

# CAPACITY BUILDING PROGRAMME

GREEN  
CULTURE  
SERIES

**27/MAY/26**  
ONLINE  
SESSION

zmina.eu

**ZMINA**  
RESILIENCE



**THE DIGITAL  
PARADOX:  
NAVIGATING  
INNOVATION AND  
SUSTAINABILITY**

— WITH  
**GWENDOLENN  
SHARP**

**IZOLYATSIYA**  
PLATFORM FOR CULTURAL INITIATIVES

**MALÝ  
BERLÍN**  
kultúrne centrum

**teh**

Co-funded by  
the European Union

ZMINA:Resilience is a cooperation between IZOLYATSIYA (UA),  
Malý Berlín (SK) with support of Trans Europe Halles (SE).

# ■ OBJECTIVES



- Understand the hidden impacts of digital technologies and AI
- Reflect on digital practices in cultural work
- Explore practical strategies for digital sustainability
- Share experiences and existing experimentations with peers

## **The Green Room : developing creative strategies for environmental and social change in the music sector**

- awareness-raising and training
- operational support
- cooperation
- action research
- advocacy

<https://thegreenroom.fr/>



# The myth of dematerialisation



**FEB  
2025**

# ESSENTIAL DIGITAL HEADLINES

OVERVIEW OF THE ADOPTION AND USE OF CONNECTED DEVICES AND SERVICES



GLOBAL OVERVIEW

TOTAL  
POPULATION



we  
are  
social

**8.20  
BILLION**

URBANISATION

**58.1%**

UNIQUE MOBILE  
PHONE SUBSCRIBERS



Meltwater

**5.78  
BILLION**

vs. POPULATION

**70.5%**

INDIVIDUALS USING  
THE INTERNET



KEPIOS

**5.56  
BILLION**

vs. POPULATION

**67.9%**

SOCIAL MEDIA  
USER IDENTITIES



**5.24  
BILLION**

vs. POPULATION

**63.9%**

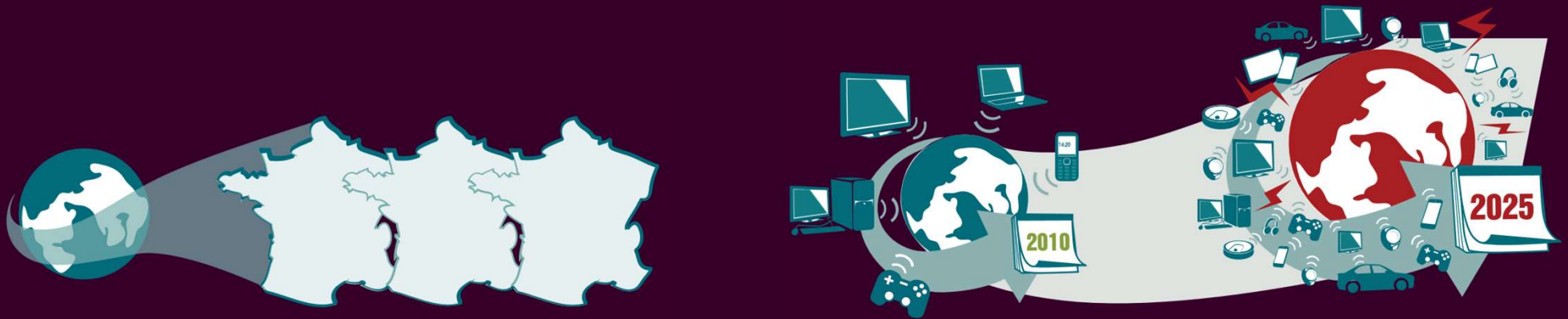




In 2019, the digital world was made up of 34 billion pieces of equipment with 4.1 billion users, i.e. 8 pieces of equipment per user. This average equipment level hides very large disparities depending on the geographical area observed.

In 2019, the mass of this digital world amounted to 223 million tonnes, the equivalent of 179 million cars of 1.3 tonnes (5 times the number of cars in France).

# The Global digital footprint





# Hierarchy of sources of carbon impacts

(in decreasing order of importance in terms of sources of impact):

- 1/ Manufacture of user equipment
- 2/ Electricity consumption of user equipment
- 3/ Electricity consumption of the network
- 4/ Electricity consumption of data centres
- 5/ Manufacture of network equipment
- 6/ Manufacture of equipment and data centres (servers, etc.)

