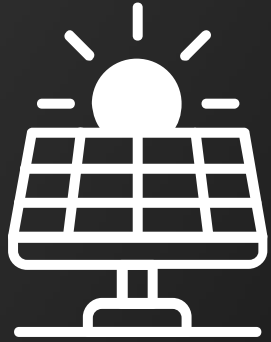


NW TECS IoT

Smart Energy Solution for Smart Cities

Smart Electricity & Meter IoT Solution
based on LoRaWAN



SMART ENERGY



OVER
CONSUMPTION



ENERGY
OPTIMIZATION



ELECTRICITY
CONSUMPTION



Smart Grid
Control and load
balancing
OPTIMIZATION



ELECTRICITY
Metering



Monitor Towers



Control AC



Light Control



BOILERS



PHOTO
VOLTAIC

Introduction

A leader of Low-Power Wide Area Networks (LPWAN) for the Internet of Things, with over 50 public network providers and thousands of enterprises using the ThingPark Wireless platform all over the world.

Mission : Digital Twin Made Commonplace

Actility believes in a radically more efficient and sustainable world through ubiquitous digital-twin technology. We want to spark this transition and become **the leading global mediation platform between cloud apps & physical world by 2023.**

LPWAN technology is a perfect vehicle for global leadership in its unlicensed version : we first make it the “**Wifi of IoT**” and then upgrade from connectivity to mediation.



Activity at a glance

ThingPark

ThingPark is the leading industrial-grade LPWAN IoT platform, enabling both public and private customers to deploy and scale IIoT use cases throughout the world.



Profile



2008

Company founded



130+

People. Multi-cultural team, 80% engineers



100 M€+

Funding raised with from Bosch, BPI, Cisco, Credev, FoxConn, IdInvest, Inmarsat, Orange and Swisscom



10

Country locations in North America, Europe and APAC



40.000+

LoRaWAN gateways connected on Activity-supplied public networks



200.000+

LoRaWAN ABeeway trackers delivered yearly

IoT product & services portfolio

Connect



- LPWAN & cellular infrastructure
- Device & GW management at scale
- Professional services & radio planning
- End-to-end carrier-grade security
- Network interconnection & roaming

Integrate



- Seamless integration with all leading IoT platforms
- Large ecosystem of pre-integrated solution providers
- Immediately actionable data from any device
- Largest device decoder catalogue

Locate



- Assets & people
- Indoor & outdoor
- Multi-technology fused geolocation (WiFi, GPS, BLE, TDoA)
- Patented ultra-low-power GPS

Clients & partners

Public operators



50+

Large scale operators

Enterprise networks in



100+ countries

Smart Cities, Manufacturing, Oil & Gas, Facility management, Tracking and Logistics

