
Remotely monitor and manage your storage of agricultural products.
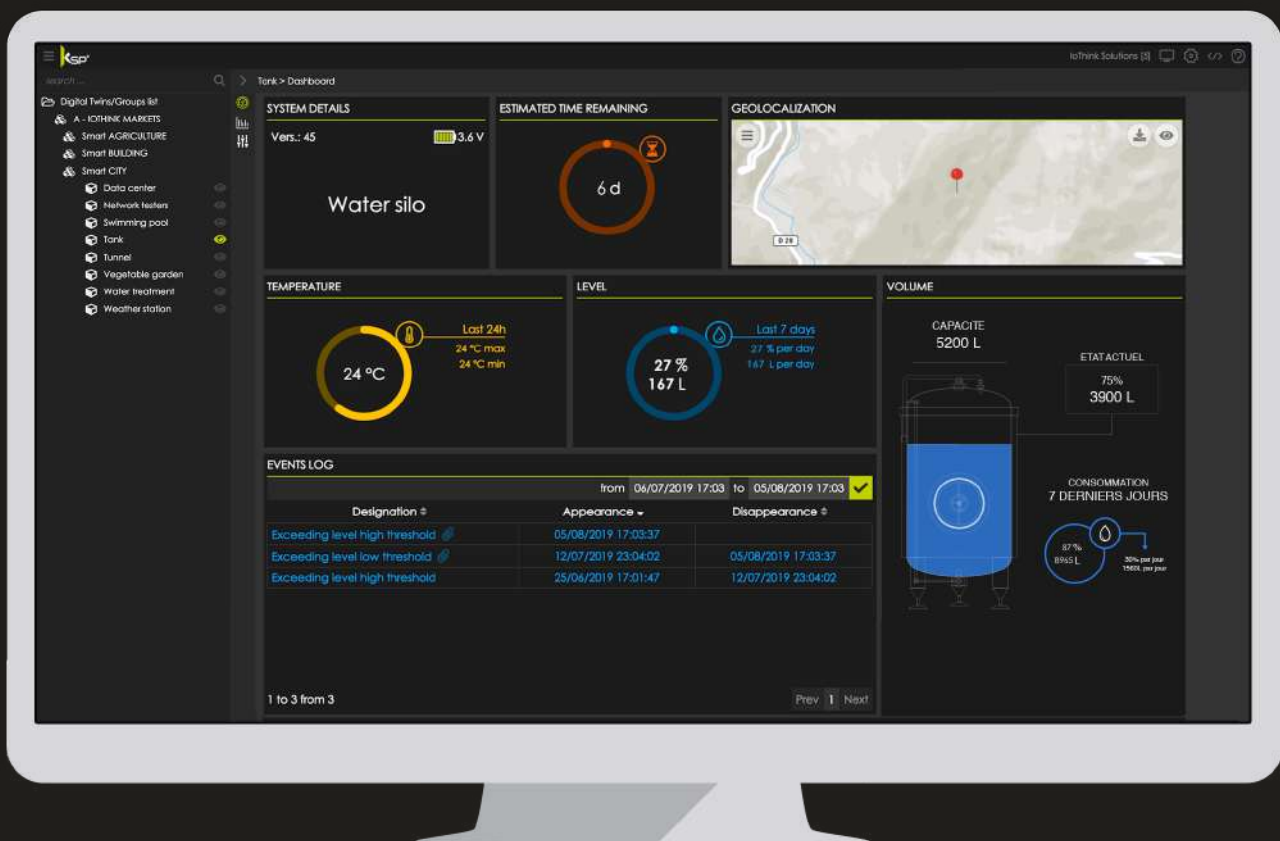
LoRaWAN

sigfox

TARGETS

- Agricultural parcels
- Parcs
- Gardens

BENEFITS

- Real-time status of your fleet
- Calculation and prediction of autonomy
- Volume calculation of any type of tank
- Avoid breaks
- Robbery Detection

Example: Silo Monitoring

Are you looking for another use case?