... but AI is changing this...

Source: [greenit.fr](https://greenit.fr), 2021





- One of the major problems created by data centres is their very high geographical concentration, which generates conflicts of use.
- Microsoft has increased its water consumption by 34% in 2023. In a world where water resources are set to become increasingly scarce, building data centres in an uncoordinated way competes with agriculture and the needs of local populations.

AI draws its power from thousands of computers in data centres around the world (currently around 9000 globally) running at full speed all the time. A ChatGPT query consumes 10 times more energy than a standard google query.



In Ireland, data centres account for 25% of the country's electricity consumption, 30% by 2028

| NOMBRE DE CENTRES DE DONNÉES (DATA CENTERS)                            |                    |                                   |       |       |
|------------------------------------------------------------------------|--------------------|-----------------------------------|-------|-------|
| Sources : Uptime Institute ; Synergy Research Group ; Data Center Map. |                    |                                   |       |       |
| RANG                                                                   | ÉTAT OU TERRITOIRE | CENTRES DE DONNÉES (data centers) |       |       |
|                                                                        |                    | 2010                              | 2020  | 2025  |
| 1                                                                      | États-Unis         | 1 511                             | 3 263 | 4 165 |
| 2                                                                      | Royaume-Uni        | 181                               | 391   | 499   |
| 3                                                                      | Allemagne          | 177                               | 382   | 487   |
| 4                                                                      | Chine              | 138                               | 299   | 381   |
| 5                                                                      | France             | 117                               | 252   | 321   |
| 6                                                                      | Canada             | 107                               | 230   | 293   |
| 7                                                                      | Australie          | 100                               | 215   | 274   |
| 8                                                                      | Inde               | 98                                | 212   | 271   |
| 9                                                                      | Japon              | 88                                | 190   | 242   |
| 10                                                                     | Italie             | 76                                | 164   | 209   |
| 11                                                                     | Brésil             | 71                                | 153   | 195   |
| 12                                                                     | Pays-Bas           | 70                                | 152   | 194   |
| 13                                                                     | Espagne            | 70                                | 152   | 194   |
| 14                                                                     | Indonésie          | 66                                | 143   | 182   |
| 15                                                                     | Russie             | 65                                | 141   | 180   |
| 16                                                                     | Irlande            | 50                                | 109   | 139   |

- According to the International Energy Agency, data centres could consume as much energy as countries like Sweden or Germany within 2 years.
- A study by the University of California has estimated the water consumption of AI: every time we ask an AI chatbox a question, we consume water without realising it. 20 to 50 queries would be equivalent to consuming ½ litre of water (fresh water used in rivers, lakes and groundwater).
- In 2023 Google withdrew 28 billion litres of water, 2/3 of which was drinking water. Main purpose of this consumption: cooling data centres. Global demand for AI could lead to data centres consuming more than 4,000 billion litres of fresh water within the next 2 years (University of California).



SEI podcast

# Powering inequity: lithium mining’s impacts on Indigenous communities and ecosystems in the Andes

part of [Power in balance](#) / Episode 1, Season 1

In this podcast episode of Power in balance: conversations on sustainability and justice, SEI’s Laura Forni explores how lithium mining in the Andean mountains is impacting Indigenous communities, and how including Indigenous voices and knowledge systems in climate solutions is essential for a just and sustainable transition.

Published on 7 March 2025



## Jadar: Ground Zero for EU green mobility dreams, Serbia’s EU hopes

Locals are concerned that the project could spoil the farmlands of the Jadar Valley in western Serbia.