Distributors & resellers



120+

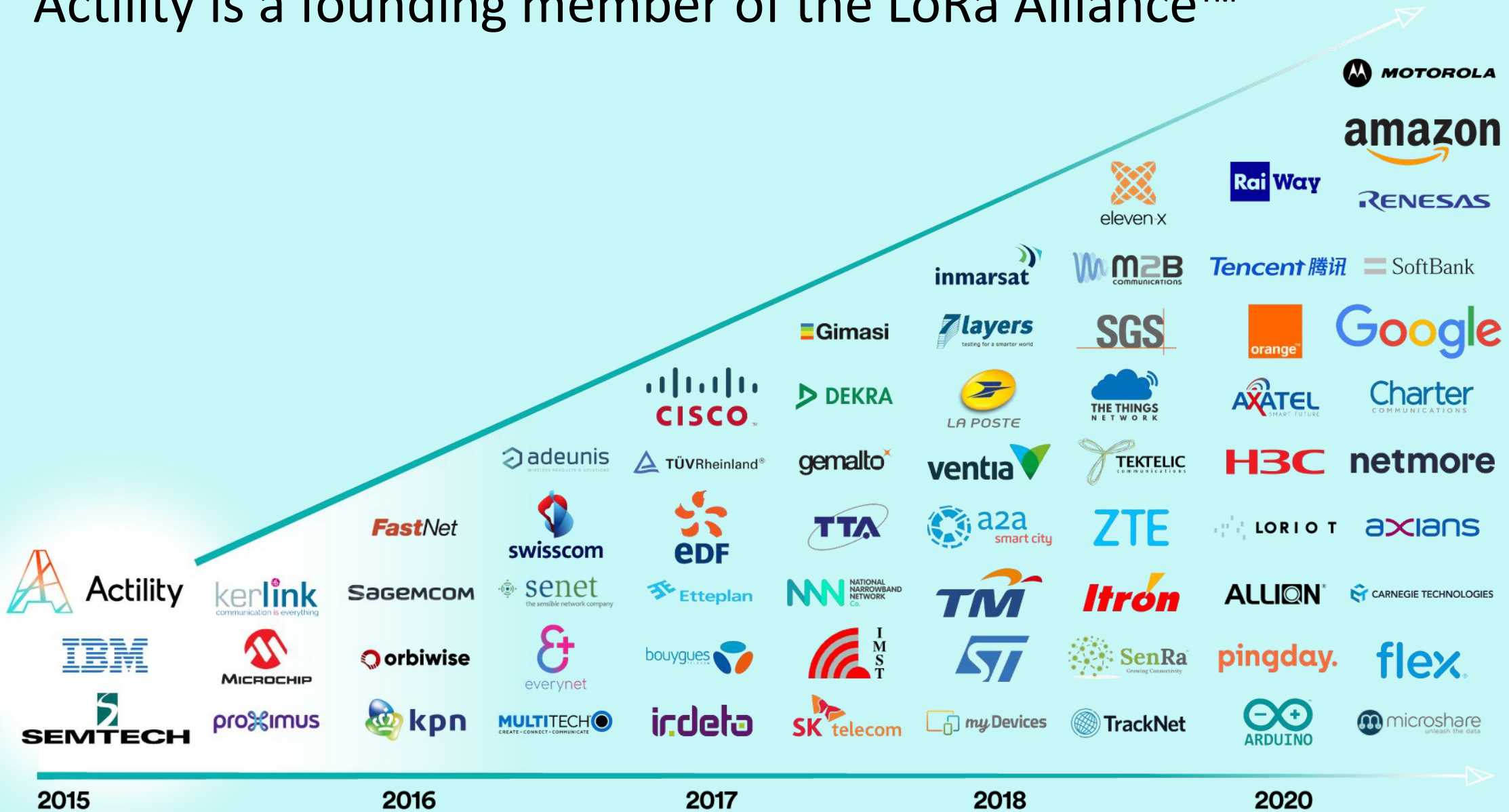
local partners in all regions

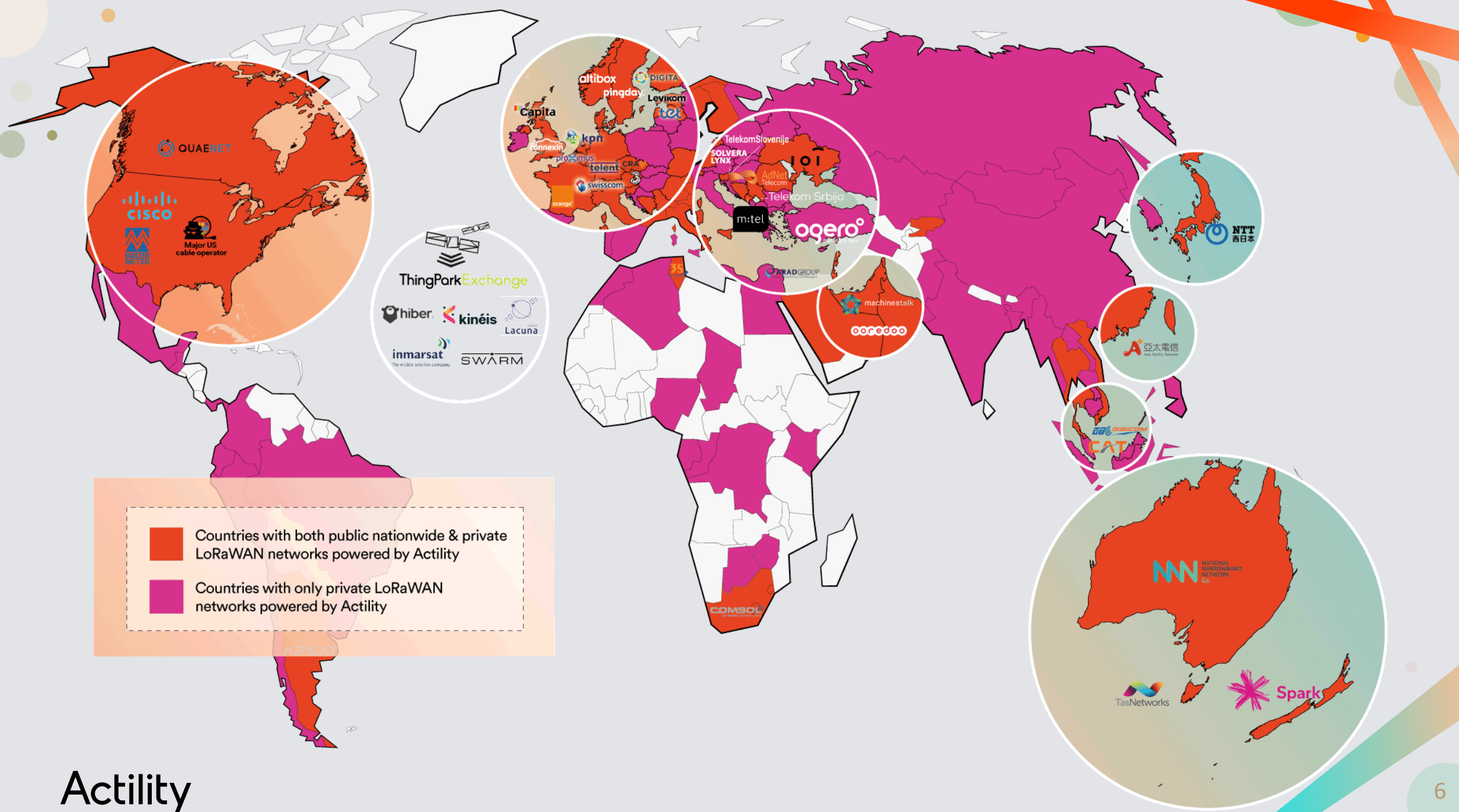
Ecosystem & Solutions



ThingPark Market, largest IoT B2B marketplace
Pre-integrated IoT solutions: Industry 4.0, farming, logistics and transportation, energy & utilities, facility management, etc

