DestinE Platform

DIGITAL RESPONSIBILITY ROADMAP EXECUTION

SUSTAINABLE IT



Destination Earth
Funded by the European Union
Implemented by ECMWF esa EUMETSAT

Agenda

Step	Activity	Format
Opening	Briefing - Setting the scene	Plenary : trainer pitch
Step 1	Key data of Sustainable IT: Why is it important	Participative quiz
Step 2.1	Discovery of the 6 pillars: End user devices, Networks, datacentres, Software, Uses & Behaviors, Governance	Envelope investigation
Step 2.2	Results presentation	Group presentations
Break		
Step 3	Brainstorm on levers to reduce emissions	Action cards
Step 4.1	Groups exchange their card to activate Levers to reduce impact	Action cards
Step 4.2	Results presentation	Group presentations
Closing	Individual commitments and session wrap-up	Individual intention cards and debrief
End	Transition quiz	Participative quiz

+ 30 min of presentation of SERCO's sustainable roadmap status

Step 1 – Introduction to the agent role

EVERY DAY, YOU ARE MODELLING THE FUTURE OF OUR PLANET. YOU RUN SIMULATIONS, PROCESS TERABYTES OF DATA, AND PUSH THE BOUNDARIES OF WHAT SCIENCE CAN PREDICT.

BUT BEHIND EVERY CALCULATION, BEHIND EVERY JOB RUNNING OVERNIGHT, SOMETHING GOES UNNOTICED.

AN INVISIBLE FOOTPRINT. A HIDDEN COST. A STORY NO DASHBOARD TELLS.

THIS TRAINING IS ABOUT FINDING IT... AND DECIDING WHAT TO DO WITH IT.

FOR 3 HOURS, YOU WON'T BE ENGINEERS OR PROJECT MANAGERS.

YOU WILL BE DETECTIVES.

INVESTIGATING THE HIDDEN FACE OF YOUR OWN WORK. AND LEAVING WITH THE TOOLS TO CHANGE IT



Step 2 – Analysis and compilation of evidence

CONTEXT

You will receive six envelopes containing evidence related to each of the six main suspects implicated in the digital carbon footprint.
However, due to their highly classified nature, some of this evidence remains censored.



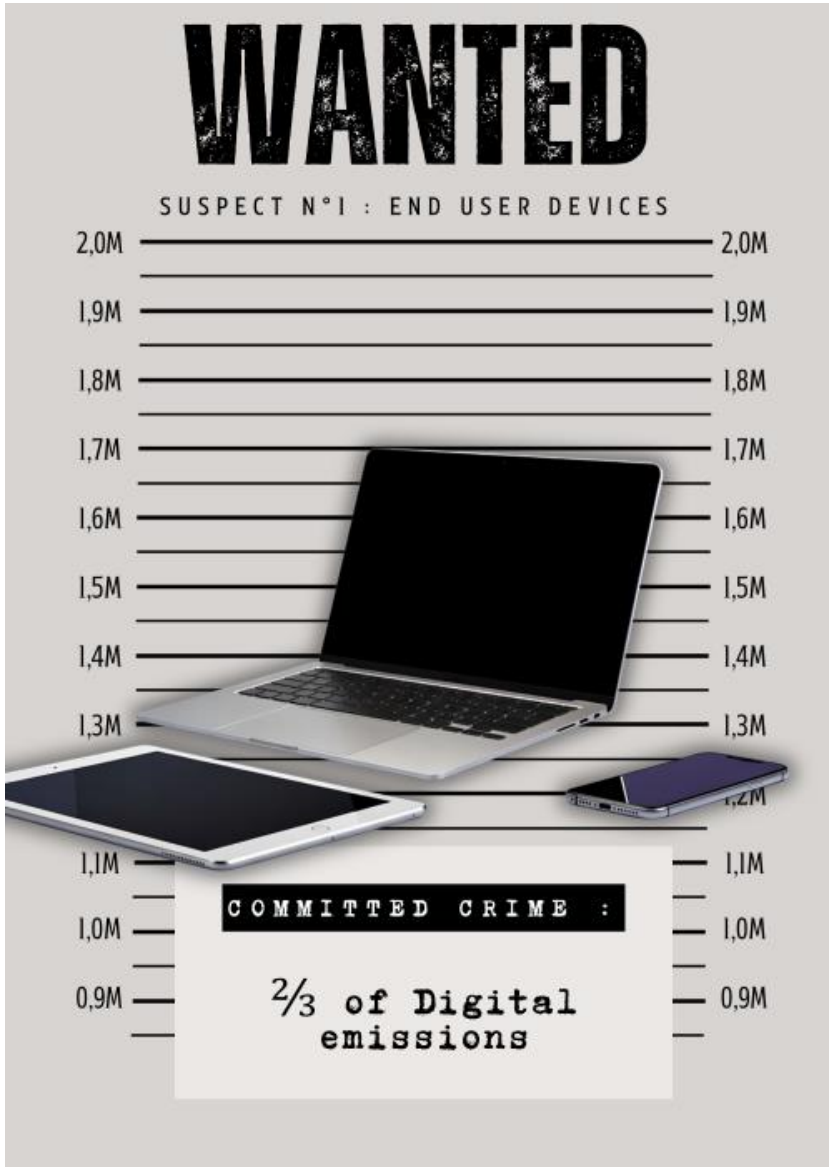


YOUR MISSION:

As a team of agents, your mission is of the utmost importance.
We need you to uncover the truth and reveal the hidden details in the evidence, to help us arrest the suspects.



Step 2 – Analysis and compilation of evidence

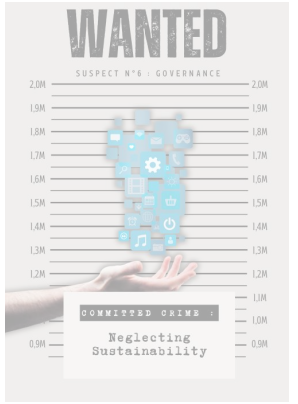


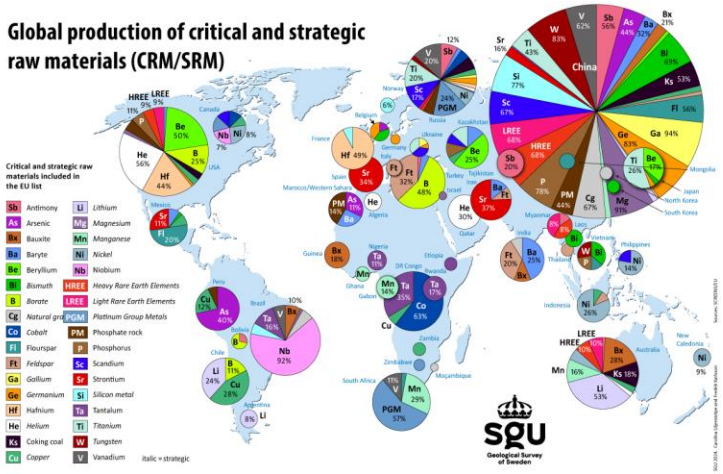












One smartphone requires the mining of **54 critical raw materials** (cobalt, lithium, rare earth elements...)

