



## IDENTITY CARD

### Activity

Electricity producer and provider

### Direction

Telecom and IT department

### Department

Proximity to the users department

### Headcount

+1000 employees

### Regional agency

East / Northwest

## SCOPE

- ▶ 15 solution users
- ▶ 150 sensors end 2019, 1000 in 2020
- ▶ +75 equipped sites in France

## GOALS

- ▶ "Zero breakdown" target with a remote monitoring and in real time on telecom technical premise environmental conditions
- ▶ Having an independent solution via a LoRaWAN local network to benefit from a second means of information feedback
- ▶ Easily and safely accessing to critical data to prevent incident and breakdown risks

## RESULTS

- ▶ **Autonomy** and **time gain** to access information relating to premise environmental conditions
- ▶ Equipment availability **maximization** and optimized service continuity
- ▶ **Energy saving** thanks to the availability of critical information on technical room use

## How has the IoT made it possible to meet the maintenance and service continuity challenges on technical sites?

In the context of an internal innovation project, EDF's user proximity service department was looking for a solution to remotely control the environmental conditions of its technical premises. Mr. Penhouet, computer and telecom engineer, chose to turn to IoT and especially LORAWAN because this technology meet all the project's constraints in technical terms of "time to market" and costs.

### BACKGROUND

The electricity supplier activity requires reliable IT and telecom solutions. However, even with a very low breakdown rate, an observation is recurrent: incidents are often linked to the environment. An air-conditioning breakdown made the equipment overheat and was the trigger for the search for an innovative solution to anticipate these incidents.

The experimental project come from the need to collect and analyze in real time key data relating to the ambient conditions of the technical premises - temperature, moisture, luminosity - independently of the existing network.

To meet the cost constraint, Mr. Penhouet and Mr. Bouleau, the project initiators, quickly turned to LoRaWAN technology as a technical solution allowing data feedback in complete autonomy. Having sourced several LoRa communicating sensors, they chose a multifunctional sensor fast to install to measure all the necessary parameters.

### THE SOLUTION

The technical premises are spread all over the territory so it is important to have a centralized management interface to get a global vision. Two platforms were studied, including Synox's software suite, chosen for its maturity and its scalability while proposing a controlled cost.

The SoM2M#IoT platform was tested to remotely manage all the sensors and the connectivity. It provides indicators to users that give an overall view of the objects and their status. It is completed with the SoDATA#Viz platform that allows to analyze data and sharing it through a dashboard which is updated in real time. Thanks to its mail notification system, the information broadcasting and processing has become more efficient. The pilot solution's interlocutors get alerts in case of threshold overrun - temperature for example - thus accelerating the eventual incidents detection and correction in total security.

Mr. Penhouet outlines "We chose Synox's platforms because they allowed the connected devices management and also offered an intuitive interface of data visualization. Moreover, the SoM2M#IoT platform is agnostic and includes all the networks on the market (LoRa, Sigfox, Cellular...) that will allow us to integrate other sensors if needed whatever the technology used."

“ We were looking for a mature solution for a quick implementation and this is what Synox offered us. Thanks to the end-to-end support by Synox, the 1st Proof of Concept was carried out in less than a month

David PENHOUE, IT and telecom engineer





## ABOUT EDF

As the world leader in low-carbon energy, the EDF Group gathers all the businesses involved in electricity generation, trading and distribution.

Drawing on the expertise of its teams, its R&D and engineering, its experience as an industrial operator and the attentive support of its customers, EDF provides competitive solutions that combine economic development and climate protection.

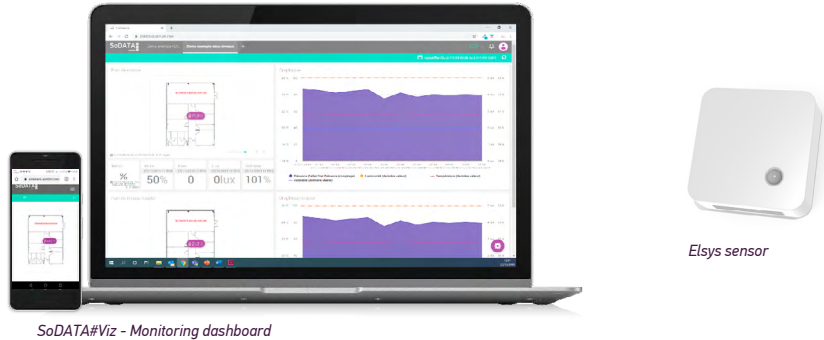
## ABOUT SYNOX

As an IoT editor and integrator platforms, Synox supports companies and communities wishing to easily and safely implement their IoT project whatever the objects and technologies used.

Its mission: allowing companies and communities to transform themselves by taking advantage of IoT emerging technology potential, in complete autonomy in a sustainable development way.

## MORE INFORMATION

- ▶ [Web demo registration](#)
- ▶ [Request our Smart Building use case brochure](#)
- ▶ [Contact us](#)



SoDATA#Viz - Monitoring dashboard

## THE RESULTS

After a first successful Proof of Concept carried out on 5 sites, the project moved into a pilot stage with the setup of sensors on more than 75 sites to test the value proposition of the solution. The collected data enabled the first dashboards to be developed and the platform's alert system to be configured as accurate as possible. After 6 months of use of the platforms and the creation of 75 dashboards by a team of 3 users, the incident detection processes were structured with a time gain in the incident resolution.

This remote technical premises monitoring could, according to the company's directions, be extended to most of tertiary sites. Finally, the platform will be used by a dozen people in charge of IT or building management at regional sites. Each manager will be able to remotely control the recommended temperature respect and thus guarantee optimal conditions in technical premises to extend the hardware lifetime et allow a better management. In addition to the environmental conditions, the solutions allowed to identify new improvement targets in the premise management. Mr. Penhouet explains "Thanks to the data displayed in SoDATA#Viz, we have access to new informations. For example we often noticed that the light was on in an empty room. We can now set up alerts and make energy savings!"

Mr. Penhouet also talks about several complementary projects "As the Synox's platforms are open and interoperable, the next test steps will be to transfer data on our service platform via the MQTTS protocol for a massive processing of big data type. We also plan to cross-reference them with other data sources to keep on improving our processes and monitoring."

« We still have to validate the value proposition with our internal customers, which will allow us to open the solution on other use cases and perpetuate this monitoring solution, even for a more massive deployment. » concludes Mr. Penhouet

"How would you describe our solution in 3 words?"

**Simplicity, connectivity and ergonomics** answers Mr. Penhouet

“The Synox's solution brings us knowledge, thanks to the reliability of the collected data we could identify several issues easy to solve, such as the failure to respect recommended temperature in technical premises.

David PENHOUE, IT and telecom engineer



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