Actility is a founding member of the LoRa Alliance™





Actility

Actility is at the heart of an ever-growing global partner ecosystem

Application Platforms



Communication Service Providers



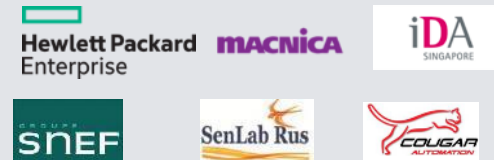
Energy & Utilities



Industrial IoT Solution Providers



System Integrators

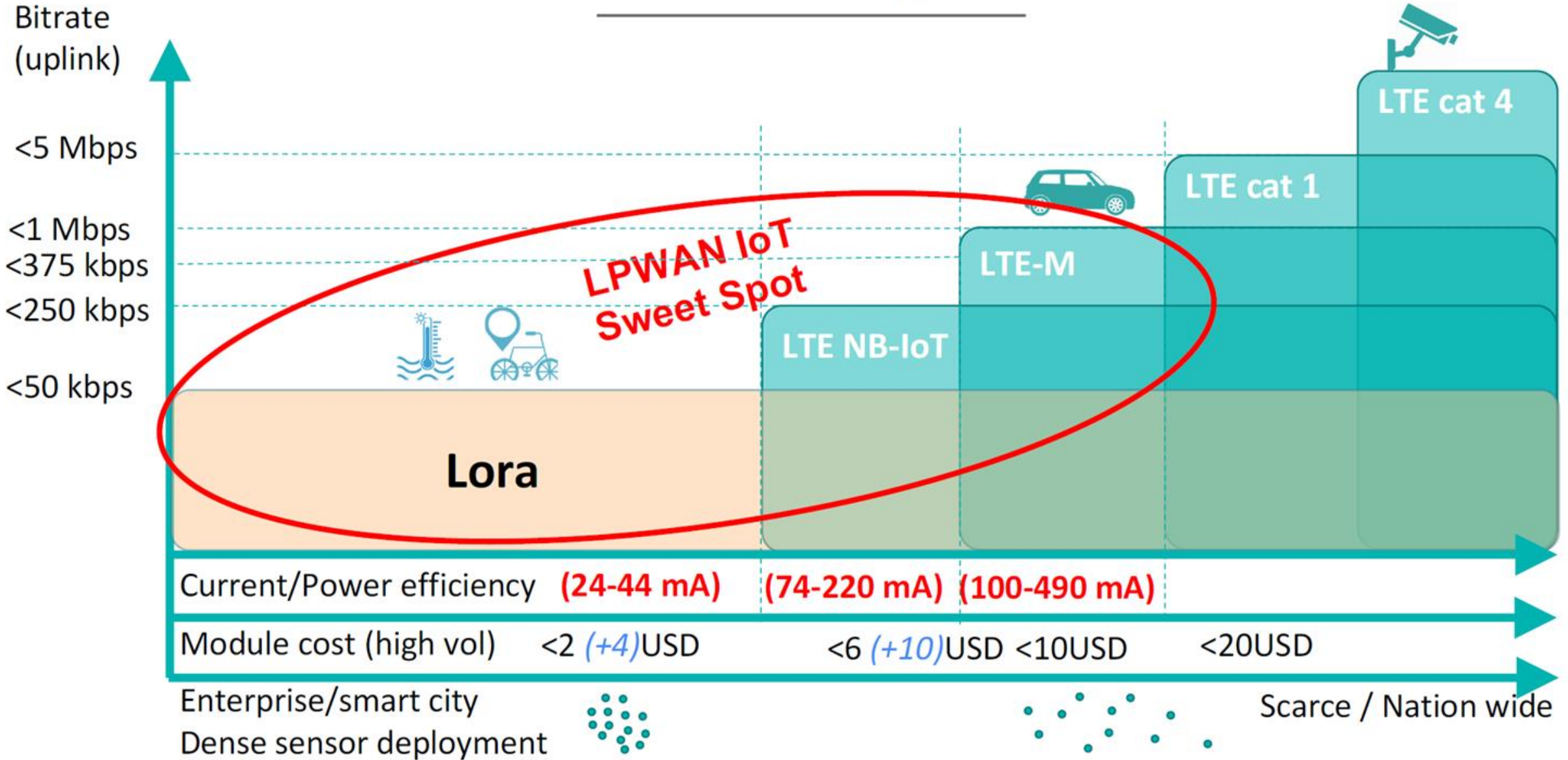


Ecosystem Partners

- 1000 Registered developers
- 100 Solution partners
- 155 Marketplace products



LPWA Market Segmentation

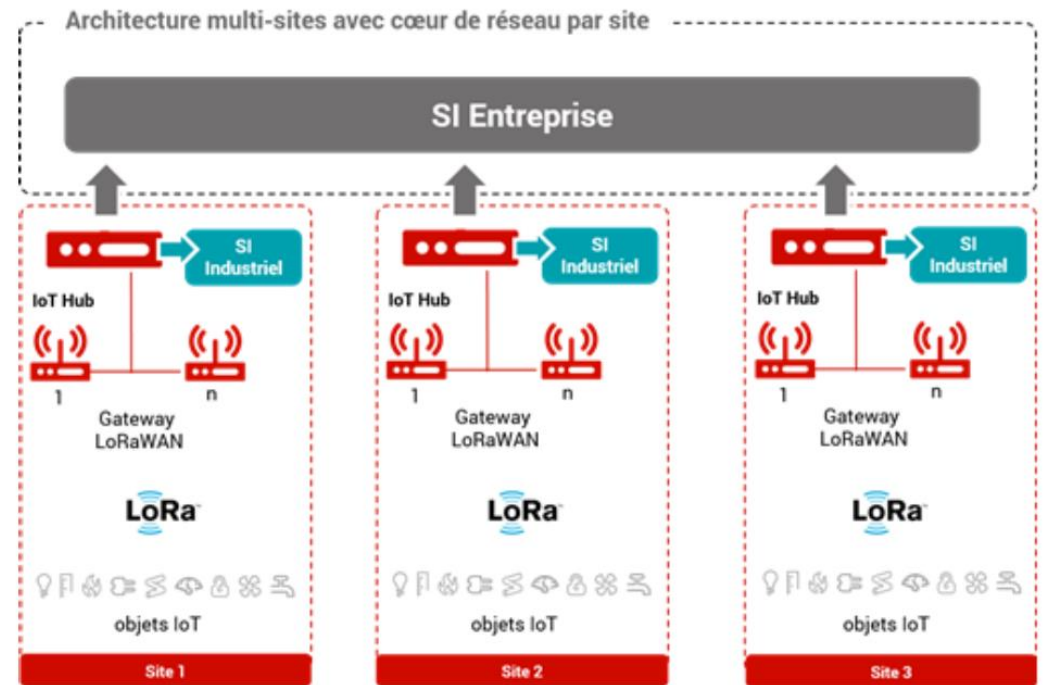
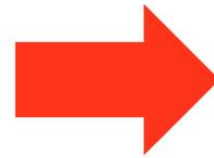
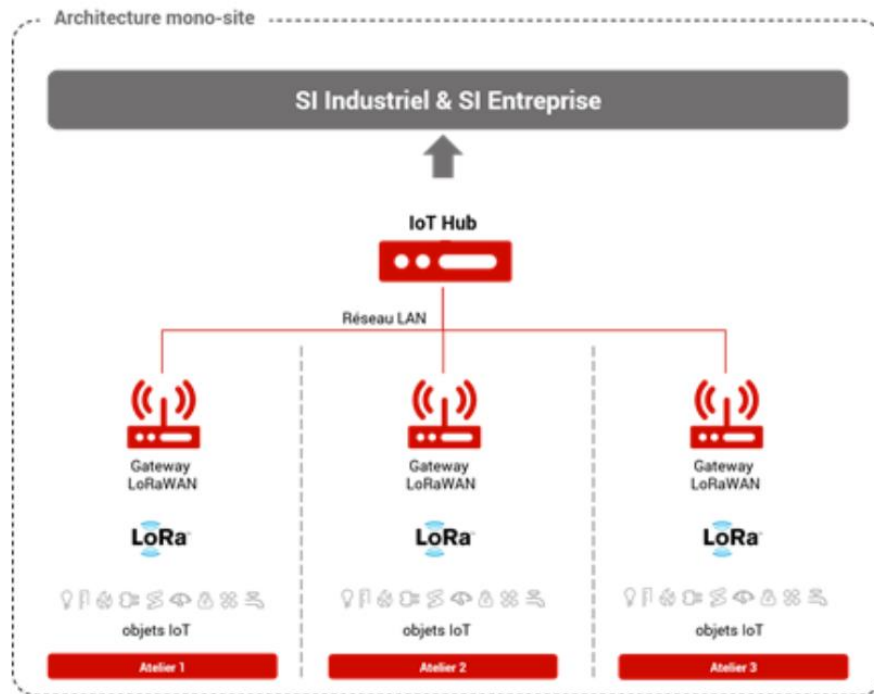


For LPWA solutions (LoRa and NB1), battery for 10yr @ 4USD/2Ah, 10msg/day is shown.



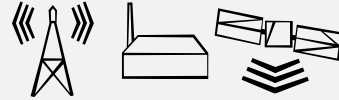








NB1 power use per 3GPP report R1 156006, 5Wh for 10yr, 1 msg/2h scenario

Enabling Industrial Architecture


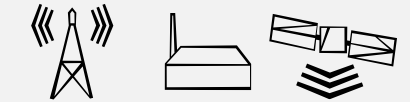







Architecture evolve overtime with limited effort and no impact on end-user applications.




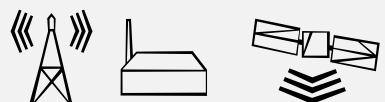







IoT Challenge 1: The language barrier and cost

	Regulation 	Devices 	Connectivity infrastructure 	IoT platforms & business applications 
				
Issues 	<ul style="list-style-type: none"> - Radio protocol & regulation - Radio resource limitation 	<ul style="list-style-type: none"> - Many device manufacturers - Complex binary protocols - Diversity of industrial standards and Many proprietary application layers 	<ul style="list-style-type: none"> - Diversity of network elements & Management interfaces - Open-source packet forwarder clients with unclear ownership and SLAs. - Low security 	<ul style="list-style-type: none"> - Multiple IoT platform semantics - Heterogeneous data format & connectors
Impact 	<p>Some NS providers require separate instances per regulatory zone</p>	<p>Painful case by case interfacing with cloud applications</p>	<ul style="list-style-type: none"> - Heterogenous maintenance tools - Painful upgrades - Unclear responsibilities - Lack of uniform security paradigm 	<p>Each cloud platform requires manual mapping of each device payload to the cloud semantics, and coordination of device lifecycle in cloud and NS</p>
Solution 	<ul style="list-style-type: none"> - A single instance can manage any mix of regulatory zones - Comprehensive regional profiles support - Live deployment at scale worldwide - Ability to assist in regulator interactions 	<ul style="list-style-type: none"> - Comprehensive library of CoDecs (managing both uplink decoding and downlink coding): first part of our mediation platform - Data normalization - Pre-integrated ecosystem partners 	<ul style="list-style-type: none"> - Support for all market gateways - Activity advanced client is open-source - Full maintenance provided by Activity - no dependence on third parties - Unified gateway management protocol and infrastructure commissioning service - Fully integrated PKI (Certificate management...) 	<ul style="list-style-type: none"> - Comprehensive library of IoT platform connectors: second layer of our mediation platform - Semantic adaptation to IoT platform conventions - Automatic synchronization and management of device lifecycle on IoT platform

IoT Challenge 2: The maintainability and cost

	Devices 	Connectivity infrastructure 	IoT platforms & business applications 
			
Issues 	<ul style="list-style-type: none"> - Battery - Optimization - Upgrade (FOTA) Industrial protocols: <ul style="list-style-type: none"> - Evolution - Compatibility 	<ul style="list-style-type: none"> - Network Equipment: administration & monitoring; QA testing - Maintenance & upgrades - Single Equipment vendor sourcing - Scalability - Radio Protocol: RF and power optimization in presence of high traffic and congestion; Radio planning; Evolution 	<ul style="list-style-type: none"> - Maintenance of a cloud interface under continuous uncontrolled upgrade, for each cloud platform - Test application interface scalability - Upgrade application without loss of data - Introduce new devices - Expertise on IoT Platform integration
Impact 	<p>Frequent field upgrades and battery replacements</p>	<ul style="list-style-type: none"> - Lack of alarms and indicators prevent proactive support - Cannot perform seamless upgrades - Long service interruptions and outages - Catastrophic degradation of PER as spectrum utilization increases. 	<ul style="list-style-type: none"> - Need to assign resources for continuous maintenance of connector. - Need a load test platform. - Long integration process, reopened for each new device.
Solution 	<ul style="list-style-type: none"> - State-of-the-art ADR V3 radio optimization - Multicast firmware updates over the air - Continuously updated Managed CoDec catalog 	<p>Select best vendor per use case; ISO 9001 certified RD process; Over 1000 non regression tests; Record replay for non-regression of any device; Seamless non-stop upgrades; automated Infrastructure Commissioning Service; uniform interface and alarms for all vendors; Integrated alarm management; Automated coordination of RF plan between NS and gateways; Non-stop upgrades; Proven scalability to nationwide level; 100% 24*7 managed platform in SaaS. Significant PER reduction algorithm.</p>	<ul style="list-style-type: none"> - Fully managed device catalogue and drivers - Fully managed IoT platform connectors - Automated ontology mapping for new devices.

