AI and sustainability: Technology also has an environmental impact

A silent but explosive growth

In recent years, artificial intelligence has entered our daily lives with surprising speed.
From educational tools to digital companions, models like ChatGPT are consulted every day by millions of users for the most disparate reasons.
However, behind this apparent lightness lies an invisible reality: each of our question requires an enormous amount of data, processing, servers active 24 hours a day.
And this has a cost, even if it is not visible.

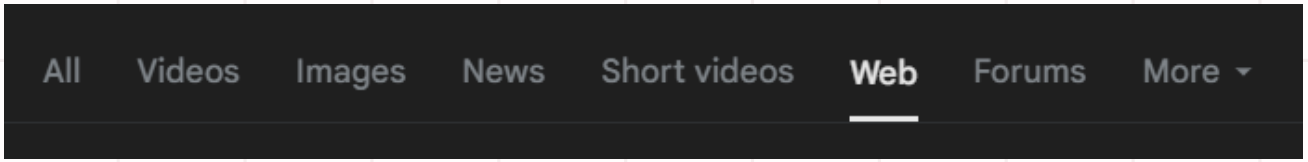
An environmental impact we cannot ignore

To operate these systems, large quantities of electricity and water are needed to cool the data centers.
Some US plants, for example, consume millions of liters of water per day and still operate partly with non-renewable sources.
So, the problem is not only technological, but ecological: AI generates emissions and exploits precious resources in an increasing and often uncontrolled way.

When we should avoid AI

For simple questions (e.g. store hours, basic facts), it is best to use a search engine or a trusted website.
A Google search uses about 10 times less energy than a request to ChatGPT.
To avoid unwanted AI-generated responses in search engines:

- Use the “web” tab instead of the “All” tab.



- Add “-ai” to the end of the query.
- Use alternative engines like DuckDuckGo, which allow you to disable AI responses.

When it makes sense to use AI

- For complex tasks: summaries, translations, reformulations, brainstorming.
- According to professor Bill Tomlinson, in some cases AI produces less CO_2 than human work on laptops, because a prompt lasts a few seconds, while writing or drawing alone can take hours and consume more energy.

Which model should I use?

- Some models are larger and more precise, but also more energy-intensive; others are lighter and consume less.
- For simple tasks (e.g. correcting an assignment, writing a short email), it is sufficient to use a smaller model like the o4-mini, which consumes less energy.
- For complex or theoretical tasks, a larger model, such as GPT-4.5, may be useful, although it has a greater environmental impact.
- In any case, to reduce consumption:

    1. Write short, direct questions
    2. Ask for concise answers
    3. Avoid unnecessary words or polite formulas
    4. Don’t treat AI like a person, there’s no need to say “please” or “thank you”