

A Snapshot on Arcep's Digital Sustainability work

Greening Digital Companies 2023
ITU/WBA Webinar

October 2th, 2023

Arcep's « Achieving Digital Sustainability » survey*



- Arcep has already initiated a collection of environmental data from **Telecom operators** in March 2020, enriched in 2021 and 2022, including: *energy consumption of operators and their boxes, GHG emissions per scope, refurbishment/recycling of phones and STB ...*



- This Data collection was extended to **data center operators** and **terminals manufacturers (TV, phones)** in 2022, including: *energy and electricity consumption of DC and IT equipment, GHG emissions per scope, volume of precious metals/rare earths with respect to the number of terminals sold in France ...*

- Arcep intends, in the future, to generalize this collection to the various players of the Digital ecosystem.

- Rationale: Following an **incremental approach**

- Starting with selected types of players then **expanding to others...**
- Starting with **consensual & market aggregated KPIs** to then **refine** and ultimately **individualize ...**



**For more information on Arcep's Survey:*



<https://www.arcep.fr/cartes-et-donnees/nos-publications-chiffrees/impact-environnemental/enquete-annuelle-pour-un-numerique-soutenable-edition-2023.html>

Examples of published Arcep's Studies



01/2022: The Digital environmental footprint in France: ADEME and Arcep publish the first report of their joint study



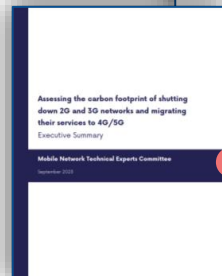
05/2022: Energy assessment of 4G vs 5G network deployment in France: Arcep's Technical Experts Committee on mobile networks delivers its report



03/2023: A forward-looking assessment of the digital environmental footprint in France in 2030 and 2050: Arcep and ADEME publish the second report of their joint study



04/2023: Understanding the methodological gaps in measuring the digital environmental footprint: A report from the Technical Experts Committee on measuring the environmental impact of Digital managed by Arcep and ADEME

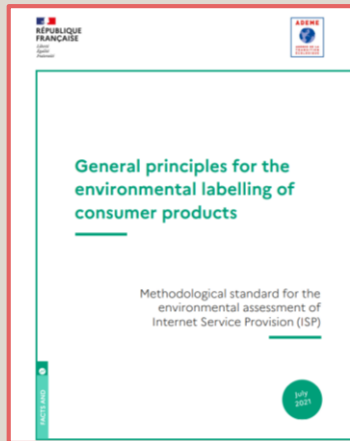


09/2023: Carbon impact of shutting down 2G and 3G networks: Arcep's Technical Experts Committee on mobile networks delivers its report

Environmental labelling and Product Category Rules (PCR) for ICT ...

Art. 13th of AGEC Act (Anti-waste law for a circular economy (2022)): obligation for telecom operators to inform their subscribers on **the GHG emissions related their Internet access services.**

Published V2 & pilot projects



Internet Access Service providers (mobile and fixed networks)

Published V1 & pilot projects

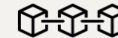


DC and Cloud services



Enterprise networks

Ongoing reflection ?



Blockchain ?



Artificial Intelligence ?

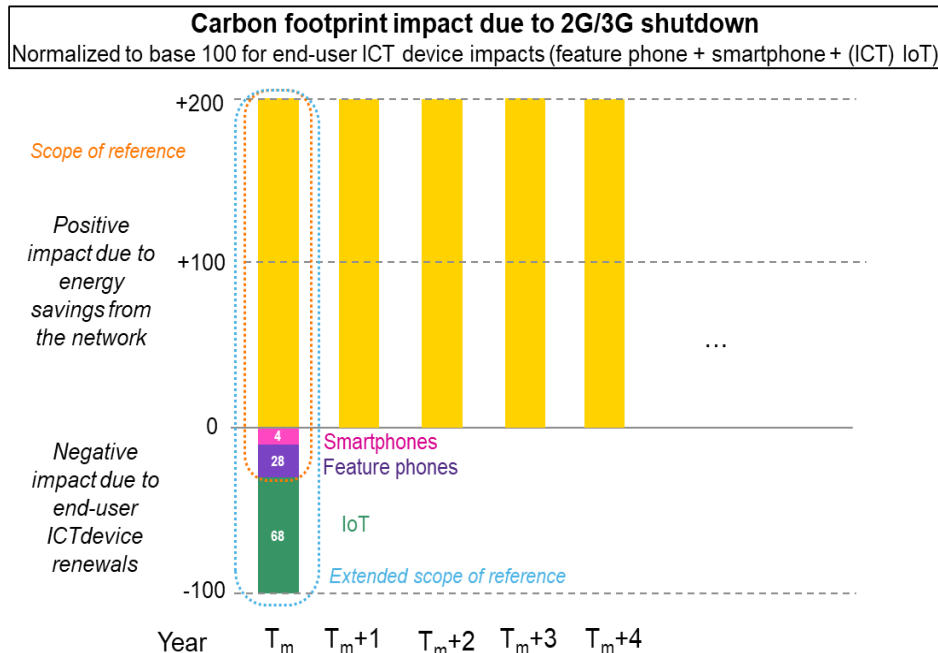


IoT ?

Arcep's Technical Expert Committee study findings on the Carbon impact of 2G/3G network shutdown

Aimed at informing public actors in particular, it seeks to provide qualitative and quantitative inputs on the environmental issues surrounding 2G/3G network shutdowns with migration of its services to 4G/5G, such as Climate Change.

The study shows recurring reductions in carbon emissions **from the first year** after the 2G/3G shutdown. For the network and mobile devices, this reduction is achieved in **under two months**. When factoring in M2M/IoT as well, this reduction is achieved in **under six months**.



* This illustration assumes a constant electricity grid emission factor over time, however this does not change the fact that gains in network electricity consumption are constant and persist over time beyond T_m

Extended scope of reference: break-even point after less than 6 months



**Thank you for
your attention**

Ahmed HADDAD

PhD. Technical Advisor @ ARCEP