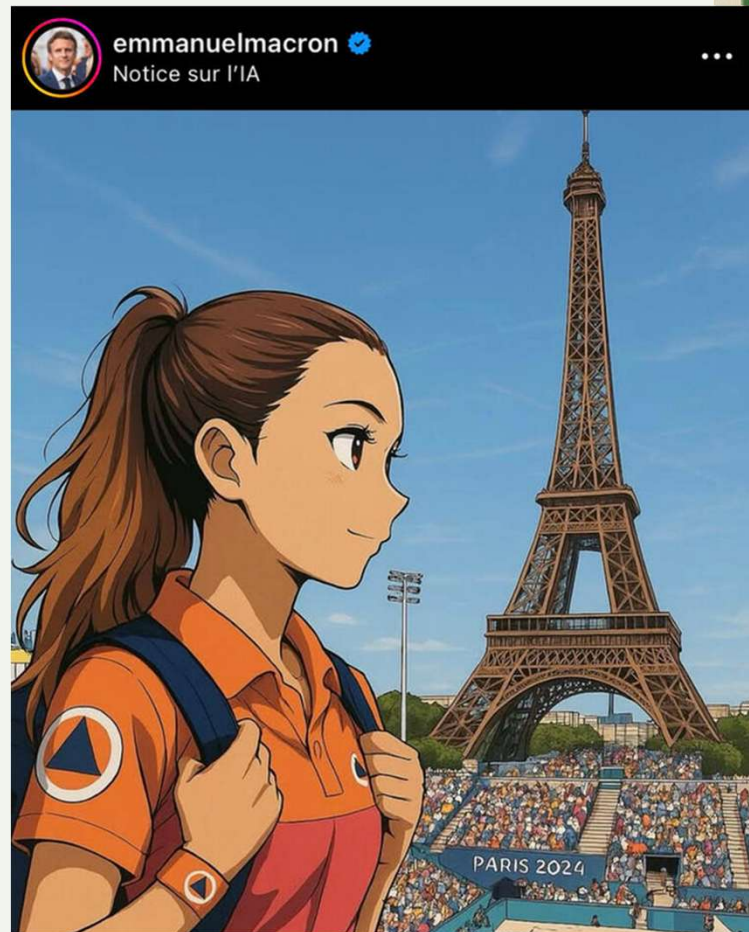


Location approximate.  
Source: Mindat, POLITICO research



## AI trends

One single Midjourney image is the energy equivalent of recharging a phone. We're talking about 700 million images generated in less than a month for the starter pack and studio Ghibli trends. That's as much as the annual electricity consumption of 2,100 households.







## Hierarchy of sources of carbon impacts

1 email with 1 attachment of 1 MB is 0.03g of CO<sub>2</sub> emitted (large email)

A 10-minute video (100 MB) emits around 3gCO<sub>2</sub>e

1 chatGPT query emits 2 to 3gCO<sub>2</sub>e

The manufacture of a smartphone emits 61kgCO<sub>2</sub>e (i.e. 2 million emails)

A new laptop emits 514kgCO<sub>2</sub>e (or 171,000 10-minute videos)

Reminder: a beef steak = approximately 5kg of CO<sub>2</sub> emitted > 40km in a car (or 165,000 emails)



## Online vs. In person

- Video conferencing approx. 1g CO<sub>2</sub>e per minute per person
- Audio conference + screen sharing 0.3g CO<sub>2</sub>e per minute per person
- Car journey: 150g CO<sub>2</sub>e per km travelled
- Travel by TGV: 2g CO<sub>2</sub>e per km travelled



Streaming or downloading?  
Cloud or local storage?  
Reading a book on tablet or paper?



## Digital « sobriety »

Digital sobriety means being intentional and selective about how we use digital tools. It is not necessarily about using less but about using *better*.

### 3 key principles:

- **Sufficiency before efficiency** “Do we really need this tool, this update, this meeting, etc.?”
- **Lightness by design** – choose lighter software, smaller files, simpler visuals.
- **Shared responsibility** – involve the whole team in defining what “enough” means for your organisation.

## From individual to collective culture :

Ex:

- Define internal guidelines for responsible digital practices
- Integrate sustainability into your digital purchasing policy
- Encourage peer learning – share tips between colleagues
- Nominate a digital responsibility referent or working group
- Regularly review tools and subscriptions together



## Recommandations :

- Make your equipment last as long as possible
- Think of digital technology as a non-renewable resource (=not to be wasted)
- Re-examine our needs and habits (real need vs. bad habit)
- Disseminate knowledge about these issues
- Eco-designing websites, videos and platforms

*Open Letter*

# Rethinking Digital Practices and Spaces



We, cultural and media players who benefit from EU funds, ask the European Commission and its Creative Europe funding programme to take the threats caused by the growing power of digital capitalism represented by tech giants into consideration, and to take a leading role in tackling them.

# Sustainable tools for online music practices



**In Great Britain, 46% of vinyl purchased is never listened to**



# Coffee break



# Workshop





# Thank you for your attention!

Gwendolenn Sharp

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