IoT Challenge 3: time to market

	Devices 	Connectivity infrastructure 	IoT platforms & business applications 
			
Issues 	<ul style="list-style-type: none"> - Jungle of proprietary drivers - Evolving versions - Specific LoRaWAN profiles for each device 	<ul style="list-style-type: none"> - Proprietary UIs and maintenance tools for each supplier - No default configuration for georedundancy - Supplier does not include a PKI 	<ul style="list-style-type: none"> - Each use case, each site has its own optimal deployment model (on-prem, SaaS) and may evolve over time. - Cloud connectors are complex and in constant evolution - Device payloads not understood by IoT platforms
Impact 	<ul style="list-style-type: none"> - Custom integration for each device, complex debugging 	<ul style="list-style-type: none"> - Need to design and audit a IoT network security model. - Incompatible monitoring & upgrade tools. - Painful upgrades and service interruptions. 	<ul style="list-style-type: none"> - Need a dedicated integration project, and ongoing maintenance.
Solution 	<p>Device creation and provisioning in 3 steps.</p> <ul style="list-style-type: none"> - Includes automated profile and driver selection from managed catalogue - Embedded tool for customization of development of custom drivers 	<p>Gateway configuration in 3 steps.</p> <ul style="list-style-type: none"> - Uniform UI and tools for all gateways. - Actility client includes redundant interface management , georedundancy and full KPI. 	<ul style="list-style-type: none"> - Fast automated cloud connectors - Maintained by Actility and tested to scale, include automated adaptation of device format and ontology - Rich library of fully preintegrated devices.

Sample Implementation

TOULOUSE (FR – 2019) FIRST BIG PROJECT WITH LoRaWAN





NNNCo – Actility deal in Australia

- NNNCo signs 2d largest government area in Australia – Newcastle for smart city applications
- Gold Coast City wants to connect 150,000 water meters, 3000+ street light, 5000+ parking bays
- Ensuring distribution grid security using smart demand response with Ergon Energy



Benefit: more efficient and sustainable city services and robust electricity distribution grid

Sample Implementation



Engie, third global electric utility company, was looking for an IOT platform to propose new services all around the world.

Before

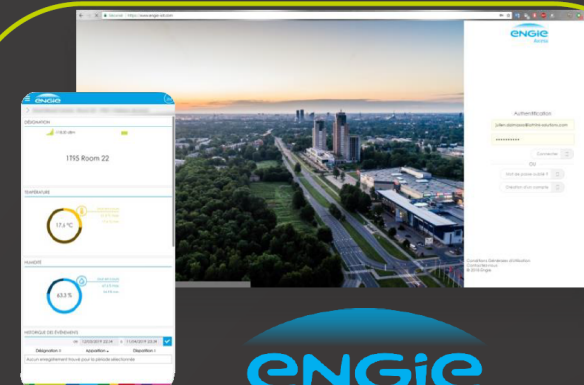


Many different use cases



- Difficulties to connect different devices and BMS
- Many type of connectivity to manage
- Too many vertical platforms
- 2 to 24 months to deploy a project

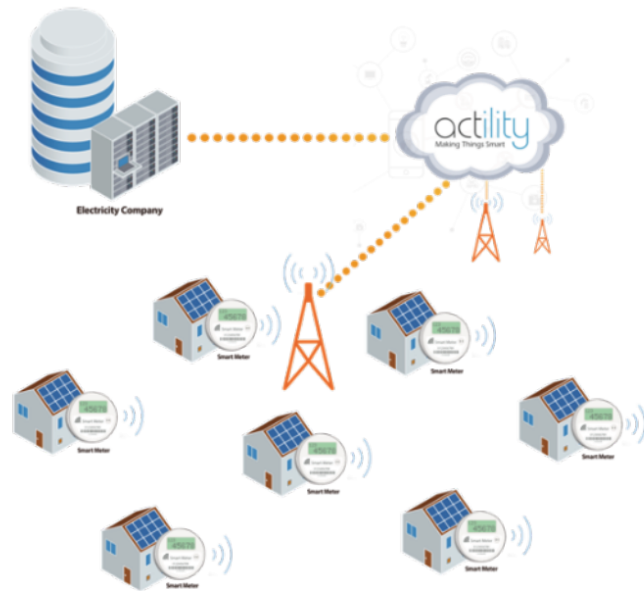
2 days training



ENGIE
www.engie-iot.com

- Connected 15,000 different devices and machines
- Hundreds of users in Europe and Asia
- Connect on many type of connectivity
- Made hundreds of customized use cases
- Deploy project in less than 5 days
- Have their own white label web and mobile platform

Utilities : Smart metering



Key challenge :

Deploy an easy-to-install network of smart meters with bidirectional capabilities for remote data gathering

Key characteristics of vertical market:

- Market driven by consumption optimization, infrastructure deployment & heavy ROI considerations

Current vertical pain points :

- ✓ Metering infrastructure needs heavy deployment of local repeaters and installation
- ✓ With existing technologies water and gas meter battery life is low
- ✓ Need to send employees to manually read consumption in some cases
- ✓ Need to be able to remotely manage meters & subscription

Key benefits :

- ✓ LoRaWAN brings low-cost long-range communication & real-time analytics
- ✓ Pre-integrated meters with LoRa modules or retro fit existing meters with LoRa WAN sensors e.g. pulse detector.
- ✓ 2-way communication allows utilities to better manage subscriber management (eg. taking action if subscriber is not paying the bills)
- ✓ Real time data feeds into customer dashboard allowing for energy consumption optimization

Device partners :

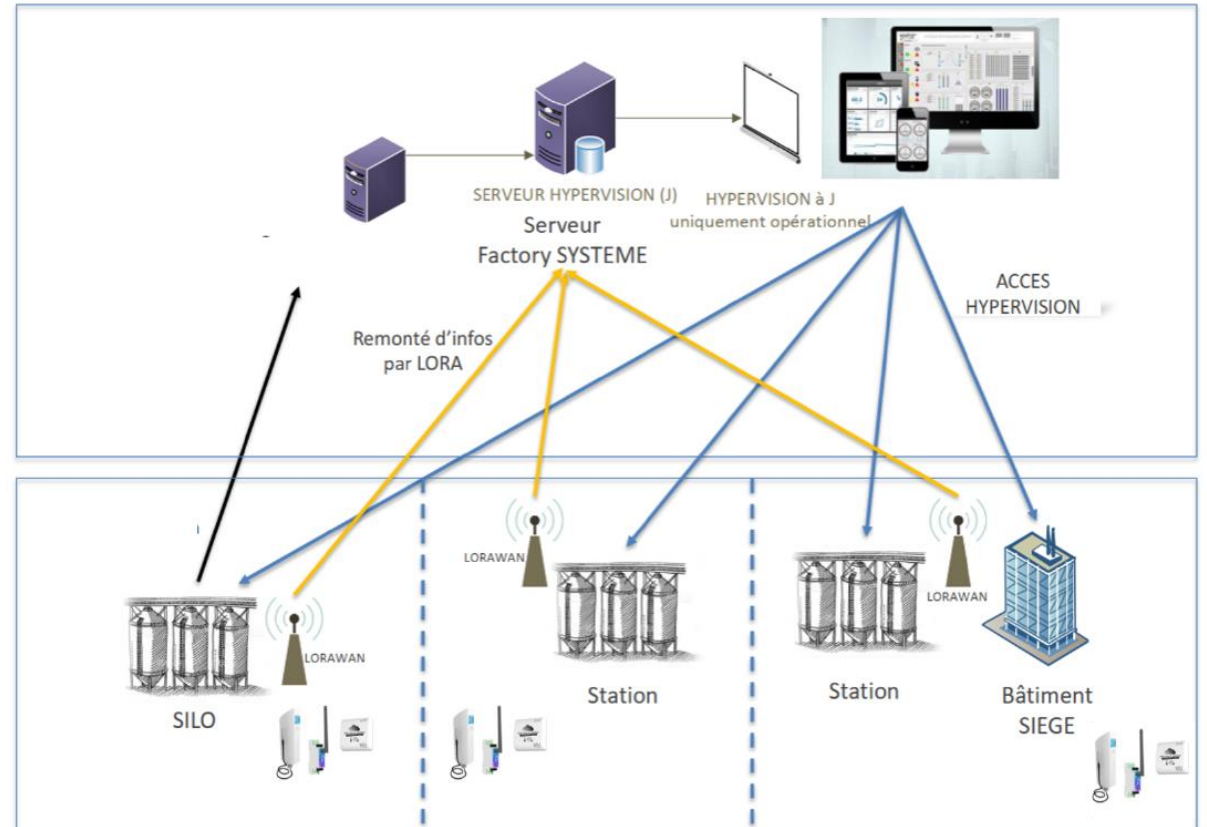


Actility

Muti Site monitoring

Benefits :

