



The Challenges of Massive IoT

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The Challenges of Massive IoT

€ **Low cost**, to address everything

🌐 **Global**, to be used everywhere

🔋 **Low power**, to provide autonomy

👤 **Easy to use**, to deploy it fast



🌱 **Produce more with less** resources and effort

⚙️ **Create innovative value**, avoid commoditization

A New Paradigm to Address the Massive IoT Challenge

Devices with a **connectivity module**



Ecosystem of certified vendors
Royalty free

Devices **send data**



Small messages optimized for sensor data

Messages are transmitted through the **Sigfox network**



Global network with high capacity for Massive IoT

They are **Processed in the Sigfox cloud**



5G-like Approach

They are accessed Through **Internet APIs**



Interoperability Layer

They **turn into actions and insights** through the customer IT



Partners with **specific business applications**

Applicable Across all Industries



... and across the globe

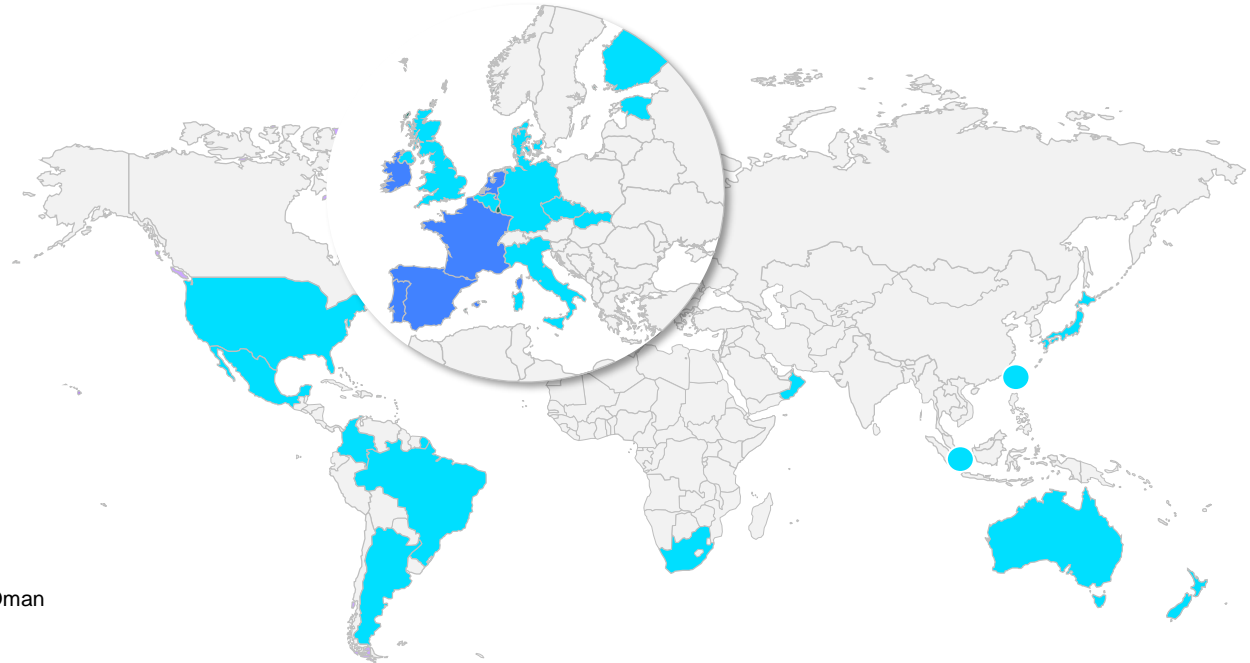
Present in 29 countries (inc. 15 EU members, 77% of the EU population), targeting 60 countries by 2018

● Covered countries

- France
- Ireland
- Luxembourg
- Portugal
- Spain
- The Netherlands

● On going country deployment

Australia	Malta
Belgium	Mauritius Island
Brazil	Mexico
Colombia	New Zealand
Argentina	South Africa
Czech Republic	Slovakia
Denmark	Singapore
Estonia	Taiwan
Finland	The Sultanate of Oman
Germany	The U.K
Italy	The U.S.
Japan	



How to Best Ensure the raise of the Massive IoT market: a need for interoperability?