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Democratic Republic of Congo supplies ~70%* of the world's cobalt, under conditions flagged by human rights organizations.

* Source : S&P Global Market Intelligence (2024)

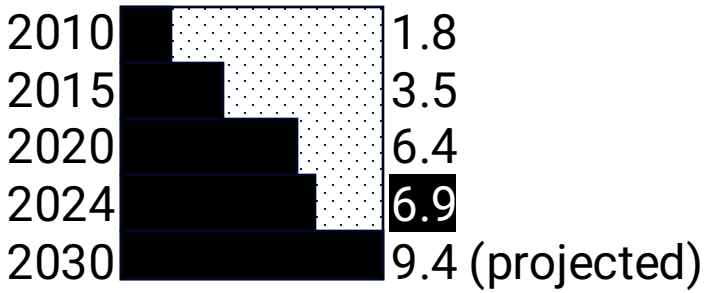
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Manufacturing one laptop requires approximately **800 kg of raw materials* (equivalent of a horse)** and **190 000 liters of water* (3 years of family daily showers)**

* Source : Calculating the pre-consumer waste footprint : A screening study of 10 selected products. Article in Waste Management & Research – Jan. 2017

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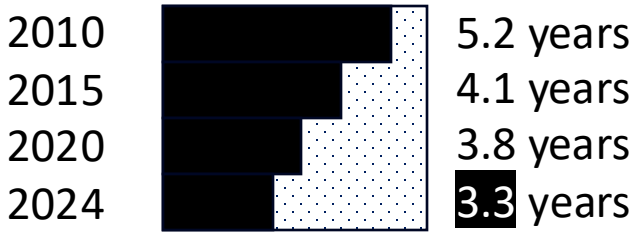
NUMBER OF CONNECTED DEVICES PER PERSON (GLOBAL AVERAGE)



* Source : Cisco annual internet report (2020)

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AVERAGE REPLACEMENT CYCLE FOR PROFESSIONAL LAPTOPS



* Source : Ecosndard.org 2020

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Indicator	Value
Connected devices worldwide (2024)	~18 billion
E-waste generated per year	~62 million tonnes
Share of e-waste formally recycled	17%
Average lifespan of a professional laptop	3.3 years (industry target : 7+)

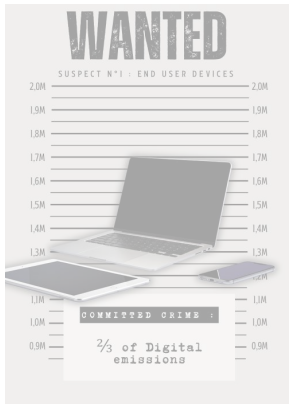
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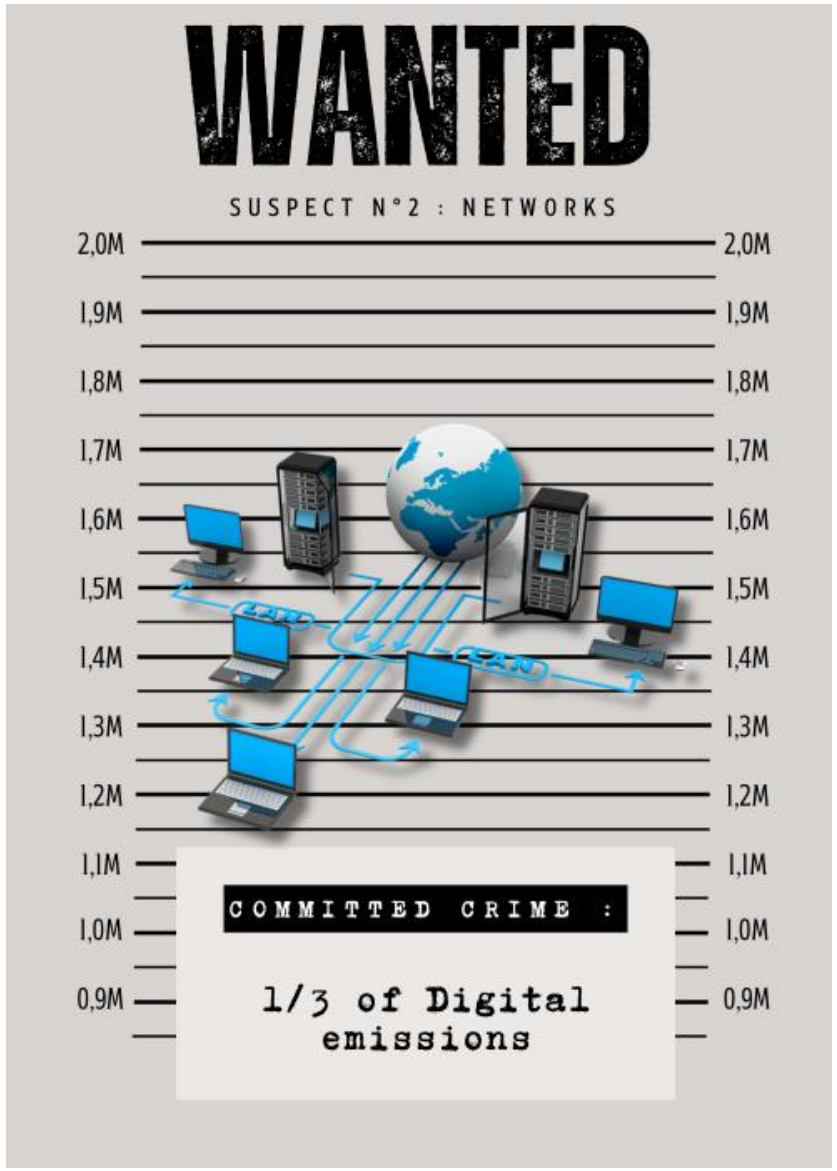
If the DestinE SERCO team of **~30 people** replaces laptops every **3.5 years** instead of **6 years** :
6 000 kg CO2e of unnecessary manufacturing emissions per cycle
That's equivalent to 60 return flights Paris → Rome.