- Unified multi-sites architecture
- Central management
- Easy to install



Implementation - Gateways

- LoRaWAN coverage extremely good given the site dimension
- 5 Gateways installed for capacity and redundancy purpose



Cisco router in a cabinet

Actility



Cisco LoRa gateway

Cabinet with router



Cisco LoRa gateway

End to End Read Meters, Track Defects Remotely

- Electricity Monitoring 📡

Protect and secure your electrical meter installation, follow your consumption in real-time according to your usages and detect damages or faults. IoT Suite allows you to save money, improve safety and control energy expenses.

Uses:

- Remote meter reading at regular intervals
- Detect fraud and leaks
- Monitor consumption in real time
- Manage consumption peaks
- Monitor the operating status of meters
- Anticipate and optimize technical interventions

Features:

- View meters on a map
- Set up alerts based on customizable thresholds
- Receive notifications when thresholds are exceeded, or consumption is abnormal
- Follow data in real time
- Record consumption data in the past



How does it works

Secured connection

Collect

IoT, GTB/GTC/M2M

Connect

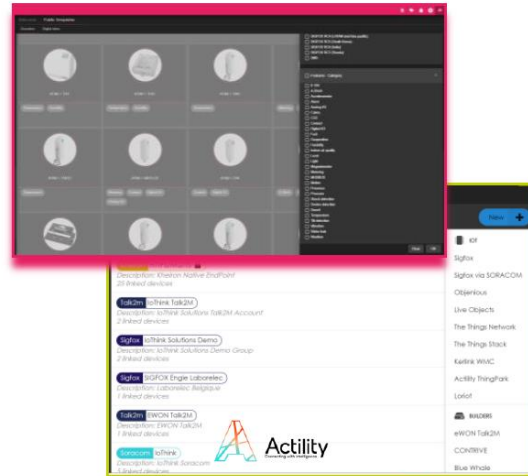
Flow agregator

Monitor, Control, Analyse

Agnostic Platform, Dashboards, reports, alerts, Analysis

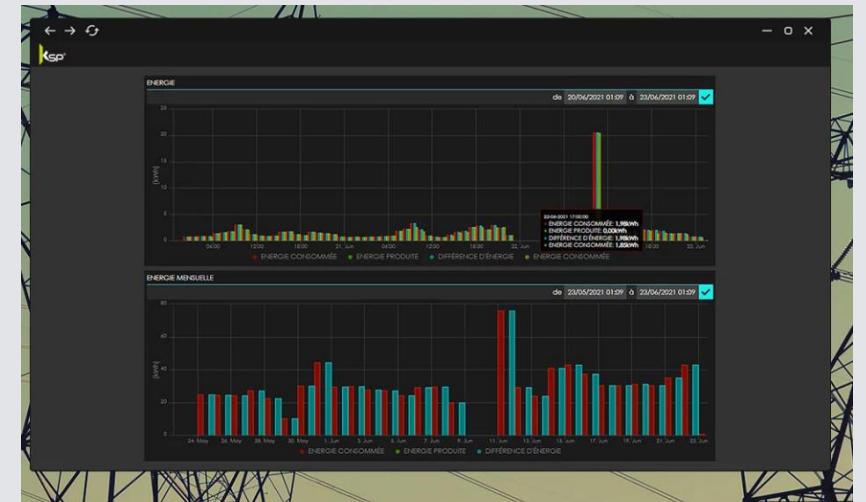
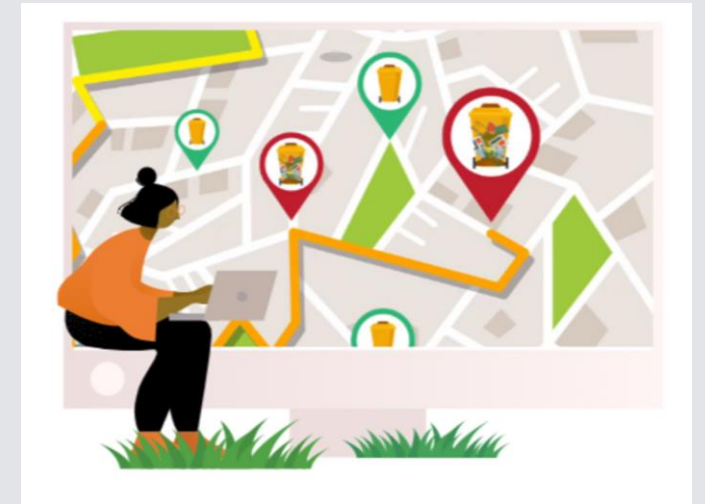


LoRaWAN

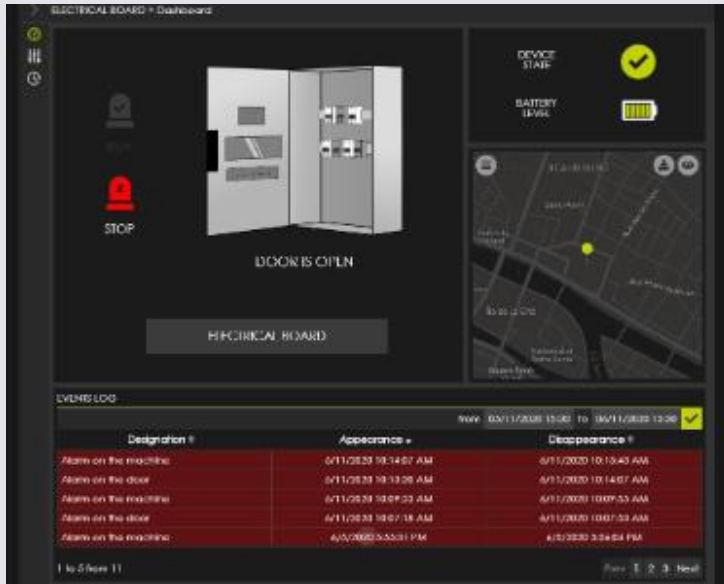


INTEGRATION (System, IT)

Smart Platform



Cloud Dashboards



Smart Energy / Utilities Solution – innovated

- Next-generation smart-solutions for utilities management and safety.
- **Cost-effective** smart sensors and solutions for utility companies and developers.
- The **smart meters or pulse meters collect data via Wireless technology and sends it our or a third party platform.**
- View meters on a map
- Set up alerts based on customizable thresholds
- Receive notifications when thresholds are exceeded, or consumption is abnormal
- Follow data in real time
- Record consumption data in the past

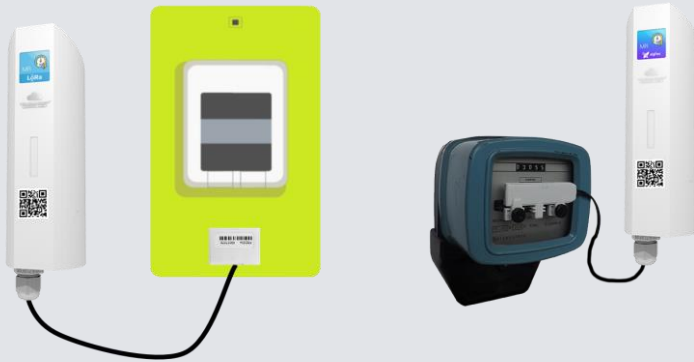
This means

- Cost reduction in collecting data
- Accurate information
- Report faults instantly
- Production automatic recording
- Consumption by tariff slots
- Consumer offloading
- Failure detection, power outages
- Manage fleet of legacy counters



