The end of the copper network and the PSTN: why and how to prepare for it?

The copper network shutdown in France is an ambitious project aimed at replacing this historical telecommunications infrastructure with modern technologies—such as fiber optics—that are more energy-efficient, offer better performance in terms of both services and speeds, and require lower maintenance costs.

A true collective challenge, the end of the copper network has significant consequences for local authorities and businesses, as it necessitates a strategic, technical, and logistical transition to more advanced digital services and new collaborative methods. It is, therefore, crucial to prepare adequately and anticipate key milestones.

What are we talking about?

We often hear terms such as "copper," "copper local loop," or "PSTN". However, it is important to distinguish between these closely related terms.

The copper network refers to a telecommunications infrastructure made up of copper cables, which serve as the physical medium for telephone services (PSTN) and Internet access (ADSL, VDSL, and SDSL).

The portion of this copper network that reaches the end user in the form of a T-shaped socket is known as the copper local loop.

Finally, the PSTN (Public Switched Telephone Network) is a technology that relies on the copper infrastructure to provide fixed telephone services, both analogue and digital.

Why the French model?

As a French company, our expertise naturally began here. France is at the forefront of this transition in Europe—just as it was during the early rollout of fiber optics—making it a valuable benchmark. We also bring real-world experience with a concrete use case in the French context, reinforcing our credibility and insight on the subject.

A bit of history

Originally, the PSTN was a fixed telephone network that was widely deployed between the 1960s and 1980s by France Télécom (now Orange). Based on a copper cable infrastructure, it automated analogue voice communication between fixed telephones, which was previously handled manually by operators.

Over time, this network evolved into digital telephony, replacing the old analogue systems by digitizing voice signals while continuing to use traditional telephone lines.

In the early 2000s, the copper network underwent technological advancements and was used to provide high-speed Internet access. It thus simultaneously supports the PSTN (analogue and digital lines) and technologies that enable Internet access, such as ADSL (Asymmetric Digital Subscriber Line), VDSL (Very-high-bit-rate Digital Subscriber Line), and SDSL (Symmetrical Digital Subscriber Line).

Shutdown timeline

After more than half a century of service, the copper network is gradually being phased out. Due to its obsolescence, technological limitations, and maintenance costs, Orange has decided to discontinue its commercialization and operation.

It is important to distinguish between the shutdown of the copper network and the shutdown of the PSTN.

The PSTN shutdown is divided into two phases. The first, the commercial shutdown, took place between November 2018 and November 2020. This means that Orange ceased opening new analogue and digital lines in mainland France and overseas territories.

However, existing lines will continue to function until the technical shutdown of the PSTN and the end of its operation. As part of this second phase, several shutdown waves have been scheduled between October 2023 and the end of 2026.

The technical shutdown of the copper network—the infrastructure that hosts the PSTN and broadband Internet access technologies—is planned between January 31, 2025, and the end of 2030.
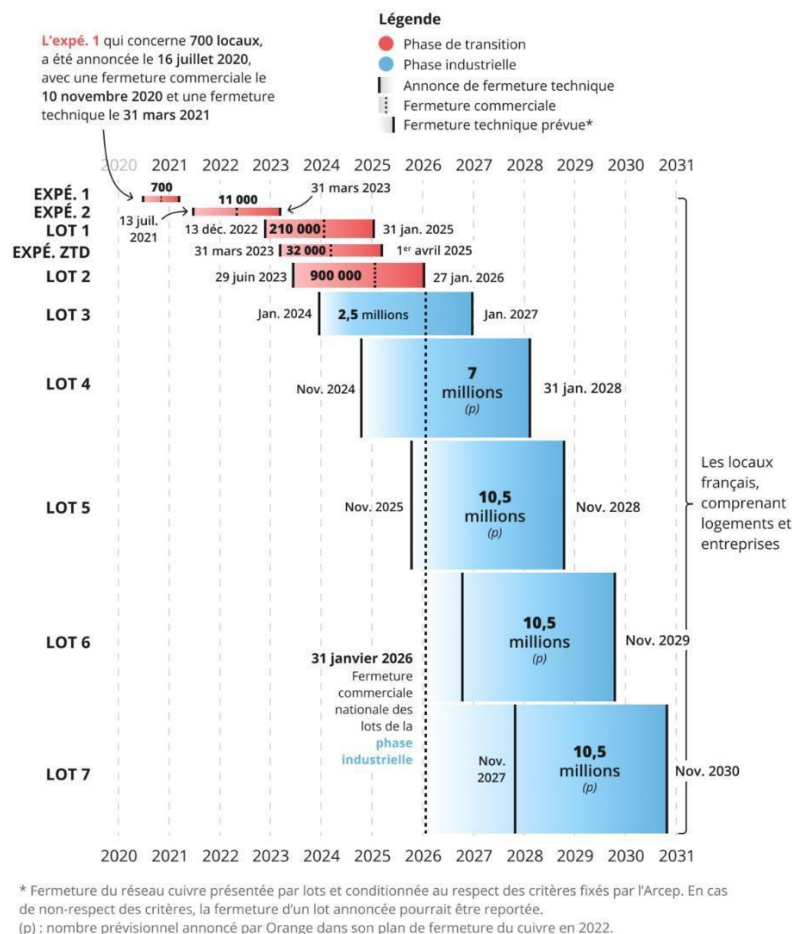
Copper network shutdown timeline – Source: Arcep