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Step 2 – Analysis and compilation of evidence

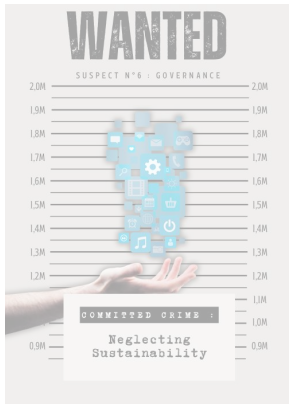








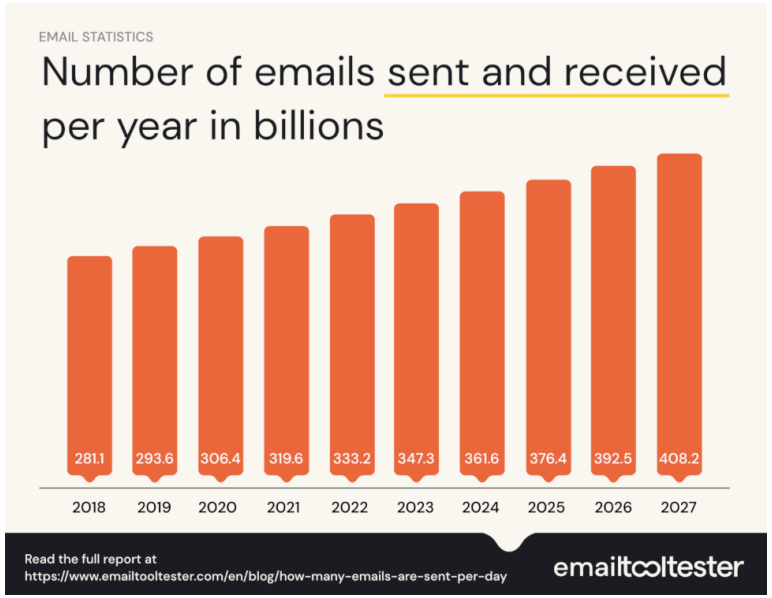




The internet runs on 1.4 million km of submarine cables (enough to wrap the Earth 35 times)
Networks account for 28% of the total digital carbon footprint

Source : ISCPC (International Submarine Cable Protection Committee) - 2025
Source : The Shift Project : Environmental impacts of digital technology: 5-year trends and 5G governance (2021)

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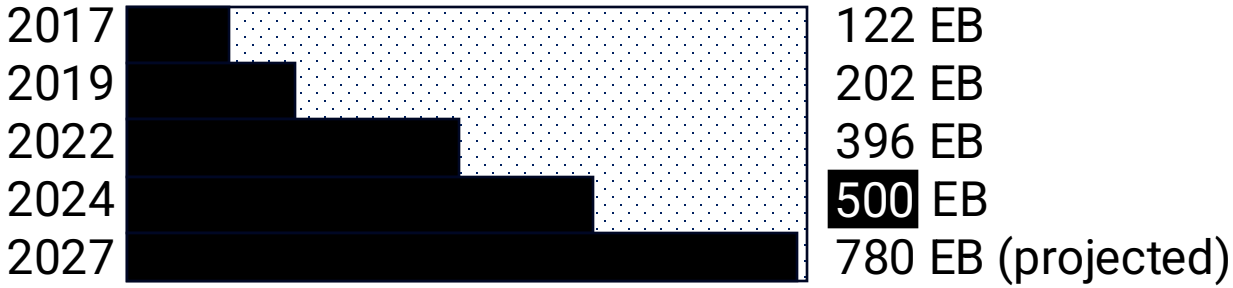
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One email with an attachment = the same CO2 as leaving a light bulb on for 25 minutes.

Source : Survey on Carbon Dioxide Emissions Through Email Conversion (2023)

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GLOBAL INTERNET TRAFFIC (EXABYTES/MONTH)



Traffic doubles every 3 years

Source : Cisco Annual Internet Report (2018 - 2023)

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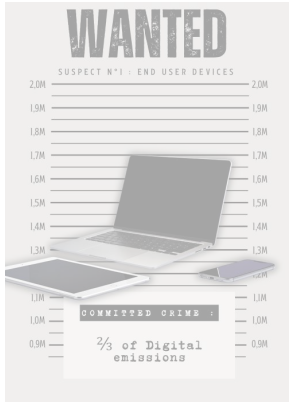
4 companies from 4 countries control ~90% of the world's submarine cable manufacturing, making internet infrastructure a geopolitical battleground.

*The world's largest submarine cable manufacturer is **French,** Alcatel Submarine Networks (ASN), part of Nokia, headquartered in Calais.*