USE CASE : ELECTRICITY

• PULSE METERS – Reading existing infrastructure



For:

- Industries, Building,
- Residential homes, Property management



Features:

- ✓ Monitor the meter index of different meters
- ✓ Install electromagnetic rings on existing wires to read consumption without need for additional wiring
- ✓ Monitor electricity consumption: energy savings
- ✓ Available in ATEX version



- **Definition of thresholds**
- **Alerts, emails, SMS and mobile application**
- **Real time level display**
- **Generation of periodic reports**
- **Global view of all sensors on a map**

Benefits

Uses :

- Remote meter reading at regular intervals
 - Detect fraud and leaks
 - Monitor consumption in real time
 - Manage consumption peaks
 - Monitor the operating status of meters
 - Anticipate and optimize technical interventions
- **FLEXIBILITY**
 - **We'll tailor the solution to your needs.**
 - Open API - compatible with any third party platform
 - Tailormade solutions, no matter how niche.

The Solution

We're creating the **simplest, cost effective**, and most **versatile** sensor-solution for energy and utility management in the market today. Versatility and flexibility are important to us. The solution isn't uniform, it's a dynamic system designed to be altered and expanded upon. That's why we're happy to tailor solutions to your needs, read about our flexibility.

Smart Energy Meter Measurement

Accurately measures consumption , available in pulse meter and smart meter. It sends data through LoRa, WiFi and GSM to either our Smart Platform or a third-party platform.

Battery

- Lasts up to 8 years of uninterrupted service - dependent on rate of transmission
- Non-rechargeable lithium battery

Range

LoRa: 20-30km

Environmental specifics

Casing: IP67

Operational temperature range: -20 to +60 degrees Celcius

Remote device management

Some configurables:

1. Measurement intervals
2. Fire alarm threshold
3. Back ground sampling (increasing battery life)
4. Alert configuration



Energy optimization

APPLICATIONS: Monitor your charging station and follow your electrical consumption.

EXAMPLES: CHARGING STATION , SMART GRIDS, UTILITIES, PUBLIC LOCATIONS

TARGETS

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

BENEFITS

- + Record consumption
- + Consumption by slots
- + Failure detection, power outages
- + Manage fleet

DEVICE DESCRIPTION



+ 6 three-phase or 18 single-phase circuits simultaneously monitored. Combinations of 3-phase and single circuits are possible.

+ Up to 6 000A or 63kV measurements with adequate Current and Potential transformers.

+ Data access : LoRa or Modbus TCP

← → ↻

KSP

USE CASE
▶ RECHARGING STATION

Titre parc

Communication ok
Signal très bon
GSM : LIE
Opérateur : Tele2

ENERGIE TOTAL DELIVREE PAR JOUR

AVAILABLE AVAILABLE AVAILABLE AVAILABLE READY

Borne n°1 Borne n°2 Borne n°3 Borne n°4 Name here

00:80:F4:42:95:54 00:80:F4:42:95:54 00:80:F4:42:95:56 00:80:F4:42:95:55 00:80:F4:42:95:54

Charge activée Charge activée Charge activée Charge activée

ENERGIE TOTAL DELIVREE PAR JOUR

18/10/2021 11:18

⚡ Electricity consumption

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

EXAMPLES: ELECTRICITY CONSUMPTION



TARGETS

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

BENEFITS

- + Remote meter consumption
- + Estimated monthly bill
- + Avoid on-site visits
- + Manage legacy meters

DEVICE DESCRIPTION

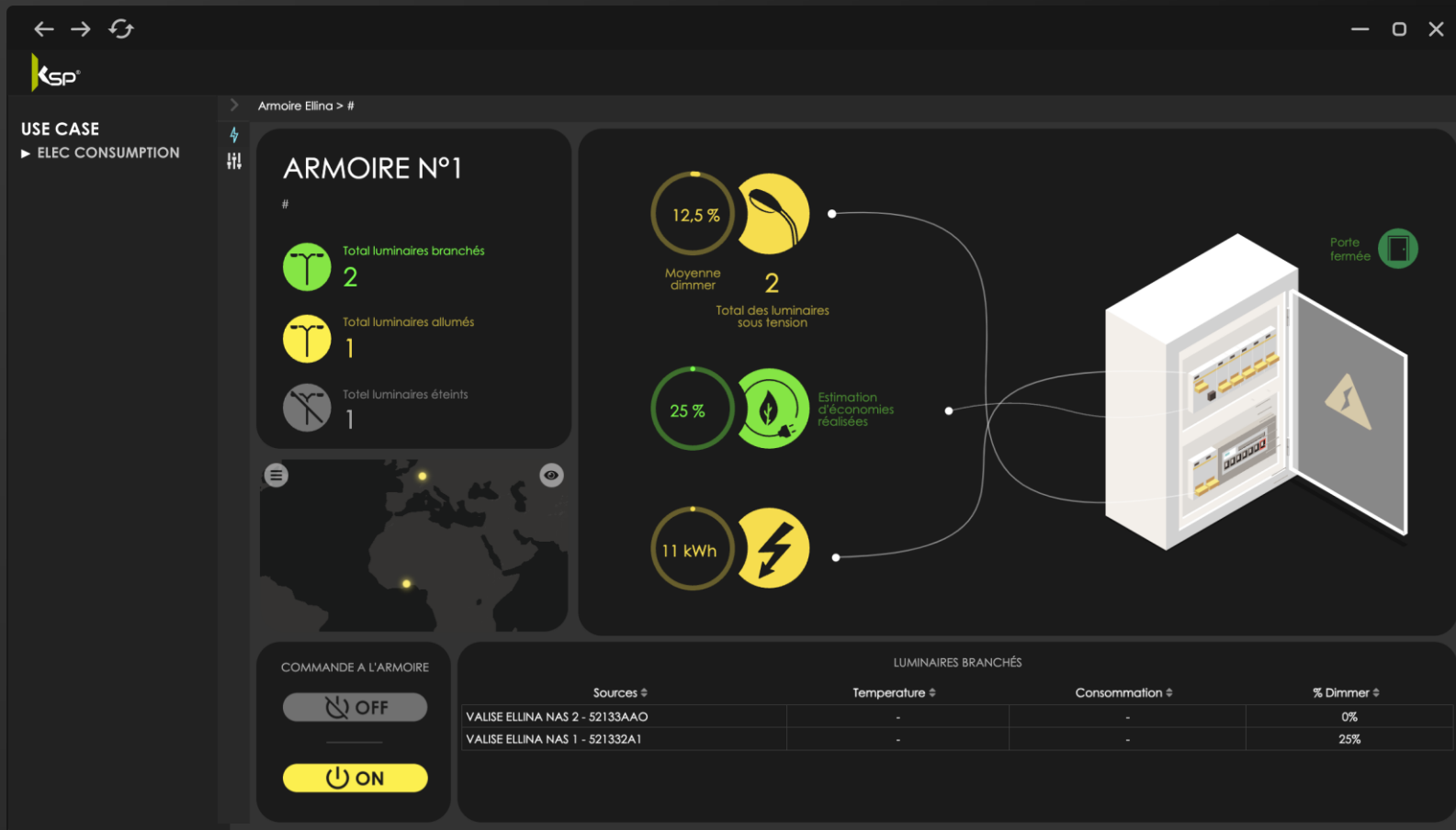


- + Rugged IP 65 enclosure for cabinet installations...
- + Up to 15 years autonomy
- + Data access : LoRa

Public Light

APPLICATIONS: Public lighting management enables efficient control and optimization of lighting in public spaces.