Technological migration

One of the objectives of Directive (EU) 2018/1972 of the European Parliament and Council, established on December 11, 2018, as part of the European Electronic Communications Code (recast), is to promote innovation and the transition to modern, high-quality technologies.

This directive also aims to meet the growing demand for digital connectivity, such as video conferencing, cloud services, virtual reality applications, and connected devices.

In France, operators have heavily invested in the deployment of modern technologies such as

fiber optics, 4G, and 5G. The copper network shutdown should lead to a full migration to these technologies, which offer higher speeds, better service quality, and greater flexibility in service offerings.

For example, telephony and collaborative solutions have continuously evolved in recent years, particularly due to the performance of fiber optics. While digital telephony still uses traditional lines and is limited to basic functions, IP telephony (VoIP)—which transmits voice over an Internet connection—offers a wide range of features such as conference calls, video calls, and the integration of tools such as CRM systems and unified communications services.

What are the support strategies?

The shutdown of the PSTN and, more broadly, the copper network is a complex issue, presenting challenges such as service disruptions, but also opportunities such as service modernization and the adoption of more efficient, secure, and cost-effective solutions.

It is, therefore, essential for local authorities, public institutions (hospitals, social housing providers, administrative buildings), and businesses to seek support from a specialized telecommunications consulting firm. Such a firm must be able to adapt to various situations, including the entity's size, geographic location, internal organization, and budgetary and scheduling constraints regarding new digital services and unified communications.