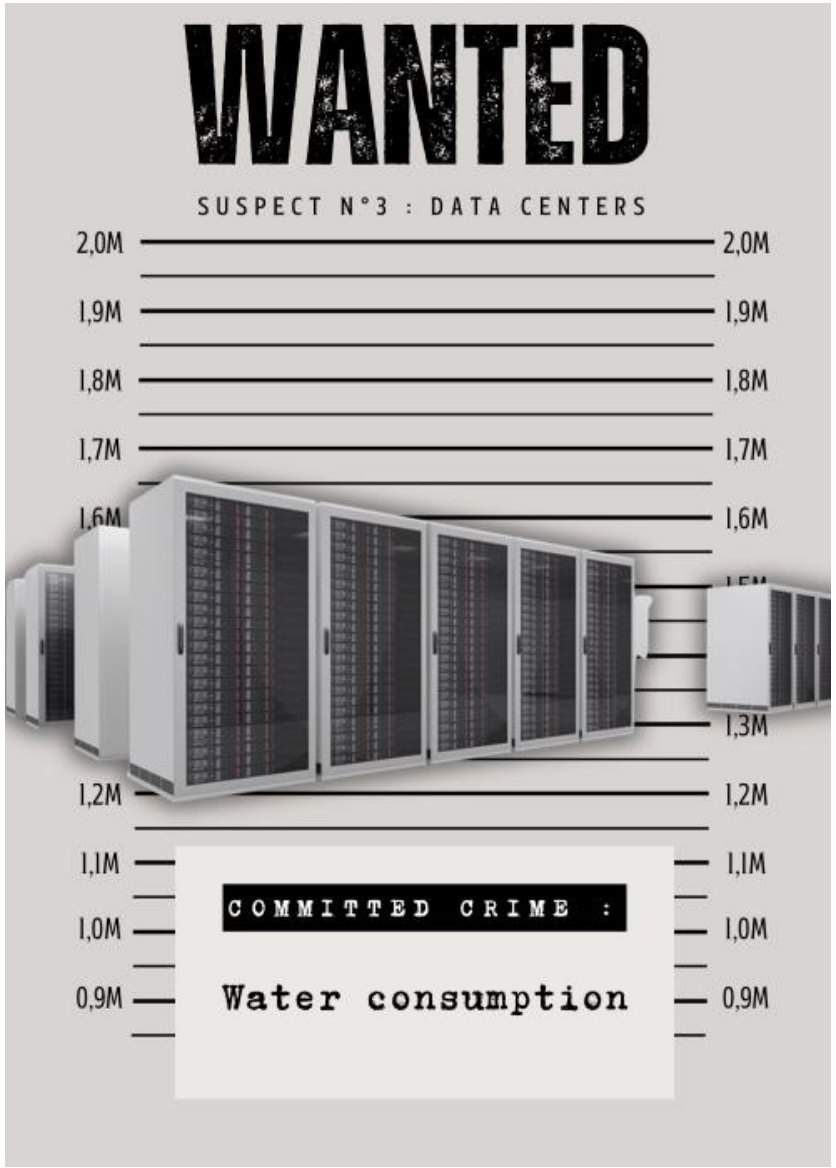
THE 5G PARADOX

5G transmits data **10 to 100x more efficiently per bit** but this unlocks so many new data-hungry use cases that **total traffic grows faster than efficiency gains**.
Add to that: 5G base stations are **more energy-intensive and more numerous** than 4G ones.
The result? **Overall energy consumption keeps rising.** This is the **Jevons Paradox**: the more efficient the technology, the more we use it and the more energy it consumes.

Step 2 – Analysis and compilation of evidence

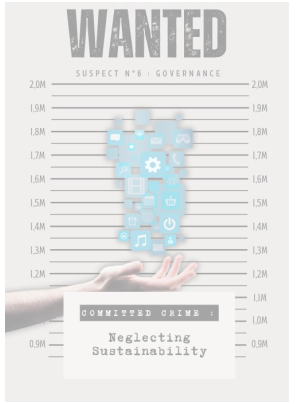












Datacentres currently consume 2% of global electricity.
With AI growth, this is projected to double by 2030. datacentres are expected to consume more energy than Japan by 2030.

Source : IEA, Electricity 2024.

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Google consumed 21 **billion liters** of water in 2022 for its datacentres

1 ChatGPT conversation = approximately **500 ml of water** evaporated for cooling

Source :Google Environmental Report 2022
Source : Making AI Less Thirsty : Uncovering and addressing the secret water footprint of AI models (2023)

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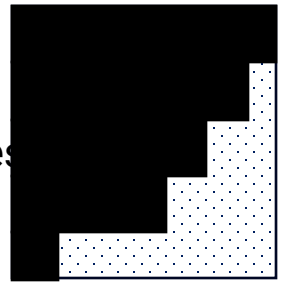
LOCATION MATTERS

Country / Energy mix	CO2 per kWh	Impact on a 400 kWh HPC job
Iceland (geothermal + hydro)	~28g	~11 kg CO2e
France (nuclear-heavy)	~85g	~34 kg CO2e
Germany (mixed)	~380g	~152 kg CO2e
Poland (coal-heavy)	~635g	~254 kg CO2e

Source : IEA Emission Factors Database 2024

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POWER USAGE EFFECTIVENESS (PUE) COMPARISON



Ideal (theoretical)	1.0 (100% efficiency)
Google / best in class	1.1
OVH Cloud (newer sites	1.3
Global average	1.58
Older datacentres	2.0 (50% energy waste)

For every 100W used by servers in an average data centre, 158W are consumed in total

Source : Uptime Institute Annual Survey 2023 + Google Efficiency Page + OVH Cloud sustainability page

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The ratio between the total energy consumed by a data center and the energy actually used by the servers.

ENERGY COST OF DIGITAL TASKS

Google search = ~0.2g CO_2e
ChatGPT query = ~3g CO_2e (~10x a search)
Training GPT-3 = 552 tonnes CO_2e
Training GPT-4 = 5000-15000 tonnes CO_2e (estimated)
1 climate simulation = ?? kg CO_2e (to be estimated)

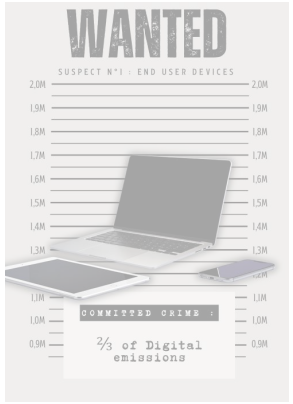
Source : Google Environmental Reports + IEA + Goldman Sachs Research

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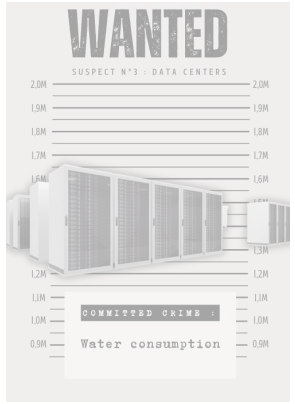
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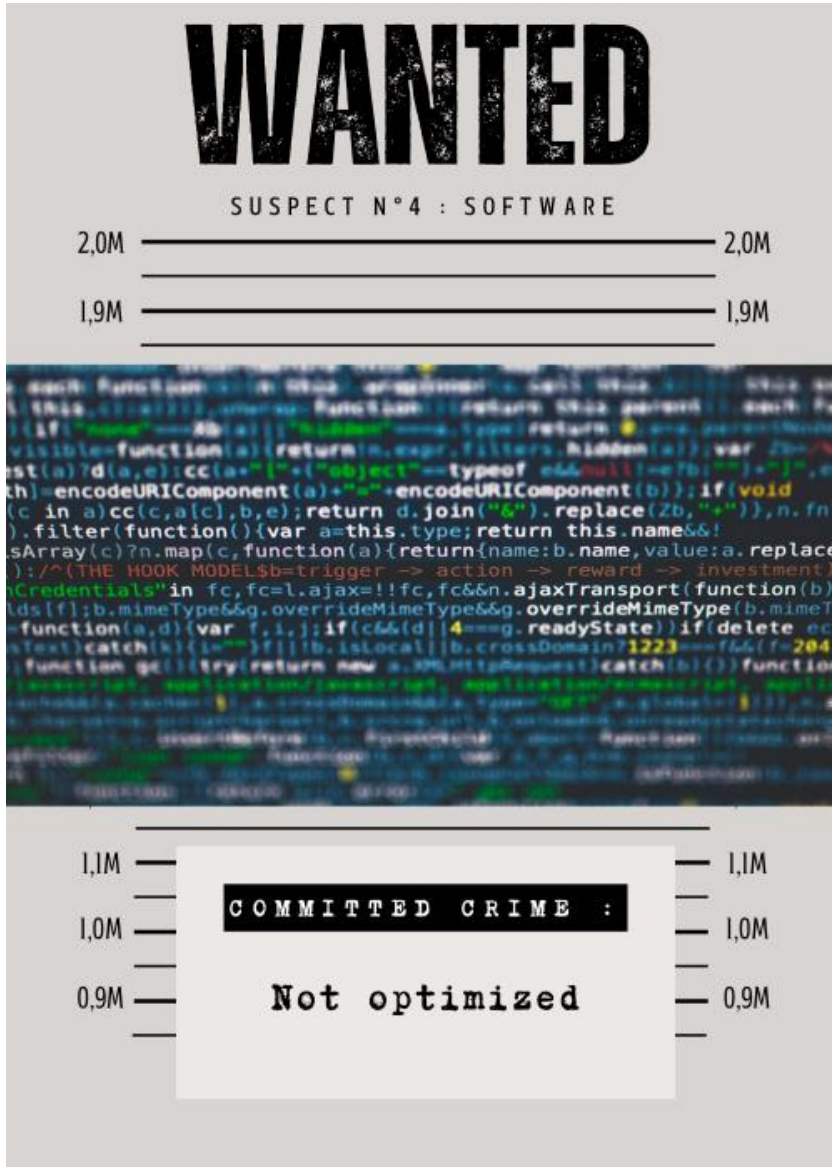
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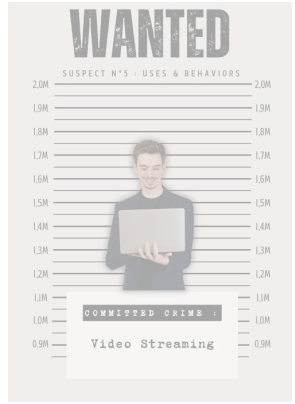
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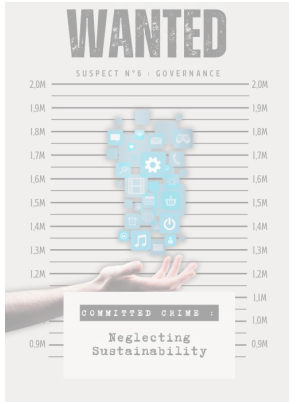












