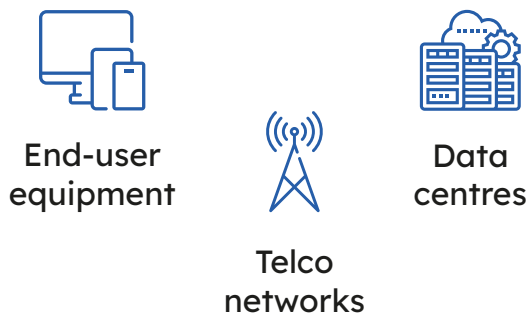



Environmental impacts of the digital sector in Switzerland


Scope of the study



Key results

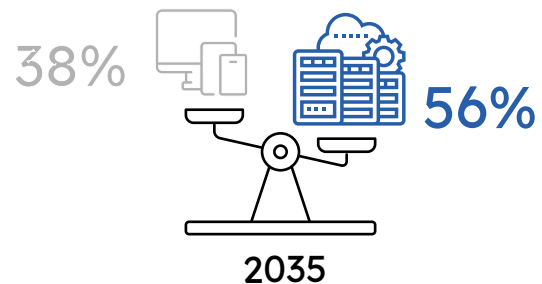
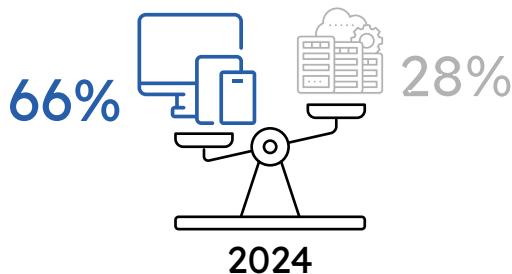


12%
of the electricity
consumption



2%
of the greenhouse
gas emissions

Largest impacts



Improving digital resilience and sustainability



Public authorities

Enhance collection & local recycling of e-waste to ensure proper disposal and recovery of valuable materials, reducing our current dependency



Businesses

Implement BYOD (Bring Your Own Device) approach to combine personal and professional use of devices



Citizens

Prefer high reparability index, second-hand, or certified (TCO, EPEAT) equipment. They are more robust & last longer



Context

In 2016 Switzerland signed the Paris Agreement along with 196 nations. In parallel Switzerland is embracing the digital transformation, with the “Digital Switzerland” strategy.

Digital technology plays a complex role in environmental matters. While it may seem immaterial at first glance, it notably contributes to **pollution and resource depletion**. It is crucial to assess and mitigate its environmental impacts to ensure a more sustainable future.

To answer this need, many Swiss organisations and institutions conducted a study on **Information and Communication Technologies (ICT)** in **Switzerland** aiming to :

- Identify the main sources of impacts;
- Inform policy-makers and businesses and motivate them to take action;
- Contribute to raising awareness among Swiss citizens.



Methodology

The methodology is based on **Life Cycle Assessment (LCA)**, used to assess the environmental impacts of a system through the life cycle and considering multiple environmental impacts.

The perimeter studied is the entirety of digital equipment and infrastructure in use in Switzerland, for personal and professional use, in 2024 and projections for 2035.



Key results

The key results from this study show that ICT infrastructures contribute to **2% of the total Swiss CO2 emissions** and **12% of the total electricity** consumption in 2024. The use of **metals and minerals** is another facet of the footprint of ICT. It is particularly strategic given the **growing demand for electronic products**.

Furthermore, projections for 2035 suggest that the environmental footprint of ICT will **significantly increase** in the coming years. These trends are due to the increase of the population and the growth of new usages (generative AI, virtual reality, etc.). **End-user equipment** is the main driver of environmental impacts in Switzerland in 2024. However, the trends until 2035 show that **data centres** and networks footprints are increasing and data centres will concentrate **most of the impacts by 2035**.



Recommendations

Although the development of ICT technologies can be a lever to reduce environmental impacts globally, this study highlights that there is a need for targeted mitigation strategies as well as a broader governance framework **to ensure the sustainability of the digital transformation**.

The recommendations presented in this study are structured around three objectives:

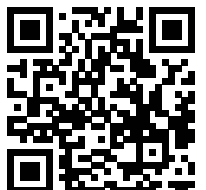
- **Decrease the need for manufacturing new devices:** Promote and implement practices that prolong the lifespan of devices, during design, utilisation and end-of-life phases;
- **Improve energy efficiency of infrastructures:** ICT providers can avoid useless redundancy and apply circularity approaches (e.g. heat reuse in data centres);
- **Arbitrating digital usage:** Critically assessing and moderating the use of digital technologies to ensure they meet genuine needs without excess.

Read the full study and more information at sustainableit.ch

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