arcep autorité de régulation
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des postes et de la distribution de la presse

RÉPUBLIQUE FRANÇAISE

Press release

ENVIRONMENT

Annual "Achieving digital sustainability" survey:

Mobile network equipment suppliers' environmental footprint has been assessed; data centre and telecom operators' impact on the environment continues to grow

Paris, 17 April 2025

In accordance with the responsibility it was assigned by the legislature to monitor digital technology's impact on the environment in France (see inset), Arcep collects indicators from ICT industry players, and compiles that information in a publication: the annual "Achieving digital sustainability" survey, which is accompanied by an infographics-based Executive summary. Last year, in addition to data collected from France's four main telecoms operators, the survey was expanded to include indicators from device manufacturers and data centre operators. This fourth edition has been expanded further still to include indicators from a new group of industry players: mobile network equipment suppliers.

Despite a slight improvement in data centres' efficiency, their impact on the environment is increasing rapidly with the surge in usage and the outsourcing of IT services

The pace of new data centre installations in France has been ramping up since 2020, concentrated around the Ile-de-France (greater Paris) region and involving data centres with increasingly large computer capacity. Of the (close to 150) installations run by data centre operators, eight became operational in 2023 alone, including six in Ile-de-France. These eight data centres are among the most powerful in France: they have an average capacity of 11 MW per centre[1], which is well above the 3.8 MW average of other centres.

At the same time, data centre operators' greenhouse gas emissions grew by 11% in 2023, due to a significant uptick in indirect emissions tied to power consumption – which itself increased by 8%, even though the tertiary sector's (which includes data centres) power consumption is decreasing. On average, newer and very high-capacity data centres are more energy-efficient.

In addition, the volume of water used by data centres, most of which is potable, reached 681,000 m^3 in 2023, which is still a modest level compared to the volumes employed for other uses. This volume nevertheless increased sharply (+ 19%) for the second year in a row in 2023.

Telecoms operators' greenhouse gas emissions and networks' power consumption is increasing, driven by the rise in digital practices

As greenhouse gas emissions in France decreased by 5.8%, the country's largest telcos' GHG emissions increased by 4%, reaching 397,000 tonnes of CO2 equivalent in 2023. This increase includes both direct (+ 2%) and indirect (+ 5%) emissions, resulting from mobile networks' growing power consumption.

While national power consumption shrank by 3% in 2023, telecom operators' consumption continues to rise (+ 2%, or 4.1 TWh). Mobile networks' energy consumption is also increasing (+ 6%), albeit at a lesser pace than in 2022: first, because the pace of cell site deployment is slowing and, second, because mobile data traffic is increasing at a lesser rate than in previous years (+20% YoY in 2023 versus + 28% in 2022). On the flipside, fixed networks' consumption continues to decrease considerably (- 14%), in large part due to the transition from the legacy copper network to more energy-efficient optical fibre ones.

Mobile network equipment: 2.4 tonnes of precious metals, 79,000 tonnes of CO2 equivalent

According to the ADEME-Arcep study, mobile network equipment's production stage is a major contributor to the depletion of strategic metals and minerals, and to the carbon footprint of networks' life cycle. In 2023, the production of mobile access network equipment sold in France required 2.4 tonnes of precious metals, which

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[1] A data centre's capacity corresponds to the maximum level of electrical power that it can provide at any given time to the IT hardware it hosts. Electrical power is expressed in megawatts (MW).

is down for the second year in a row. This decrease is due chiefly to a significant drop in equipment sales, and not to a change in the products' composition. The average amount of precious metals used to produce each piece of hardware has in fact remained steady since 2021, at around 17 g.

Embodied greenhouse gas emissions correspond to total carbon emissions across the product's life cycle, excluding the utilisation stage. Those of mobile access network equipment sold in France in 2023 totalled 79,000 tonnes of CO_2 equivalent. This figure only includes hardware sold in 2023, and is therefore not representative of the GHG emissions of the totality of mobile access network hardware deployed by mobile operators.

The number of digital devices put on the market continues to shrink, but screen sizes continue to grow

The decrease in the number of units put on the digital device market in 2023 can be attributed to several factors, including steady inflation throughout the year and, for certain devices, already high rates of ownership.

This trend should help reduce manufacturers' environmental footprint. But this reduction could be offset by several developments in the marketplace. First, the addition of new features made possible by the development of generative AI could create an incentive to switch to a newer device. Second, devices' screens continue to grow, which also increases their environmental footprint. Devices with larger screen consume more energy during the utilisation stage: on average, a big screen TV consumes six times more power than a smaller model, while a large screen computer consumes an average three times more power than a smaller model.

The next edition of the annual "Achieving digital sustainability" survey will be expanded to include new indicators and data collected from fixed network equipment suppliers that manufacture fibre optic cables

As part of its commitment to steadily enhance the data collected to measure digital technologies' impact on the environment, in 2025 Arcep will collect new indicators from the stakeholders who are already involved, and will expand the exercise to include fixed network equipment suppliers that manufacture fibre optic cable, in accordance with its Decision on data collection dated 21 November 2024 (see the press release).

Data collection powers assigned to Arcep by Parliament

The Law of 23 December 2021, on strengthening Arcep's environmental regulation of the digital sector, entrusts the Authority with the task of designing an environmental barometer, and gives it the power to collect environmental data, not only from electronic communication service providers, but also from providers of public online communication services, data centre operators, device manufacturers, network equipment suppliers and operating system providers. It also expands Arcep's data collection powers to include cloud computing providers.

Annual "Achieving digital sustainability" survey: a tool to inform public debate and discussions over a low-carbon strategy for digital technology

There are four main objectives attached to Arcep's annual "Achieving digital sustainability" survey:

- **Inform** citizens, public sector players and all of the stakeholders on the digital technology sector's environmental footprint;
- **Identify** economic players' activities that are likely to have an impact on the environment;
- **Encourage** stakeholders to take steps to achieve the most efficient measurement possible of their environmental footprint;
- **Monitor** the progression of these indicators over time, creating the ability to assess the impact of environmental protection actions put in place by businesses, and to supply relevant information for evaluating public policies on digital and the environment, and particularly the Authority's actions in this area.

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Associated documents

- [“Achieving digital sustainability” survey – 2025 edition](#)
- [Executive Summary in infographics](#)
- [Open data](#)

Arcep at a glance

`The Regulatory Authority for Electronic Communications, Postal Affairs and Print Media Distribution (Arcep), a neutral and expert arbitrator with the status of independent administrative authority (IAA), is the architect and guardian of internet, fixed and mobile electronic communications, postal and press distribution networks in France