Wirth's Law (1995) : *"Software gets slower faster than hardware gets faster"*
The average webpage has grown from **~500 KB in 2010** to **4 MB in 2024,** for often equivalent content

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ENERGY CONSUMPTION BY PROGRAMMING LANGUAGE

(to execute the same task relative to C with Python being the most used language)



Source : Pereira et al. (2021) "Ranking programming languages by energy efficiency"

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30% of servers in datacentres are **"comatose"**: powered on, consuming energy, doing nothing useful.

E.g. forgotten scheduled jobs, non decommissioned software, unused microservices….

Source : NRDC (Natural Resources Defense Council) "Data Center Efficiency Assessment" (2014-2015)

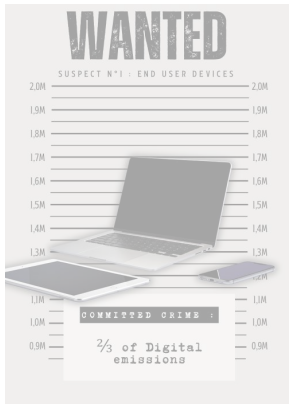
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Approach	Energy per job	CO2e for 1,000 jobs
Unoptimized Python	520 kWh	~44,000 kg CO2e
Optimized Python	~260 kWh	~22,000 kg CO2e
Hybrid Python + C/Fortran	~100–200 kWh	~5,000–10,000 kg CO2e
Fully optimized C/Fortran	~7–52 kWh	~600–4,400 kg CO2e

Source : Pereira et al. (2021) "Ranking programming languages by energy efficiency"

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Step 2 – Analysis and compilation of evidence

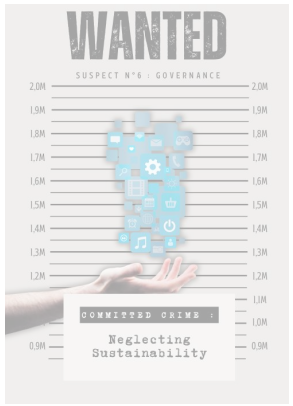












CO2e PER 1-HOUR VIDEO CALL



Audio only	~2g CO2e
Camera OFF	~10g CO2e
Camera ON (HD)	~96 g CO2e
Camera ON (4K)	~160g CO2e

→ Turning your camera OFF saves ~86g CO2e per hour = charging your smartphone 4 times

Source : Obringer et al. (2021) "The overlooked environmental footprint of increasing Internet use"

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~40% of all data stored in enterprise cloud environments is dark data

Source : Gartner (2023)

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DAILY EMAIL HABITS OF A PROFESSIONAL

Emails sent/received per day	~120
Emails never opened	~68%
Emails with unnecessary CC/BCC	~30%
Emails with attachments	~25%
CO2e per working year (email)	~136 kg CO2e

Source : Mike Berners-Lee "How Bad Are Bananas? The Carbon Footprint of Everything" (éd. 2020)

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4 kWh/day/laptop at the office (= 8h of a heater)

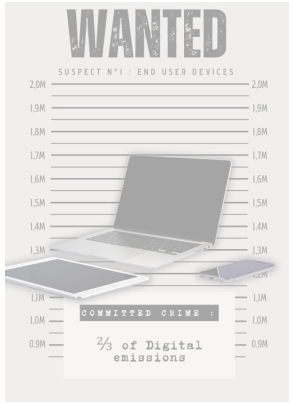
Source : Lawrence Berkeley National Laboratory (LBNL)

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Dark data is the digital equivalent of a warehouse full of boxes that nobody has opened in years, but you keep paying the rent, the electricity, and the security guard.