EXAMPLES: ELECTRICITY CONSUMPTION



TARGETS

- + Schools, Universities
- + Property managers
- + Facility managers
- + Maintenance contract managers
- + Cities

BENEFITS

- + Remote meter consumption
- + Monitoring
- + Avoid on-site visits
- + Manage the light system

DEVICE DESCRIPTION



+ internal DALI power supply and array of 64 luminaires over external power supply

+ IP68

+ Data access : LoRa



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.

EXAMPLES: ELECTRICAL CONSUMPTION



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 counters

DEVICE DESCRIPTION



+ 6 three-phase or 18 single-phase circuits simultaneously monitored. Combinations of 3-phase and single circuits are possible.

+ Up to 6 000A or 63kV measurements with adequate Current and Potential transformers.

+ Data access : LoRa or Modbus TCP



Photovoltaic and Smart Grid

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

EXAMPLES: PV ENERGY PRODUCTION



TARGETS

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

BENEFITS

- + Production automatic recording
- + Faults detection
- + Diagnosis of breakdowns
- + Revenue optimization
- + Avoid on-site visits
- + Manage a fleet of facilities

DEVICE DESCRIPTION



+ 6 three-phase or 18 single-phase circuits simultaneously monitored. Combinations of 3-phase and single circuits are possible.

+ Up to 6 000A or 63kV measurements with adequate Current and Potential transformers.

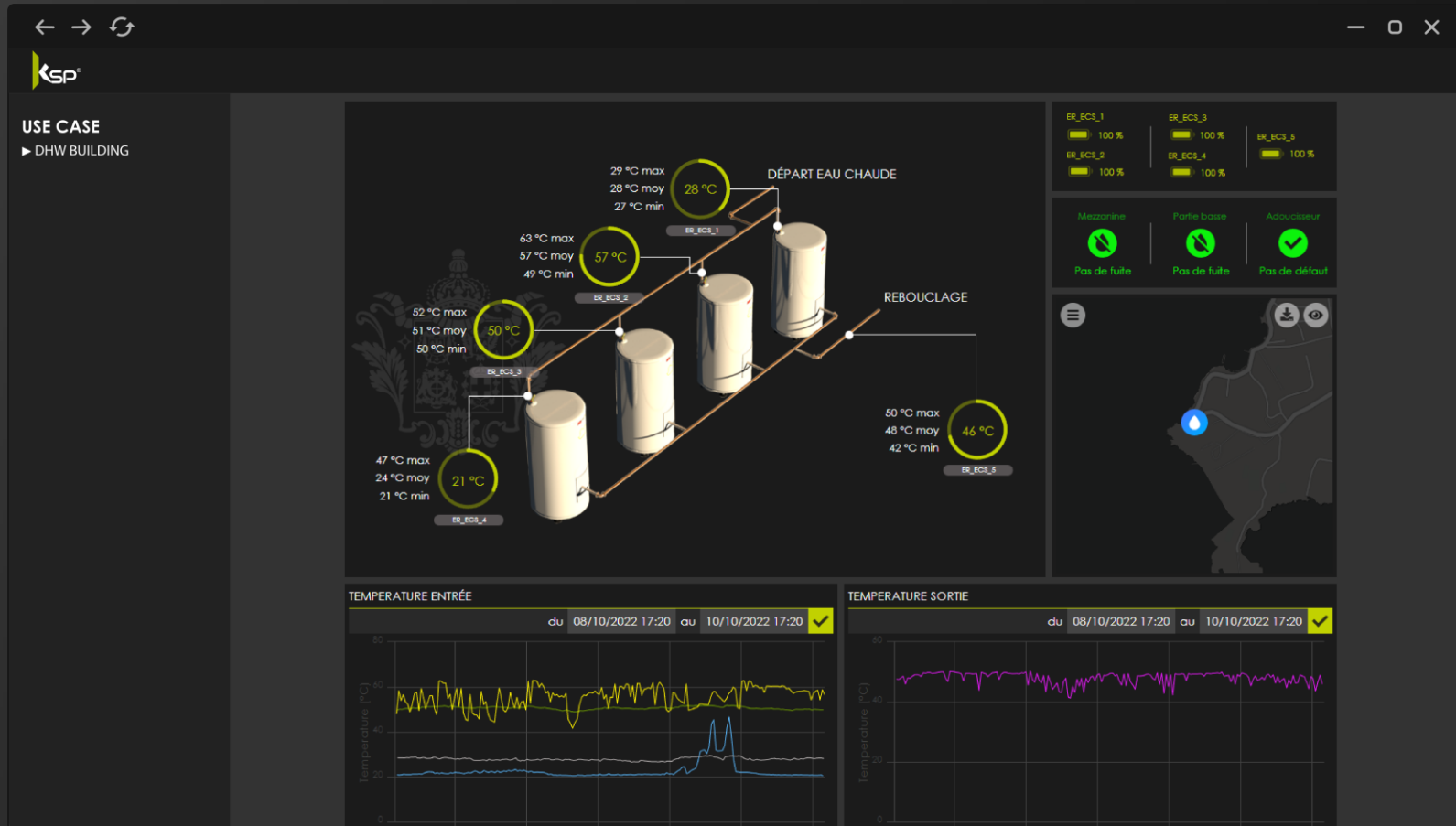
+ Data access : LoRa or Modbus TCP



Domestic hot water

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

EXAMPLES: BUILDING DOMESTIC HOT WATER



TARGETS

- + Health institutions
- + Schools, Universities
- + Public places
- + Cities
- + Hospitals
- + Residential homes
- + Property managers
- + Facility managers
- + Maintenance contract managers

BENEFITS

- + 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

DEVICE DESCRIPTION



- + IP 65 resistant enclosure for outdoor environments
- + PT1000 contact probe for remote measurements from -180°C to + 250°C
- + Data access : LoRa



HVAC Smart Thermostat

APPLICATIONS: Building Cooling and Heating is a major part of energy, controlling remotely to ensure best practices are implemented during the occupation of a building or asset or after hours can save.

EXAMPLES: SMART HVAC CONTROLS

The screenshot displays the HVAC Smart Thermostat control interface. It is divided into several sections:

- DÉSIGNATION:** Shows the name of the thermostat, "Temperature", and a battery level indicator.
- TEMPÉRATURE:** Features a large circular temperature display showing 21,5°C. It includes a "Jour en cours" (Today) summary with statistics: 21,5°C max, 21,5°C min, and 19,7°C moy. Below the display are "+" and "-" buttons for manual adjustment.
- GÉOLOCALISATION:** Shows a map of the location "Les Guillets" with a location pin and a road marker for "D 215".
- TEMPÉRATURE (Graph):** A line graph showing temperature history from 01/01/2020 15:44 to 03/01/2020 15:44. The y-axis represents temperature in °C (15 to 25). The x-axis shows time from 18:00 on Jan 1st to 12:00 on Jan 3rd. A yellow line represents the "Température", and horizontal lines represent "Seuil de température haut" (red) and "Seuil de température bas" (blue).
- HISTORIQUE DES ÉVÉNEMENTS:** A table listing events from 04/12/2019 15:44 to 03/01/2020 15:44.