Setics Group supports its clients with expert guidance and powerful digital tools. Our structured methodology ensures a seamless transition by assessing existing infrastructure, identifying needs, defining technical architectures, evaluating implementation scenarios, managing procurement, supervising deployment, and conducting quality control. Complementing this expertise, our FiberState software provides a real-time project dashboard that centralizes data, tracks decommissioning progress, and automates workflows. By comparing forecasts versus actual rollout schedules, FiberState helps optimize resources and minimize service disruptions. With enhanced visibility and streamlined processes, telecom operators can confidently phase out copper broadband and accelerate the transition to high-speed fiber connectivity.
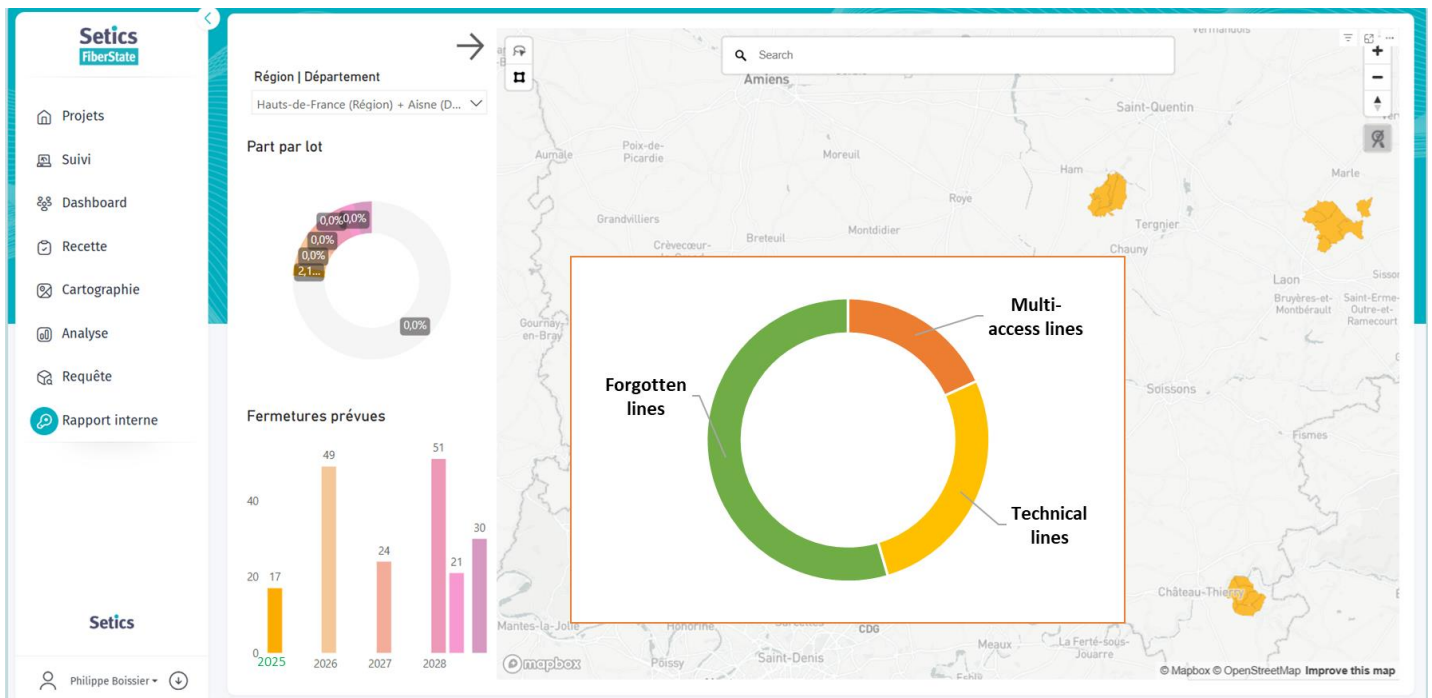