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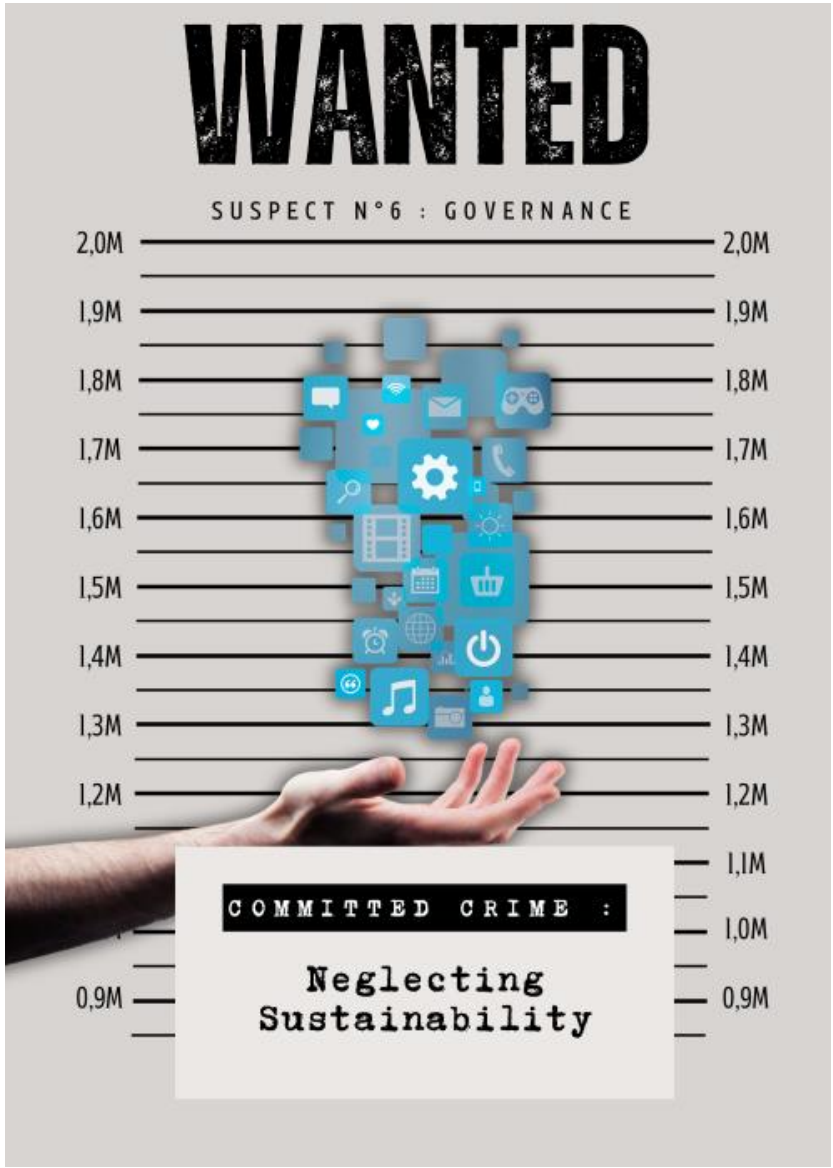












Only ~55 % of companies have a formal Sustainable IT / Green IT policy today

Source : Capgemini Research institute : “A world in Balance” (2023 & 2024)

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2050 :Year by which EU public sector IT must be carbon neutral

Source : Climate Neutral Data Centre Pact (CNDCP)"

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38% of companies that track Scope 3 emissions

Source : IBM State of Sustainability Readiness Report (2024)

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Step 3 – Brainstorm levers to reduce the impact of the suspects

CONTEXT

You will receive empty action cards containing a "finding" section to describe the issue at hand , a "recommended action" section to propose the solution to be implemented and a section to measure the impact, the effort associated and the timeline for the proposed solution.



YOUR MISSION:

In light of the findings made previously, your mission is to propose a series of actions to implement in order to reduce the impact of each of the 6 identified suspects in DestinE context.

ACTION N° 1

SUSPECT IDENTITY : End user devices

FINDING :
Replacing a laptop every 3.5 years instead of 6 years doubles its manufacturing footprint. For 30 people : ~6,000 kg CO2e of unnecessary emissions per cycle.

RECOMMENDED ACTION :
Extend the laptop replacement cycle from 3.5 to 6 years minimum across the DestinE team.

EFFORT : Medium
IMPACT : High
TIMELINE : 0-6 months
OWNER : IT / Procurement

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Step 4 – Matching evidence to corrects suspects

CONTEXT

You will receive pre-filled action cards with the identify of the associated suspect and the action owner hidden.
You will be responsible for matching the anonymous actions to the correct suspect



YOUR MISSION:

Each of you will be responsible for one suspect. You must exchange the action cards within your group to match them with the correct suspects. At the end of the exchanges, you will present the results per suspect.



ACTION N°2

SUSPECT IDENTITY : [redacted]

FINDING :
Buying a refurbished laptop saves up to 91% of CO2e vs buying new.
Only 12% of companies currently include refurbished devices in their procurement policy.

RECOMMENDED ACTION :
Introduce a refurbished-first policy for non-critical device replacements within the team

EFFORT : Medium
IMPACT : High
TIMELINE : 6-12 months
OWNER : IT / Procurement

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ACTION N°1

SUSPECT IDENTITY: End user devices

FINDING:
Replacing a laptop every 3.5 years instead of 6 years doubles its manufacturing footprint. For 30 people : ~6,000 kg CO2e of unnecessary emissions per cycle.

RECOMMENDED ACTION:
Extend the laptop replacement cycle from 3.5 to 6 years minimum across the DestinE team.

EFFORT: Medium
IMPACT: High
TIMELINE: 0-6 months
OWNER: IT / Procurement



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ACTION N°2

SUSPECT IDENTITY: End user devices

FINDING:
Buying a refurbished laptop saves up to 91% of CO2e vs buying new.
Only 12% of companies currently include refurbished devices in their procurement policy.

RECOMMENDED ACTION:
Introduce a refurbished-first policy for non-critical device replacements within the team

EFFORT: Medium
IMPACT: High
TIMELINE: 6-12 months
OWNER: IT / Procurement



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ACTION N°7

SUSPECT IDENTITY: End user devices

FINDING:
A second monitor adds ~200 kg CO2e of manufacturing footprint before it is even switched on.

RECOMMENDED ACTION:
Audit multi-screen setups and define a maximum screen policy based on actual role requirements.

EFFORT: Low
IMPACT: Medium
TIMELINE: 0-3 months
OWNER: IT / Team leaders



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ACTION

SUSPECT IDENTITY: End user devices

FINDING:
The average of devices replacements is 3.3 years

RECOMMENDED ACTION:
Increase it at 5 years

EFFORT: Low
IMPACT: High
TIMELINE: Now
OWNER: IT & procurement



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ACTION

SUSPECT IDENTITY: End user devices

FINDING:
Cost of hardware components extreme/
Too many devices thrown away because they become obsolete or never done a maintenance

RECOMMENDED ACTION:
Maintenance and change components

EFFORT: Medium
IMPACT: High
TIMELINE: 1-6 months
OWNER: everyone



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ACTION

SUSPECT IDENTITY: End User Devices

FINDING:
Emails never opened

RECOMMENDED ACTION:
Turn off unused devices

EFFORT: low
IMPACT:medium
TIMELINE: now
OWNER: everyone



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ACTION

SUSPECT IDENTITY: End user devices

FINDING:
Too many resources used to build new devices

RECOMMENDED ACTION:
Replacing the hardware broken components instead og throwing the laptop away