Désignation	Apparition	Disparition
Alarme température basse	03/01/2020 07:18:34	03/01/2020 07:48:34
Alarme température basse	03/01/2020 05:18:34	03/01/2020 06:48:34
Alarme température basse	02/01/2020 23:18:34	03/01/2020 04:18:34
Batterie faible (<10%)	30/12/2019 09:48:50	
Alarme température basse	21/12/2019 20:19:03	02/01/2020 09:48:36
Alarme température basse	21/12/2019 08:49:04	21/12/2019 10:49:04

TARGETS

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

BENEFITS

- + Control thermostat remotely
- + Save energy
- + Monitor Room Temperature
- + Automate temperature settings by time
- + Link thermostats to presence sensors

DEVICE DESCRIPTION



- + Connect the thermostats to the existing wiring to control the valves of the HVAC and temperature
- + Connected to LoRaWAN gateway to control and monitor the thermostat remote
- + Available in cool or hot , in 2 pipe / 4 pipe



Ventilation & HVAC

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

EXAMPLES: VENTILATION BOX , SMART HVAC CONTROLS

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 mechanical ventilations

DEVICE DESCRIPTION



- + 2 digital inputs / outputs: for connecting to a PLC for tracing alerts or operating states
- + Pressure difference: relative to the atmospheric pressure or between two different zones
- + 1 analogue input 0-10V: for connecting to a sensor

USE CASE
► VENTILATION

CAISSON DE VENTILATION

PRESSION DIFFERENTIELLE ATMOSPHERIQUE: 50 Pa

INFORMATIONS CAPTEUR

- DÉFAUT MATÉRIEL: OK
- NIVEAU BATTERIE: [Battery icon]

GÉOLOCALISATION

INFORMATIONS TECHNIQUES

Désignation	Valeur
Marque	XXXXX
Référence	XXXXX
Débit max	500m ³ /h
Puissance max absorbée	420kW

HISTORIQUE DES ÉVÉNEMENTS

Désignation	de	à
LE CAISSON DE VENTILATION NE FONCTIONNE PLUS	30/07/2019 09:05:22	30/07/2019 09:06:02
LE CAISSON DE VENTILATION EST ENCRASSÉ	30/07/2019 09:05:08	30/07/2019 09:05:22
LE CAISSON DE VENTILATION EST ENCRASSÉ	30/07/2019 09:04:41	30/07/2019 09:04:49
LE CAISSON DE VENTILATION EST ENCRASSÉ	29/07/2019 17:50:34	29/07/2019 17:50:58
LE CAISSON DE VENTILATION EST ENCRASSÉ	29/07/2019 17:46:04	29/07/2019 17:46:33
LE CAISSON DE VENTILATION NE FONCTIONNE PLUS	29/07/2019 15:01:41	29/07/2019 17:46:04

Predictive Maintenance

Predictive Intelligence Solution - Embedded artificial intelligence

Turnkey solution to monitor machines 24/7

The device is equipped with a motion sensor to measure the vibrations along the X, Y and Z axes. It can identify faults via the vibration Fourier transform, which shows the vibratory signature.

When in operation, after learning: The device measures the equipment vibration periodically without sending a message. If all goes well, he sends a report every 6 hours with the summary of the measurements of this period.

In the event of a vibration anomaly, it sends an alert immediately. Some machines have several operating modes. It can learn these different modes of operation through artificial intelligence and identify them later, or even adapt to their changes.

Enables Industrial end customers to increase performance, safety and decrease machines shutdowns and work accidents.

Activity

Copyright ©Activity - Confidential

Just drop me on your machine and I'll start immediately to monitor his condition. It's as simple as that..

Technical data
Dimensions: 76 x 79 x 23 mm (fixing ears included)
Weight: 75g
Operating temperature: - 30 ° to + 70 °C



OBSERVER
Bob is intimately tied to the equipment. To watch, it captures only vital data that reveal his health.



SMART
It will then apply its analysis algorithms to turn data into accurate information to keep your equipment running well.



MAKING SENSE
In case of drift or unexpected problem, it will alert you directly to your smartphone, which will allow you to act and reduce downtime.



SIMPLE
Bob is really simple to install, just put it on your machine, no wiring or configuration needed.



AUTONOMOUS
Bob will operate for several years without recharging (battery included).



CONNECTED
BOB communicates using the standard LoRa® protocol: perfectly adapted to IoT, to long-distance communication with very low power consumption.



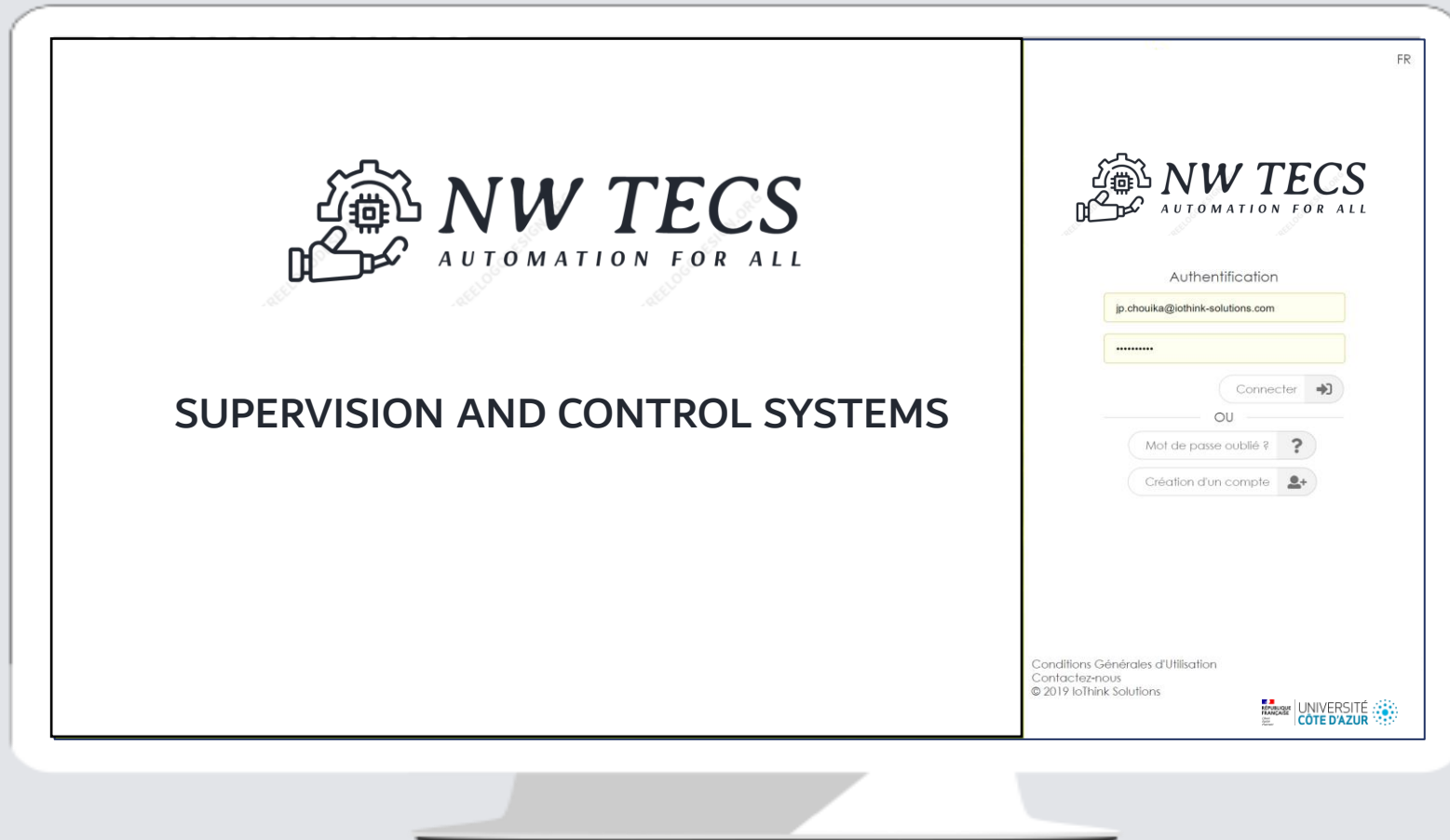
SECURED
Your production data are safe with BOB ! It retains them and sends only encrypted reports, resulting of its analysis, to the cloud.



INDUSTRIAL
Bob is very robust (IP68) and designed for industrial use cases.

Your dedicated supervision portal

- A platform dedicated to your image and customizable
- Web & Mobile
- Domain name, Logo, Graphic charter, Email addresses, Terms of Use, Notifications
- Simplified and autonomous management of user accounts
- Unlimited user creation



The platform for Everyone

Accessibility and simplicity are the keys to making change easy.

We don't want to overwhelm customers with statistics, nor upper management with the day to day operations.

The platform gives the right information to the right people. We do this through different platform components .

Contact Us

www.nwtecs.com

info@nwtecs.com