- Sigfox observations of the market after 5 years of activity in the IoT market:
 - Industries are **not afraid of a lack of standards** on the connectivity layer.
 - The low raise of the market is linked to the fact that **industries are not well prepared to integrate the IoT**.
 - The different connectivity solutions currently existing on the market are **complimentary** and not directly competing.
- From an interoperability point of view, no need for a standard at the radio layer:
 - A progressive global harmonisation of the frequencies dedicated to the IoT could allow a better interoperability between devices
- Focus on a recognition of the **importance of Interoperability at Data level**:
 - Interoperability should be targeted at the API level
 - Let the industry innovate at radio level – within the existing regulatory frame



A Few Examples of Applications

(BACK-UP SLIDES)

What LPWAN technologies allow

1 TRACKING MOVING ASSET	Control quality of delivery (SLA, humidity, temperature, shock) Identify responsibility of assets and localization off premises Ensure recovery of lost assets
2 SECURING BETTER	Supporting security for remote facilities, assets & people Complementing existing connectivity with an anti-jamming solution
3 IMPROVING UPTIME	Ensure uptime with predictive & reactive maintenance Optimize your maintenance routes Automatize replenishment
4 MANAGING PEOPLE REMOTLY	Control off-premises your providers, patients, employees

Connected Dumpster



IMPROVE YOUR UPTIME

Challenge

First operator in France for collecting and recycling textiles and shoes, Le Relais (social integration business network) wanted to improve efficiency by optimizing the gathering process.

Solution

To optimize the capture of collection terminals data, the company uses a telemetry solution, hosted on Microsoft Azure, which indicates the filling level of the containers and communicates the results through a Sigfox network in order to optimize battery power consumption. This allows to start collecting only beyond a certain fill rate.

Benefits

- ✦ Route Optimization : up to 20% savings on the collecting process
- ✦ Creation & collection of new data regarding usage of containers



Package Pick-up Service



OPTIMIZE YOUR
RESSOURCES

Challenge

Allow customers to send packages from home.

Solution

The smart button placed inside the mailbox notifies the mailman that a package has been placed in it and should be picked up for delivery.

Benefits

- ✦ Improved effectiveness : decrease the waiting line at the Post Office
- ✦ Increase the customer satisfaction
- ✦ Differentiation vs. competitors (DHL, Chronopost)



Critical Goods Management



Challenge

Create an affordable solution to monitor boilers and create new services for customers.

Solution

Continuous remote monitoring of the boiler's performance and optimize preventive maintenance.

Boilers also communicate and trigger an alert when a failure occurs, allowing professionals to generate responsive, and appropriate remote maintenance.

Benefits

- ✦ Increase customer's satisfaction
- ✦ Control of the energy consumption on a mobile device
- ✦ Money savings
- ✦ Ability to pilot the equipment remotely for the service provider

IMPROVE YOUR UPTIME



"This is the first industrial IoT sensor-monitoring solution, and it opens new opportunities for our clients in many sectors."

Laurent Rousseau, CEO OceaSoft

GPS Tracker



Challenge

Optimize the logistic chain

Solution

A standalone tracker that can fit into a vehicle or be carried with transported goods

Battery life 40 times more efficient than existing tracker: autonomy up to 5 years

Benefits

- ✦ Differentiating product
- ✦ Addressing multiple sectors

TRACK YOUR MOVING ASSETS



Alternative partners on this application



Smart Parking



OPTIMIZE YOUR RESSOURCES

Challenge

Make the management of parking spaces more efficient.

Solution

WITTY is the intelligent parking management solution that provides relevant information to communities to help them managing urban spaces.

The system doesn't need of any infrastructure deployment or maintenance effort during its lifetime (no repeater or access point).

The sensor is completely buried causing no problem to maintenance operators or snow removal.

Benefits

- ✦ Orientation towards the free areas by a dynamic parking guidance
- ✦ Real time geolocation of the parking offenses
- ✦ Optimization of local police enforcement
- ✦ Fast parking slots control
- ✦ "Long time parked" vehicles identification



Alternative partners for this application



Water Level Monitoring



OPTIMIZE YOUR
RESSOURCES

Challenge

Remotely monitor a level of a fluid.

Solution

Ijinus has developed a range of ultrasonic sensors to measure the level of water and the flow.

- Level measuring range from 3 to 10m
- Low Energy
- Integrated conversion tables (flow rate, volume)
- Wireless setting with Rfid technology
- Memory : up to 500 000 measures
- Sealing : IP68
- Input options : Counter, status, events, pulse

Benefits

- ✦ Numerous applications: water, waster water, CSO monitoring, flood warning systems, bin management
- ✦ Ease of use
- ✦ High accuracy
- ✦ Low cost