EFFORT: High
IMPACT: High
TIMELINE: 0-6 months
OWNER: Users & IT



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ACTION

SUSPECT IDENTITY: End user devices

FINDING:
Too many resources used to build new devices

RECOMMENDED ACTION:
Doing devices manufacturing with recycled materials

EFFORT: High
IMPACT: High
TIMELINE: 5-10 years
OWNER: manufacturing companies



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ACTION

SUSPECT IDENTITY: End User Devices

FINDING:
Only 17% of the devices are recycled

RECOMMENDED ACTION:
Rethink the devices to be better recyclable up to 40% in 10 years

EFFORT: high
IMPACT: high
TIMELINE: 10 years
OWNER: everyone



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ACTION

SUSPECT IDENTITY: End user devices

FINDING:
Too many resources used to build new devices

RECOMMENDED ACTION:
Doing devices manufacturing with recycled materials

EFFORT: High
IMPACT: High
TIMELINE: 5-10 years
OWNER: manufacturing companies



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ACTION N°4

SUSPECT IDENTITY: Network

FINDING:
An email with an attachment emits ~50g CO2e vs ~4g for a shared link. A professional sending 25 attachments per day generates ~136 kg CO2e per year

RECOMMENDED ACTION:
Replace email attachments with shared links (SharePoint, cloud storage) as the team default.

EFFORT: Low
IMPACT: Medium
TIMELINE: Immediate
OWNER: All team members



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ACTION N°9

SUSPECT IDENTITY: Network

FINDING:
Massive dataset transfers occur in the conctext of DestinE. Redundant or uncompressed transfers multiply the network footprint unnecessarily.

RECOMMENDED ACTION:
Implement a data transfer protocol: compress before transfer, eliminate duplicate transfers, schedule large transfers during low-carbon grid hours.

EFFORT: Medium
IMPACT: High
TIMELINE: 3-6 months
OWNER: Data / Infrastructure



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Participants Action cards: Network

ACTION

SUSPECT IDENTITY: Software

FINDING:

RECOMMENDED ACTION:
Optimize Python code
Optimize code web page
Monitoring (carbon calculators)

EFFORT: high
IMPACT: high
TIMELINE: 12-18 months
OWNER: IT



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ACTION

SUSPECT IDENTITY: Network

FINDING:
Email attachment consuming CO_2

RECOMMENDED ACTION:
Using cloud links instead of large attachements

EFFORT: low
IMPACT: high
TIMELINE: immediate
OWNER: all



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ACTION N°3

SUSPECT IDENTITY: Datacentres

FINDING:
Only 12% of companies include sustainability clauses in their cloud contracts. SERCO's contract with OVH Cloud currently has none. OVH Cloud Power Usage Effectiveness (PUE) varies from 1.3 to 2.0+ depending on the site.

RECOMMENDED ACTION:
Add a PUE cap (≤1.3) and renewable energy certificate requirement to the OVH Cloud contract at next renewal.

EFFORT: Medium
IMPACT: High
TIMELINE: Next contract renewal
OWNER: Procurement / Legal



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ACTION N°8

SUSPECT IDENTITY: Datacentres

FINDING:
The carbon intensity of electricity varies by hour depending on grid mix. In France, nights and weekends are often lower carbon. Running HPC jobs at peak carbon hours is an avoidable cost.

RECOMMENDED ACTION:
Shift non-urgent HPC runs to low-carbon grid hours using carbon-aware scheduling tools (WattTime or Electricity Maps API).

EFFORT: High
IMPACT: High
TIMELINE: 6-18 months
OWNER: Infrastructure / DevOps



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ACTION N°5

SUSPECT IDENTITY: Datacentres

FINDING:
~30% of servers in datacentres are "comatose" : powered on, consuming energy, doing nothing. Unused services from past project phases may still be running unnoticed on OVH Cloud.

RECOMMENDED ACTION:
Conduct a quarterly infrastructure audit to identify and shut down idle services, VMs and unused storage volumes on OVH Cloud.

EFFORT: Medium
IMPACT: Medium
TIMELINE/: 3-6 months
OWNER: Infrastructure / DevOps



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Participants Action cards: Datacentres

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ACTION

SUSPECT IDENTITY: Datacentres

FINDING:
Too many CO2 emissions due to overconsumption of AI tool

RECOMMENDED ACTION:
Reduce the usage of AI to more related context (as an help and not replacement)
Establish a governance to limit the usage inside the teams

EFFORT: high
IMPACT: high
TIMELINE: 6-12 months
OWNER: end user



DestinE Platform

ACTION

SUSPECT IDENTITY: Datacentres

FINDING:
Too many data on datacenters unused

RECOMMENDED ACTION:
Optimisation of retention & cleaning of obsolete softwares

EFFORT: medium
IMPACT: high
TIMELINE:
OWNER: companies



DestinE Platform

ACTION

SUSPECT IDENTITY: Datacentres

FINDING:
Consumption based on provider geo-location

RECOMMENDED ACTION:
Choose providers and hosting location

EFFORT: medium
IMPACT: high
TIMELINE: 6 months
OWNER: IT / DESP-team



DestinE Platform

Participants Action cards: Datacentres

Destination Earth

ACTION

SUSPECT IDENTITY: Datacentres

FINDING:
Too many CO2 emissions due to overconsumption of AI tool

RECOMMENDED ACTION:
Reduce the usage of AI to more related context (as an help and not replacement)

EFFORT: high
IMPACT: high
TIMELINE: 6-12 months
OWNER: end user



DestinE Platform

ACTION

SUSPECT IDENTITY: Datacentres

FINDING:
Water usage to cool down datacentres

RECOMMENDED ACTION:
Use other renewable energies to cool down datacentres

EFFORT: low
IMPACT: high
TIMELINE: 5-10 years
OWNER: Companies



DestinE Platform

ACTION

SUSPECT IDENTITY: Datacentres

FINDING:
Comatose datacentres

RECOMMENDED ACTION:
Automatic clean up with alerts after a period of inactivity

EFFORT: medium
IMPACT: high
TIMELINE: 0-12 months
OWNER: Infrastructure / Ops team



DestinE Platform

ACTION N°14

SUSPECT IDENTITY: Software

FINDING:
Python, one of the main languages used worldwide for data processing, consumes up to 75x more energy than C for the same computation. Most digital services have never measured their code's energy footprint

RECOMMENDED ACTION:
Integrate a carbon calculator (e.g. CodeCarbon) into all DestinE production pipelines to measure and log CO2e per job. One line of Python code to start.

EFFORT: Low
IMPACT: Medium
TIMELINE: 0-1 month
OWNER: Dev team



DestinE Platform

ACTION N°11

SUSPECT IDENTITY: Software

FINDING:
An optimized algorithm can consume 10 to 100x less energy than an unoptimized one producing the same result. Most HPC code is profiled for speed, never for energy.

RECOMMENDED ACTION:
Run an energy profiling audit on the top 5 most compute-intensive DestinE workflows. Identify the 20% of code responsible for 80% of energy consumption.