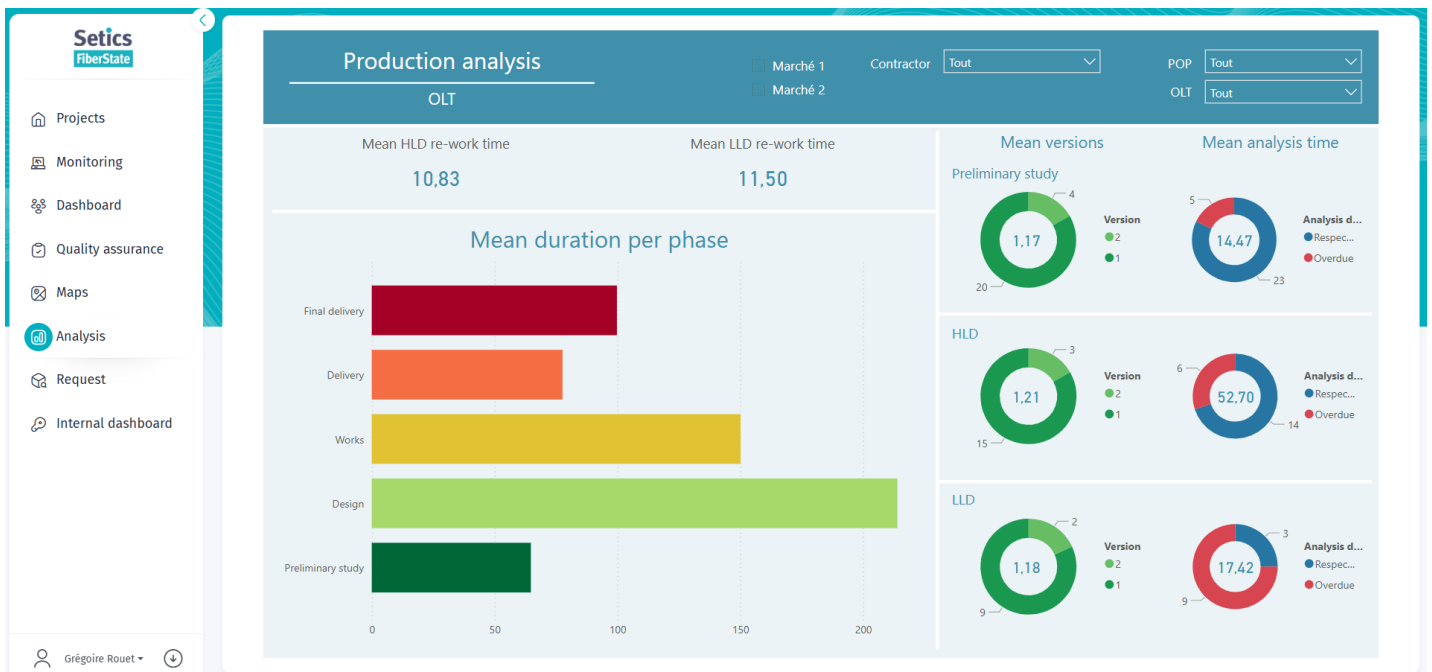Below are some visuals illustrating the outcomes of FiberState:
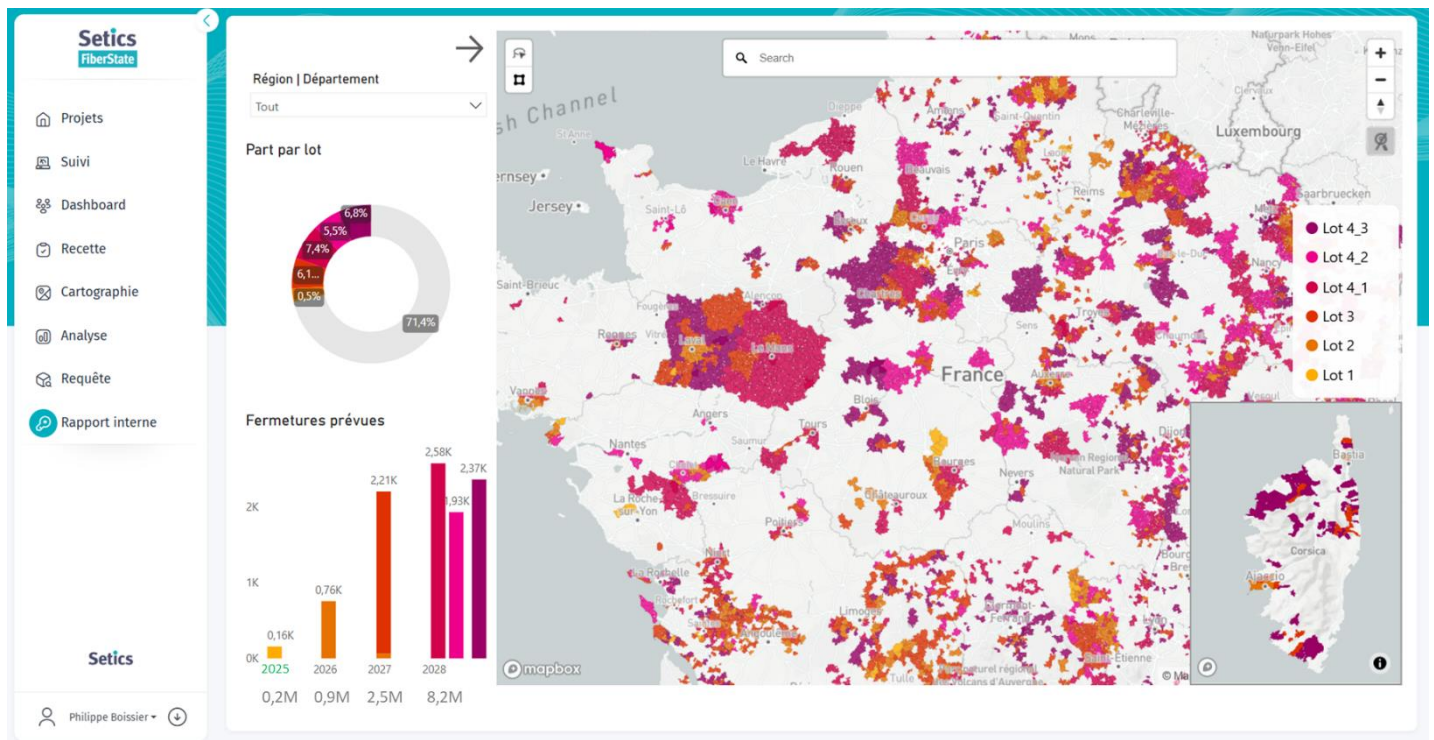
French copper rollout overview: 2025 => 2028
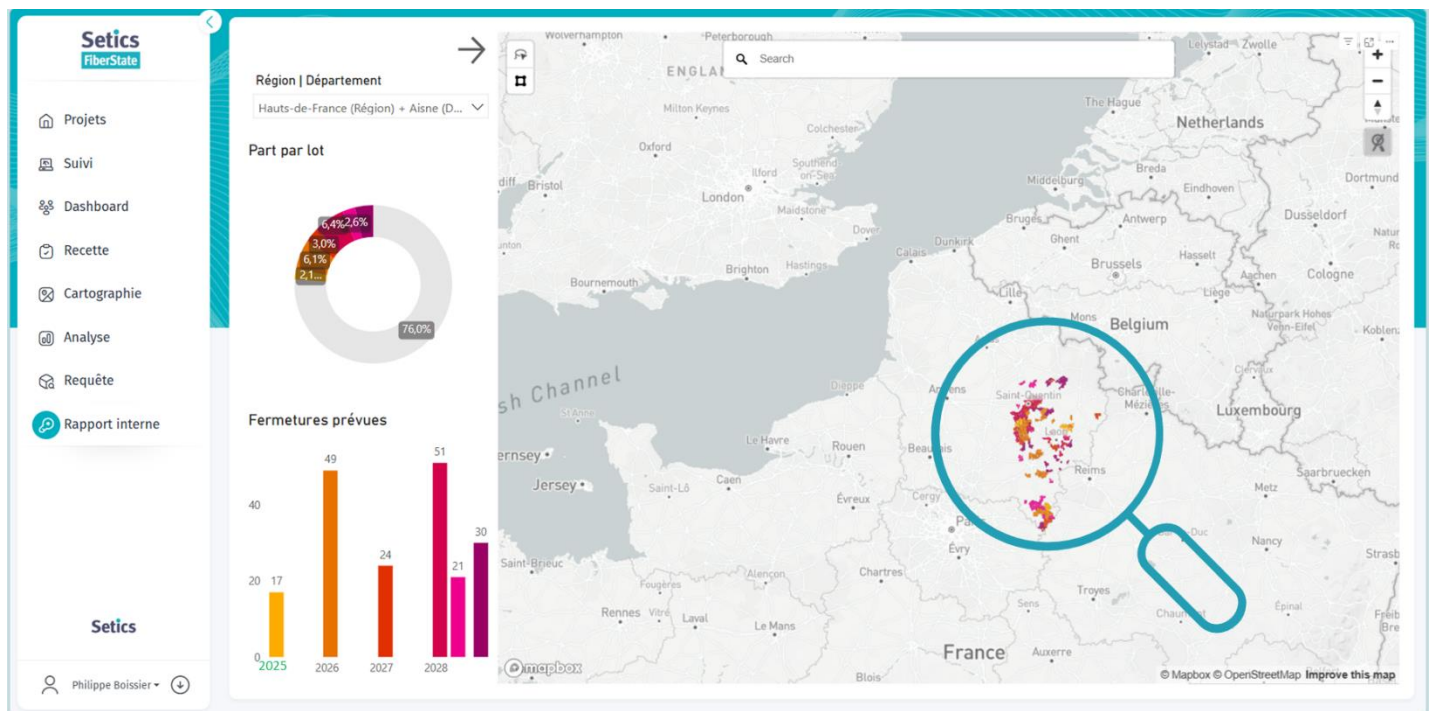
Zoom on a single department

Technical analysis

FiberState Dashboard

Would you like to discuss this topic with one of our experts? Or do you need technical expertise and support for your digital transition project? Reach out to us today!