EFFORT: High
IMPACT: High
TIMELINE: 3-12 months
OWNER: Dev teams / Tech leads



DestinE Platform

ACTION N°16

SUSPECT IDENTITY: Software

FINDING:
~30% of data center energy is wasted by software running idle or never decommissioned. DestinE scripts and scheduled jobs from past sprints may still be running unnoticed.

RECOMMENDED ACTION:
Establish a software decommission policy : every script, service or scheduled job must have an owner and an expiry review date.

EFFORT: Medium
IMPACT: Medium
TIMELINE: 1-3 months
OWNER: Dev team / Tech leads



DestinE Platform

ACTION

SUSPECT IDENTITY: Software

FINDING:
Optimised algorithm can consume 10 to 100x less energy

RECOMMENDED ACTION:
Run an energy profiling audit on the top 5 destinE workflows

EFFORT: high
IMPACT: high
TIMELINE: 6-12 months
OWNER: IT



DestinE Platform

ACTION

SUSPECT IDENTITY: Software

FINDING:

RECOMMENDED ACTION:
Design taking into account eco impact

EFFORT: medium
IMPACT: high
TIMELINE: next ones
OWNER: dev team



DestinE Platform

ACTION

SUSPECT IDENTITY: Software

FINDING:
High consumption of operating program languages, comatose of data centers

RECOMMENDED ACTION:
Optimization of programming languages & data cleaning

EFFORT: high
IMPACT: high
TIMELINE: 1-5 years
OWNER: IT



DestinE Platform

ACTION

SUSPECT IDENTITY: Software

FINDING:
30% data energy is wasted by software running idle or never decommissionned

RECOMMENDED ACTION:

EFFORT: medium
IMPACT: medium
TIMELINE: 3 months
OWNER: IT



DestinE Platform

ACTION N°4

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
An email with an attachment emits ~50g CO2e vs ~4g for a shared link. A professional sending 25 attachments per day generates ~136 kg CO2e per year

RECOMMENDED ACTION:
Replace email attachments with shared links (SharePoint, cloud storage) as the team default.

EFFORT: Low
IMPACT: Medium
TIMELINE: Immediate
OWNER: All team members



DestinE Platform

ACTION N°6

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
68% of professional emails are never opened. ~30% contain unnecessary CC/BCC. Every email stored consumes energy indefinitely on mail servers.

RECOMMENDED ACTION:
Adopt a team email charter : no unnecessary CC, clear subject lines, unsubscribe from unused lists, define inbox archiving rules.

EFFORT: Low
IMPACT: Low
TIMELINE: Immediate
OWNER: All team members



DestinE Platform

ACTION N°10

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
Turning on a camera in a 1-hour video call adds ~86g CO2e vs audio only. For a 30-person team with 3h of meetings per week, camera-on default costs ~400 kg CO2e per year.

RECOMMENDED ACTION:
Adopt a camera-off default for internal meetings. Reserve cameras for client-facing or onboarding sessions only.

EFFORT: Low
IMPACT: High
TIMELINE: Immediate
OWNER: Management



DestinE Platform

ACTION N°13

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
73% of company data is never accessed again after 90 days. DestinE simulation outputs, logs and intermediate files accumulate indefinitely, consuming storage energy with zero scientific value..

RECOMMENDED ACTION:
Implement a dark data policy : define retention rules for all simulation outputs (archive after 90 days, delete after 12 months unless flagged)...

EFFORT: Medium
IMPACT: High
TIMELINE: 1-3 months
OWNER: Data team / Management



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & behaviours

FINDING:
Too heavy attachements

RECOMMENDED ACTION:
Use links instead of attachements

EFFORT: Low
IMPACT: Medium
TIMELINE: Now
OWNER: Users



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & Behaviours

FINDING:
Several teams to coordinate

RECOMMENDED ACTION:
Avoid as much as possible online meetings / email

EFFORT: high - medium
IMPACT: high
TIMELINE: 0-6 months
OWNER: everyone



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
Too many unused documents

RECOMMENDED ACTION:
Continuously update my folder, avoiding to maintain old versions, obsolete documents

EFFORT: medium
IMPACT: high
TIMELINE: 6-12 months
OWNER: Everyone



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & behaviours

FINDING:
Lights not turned off after meetings

RECOMMENDED ACTION:
Turn of the lights after a meeting

EFFORT: Low
IMPACT: Medium
TIMELINE: Now
OWNER: Company



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & Behaviours

FINDING:
Meat impact on environment

RECOMMENDED ACTION:
Eat less meat

EFFORT: Low
IMPACT: High
TIMELINE: 6 months
OWNER: everyone



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
Camera meetings high consumption

RECOMMENDED ACTION:
Reduce the number of meetings and use camera only with external clients if needed

EFFORT: low
IMPACT: medium
TIMELINE: 0-6 months
OWNER: Everyone



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & behaviours

FINDING:
Too much power used by laptop

RECOMMENDED ACTION:
Use less consuming screens

EFFORT: Low
IMPACT: Medium
TIMELINE: Now
OWNER: Users / company



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & Behaviours

FINDING:
Always running PC

RECOMMENDED ACTION:
Switch off PC when not in use

EFFORT: Low
IMPACT: low
TIMELINE: now
OWNER: everyone



DestinE Platform

ACTION

SUSPECT IDENTITY: Uses & Behaviors

FINDING:
Emails never opened

RECOMMENDED ACTION:
Try how find out to clear the subject lines-define inbox archiving rules

EFFORT:
IMPACT:
TIMELINE:
OWNER:



DestinE Platform

ACTION N°12

SUSPECT IDENTITY: Governance

FINDING:
Companies with an active Sustainable IT governance framework reduce their IT footprint by 20–30% on average. Without a named owner, sustainable IT efforts disappear when individuals leave.

RECOMMENDED ACTION:
Appoint a Sustainable IT Champion within the DestinE team a named individual responsible for tracking progress, reporting and animating the community after this workshop..

EFFORT: Low
IMPACT: Medium
TIMELINE: Immediate
OWNER: Management



DestinE Platform

ACTION N°15

SUSPECT IDENTITY: Governance

FINDING:
For the first time in 2025, DestinE's IT carbon footprint was partially measured. SERCO has published a Net Zero 2050 commitment and the EU targets datacentres to be carbon neutral by 2030.

RECOMMENDED ACTION:
Systematise the yearly assessment of DestinE's IT carbon footprint by progressively expanding its scope and refining the data collected

EFFORT: Medium
IMPACT: High
TIMELINE: 3-6 months
OWNER: Management



DestinE Platform

ACTION

SUSPECT IDENTITY: Governance

FINDING:
Update and complete DestinE's IT Carbon Footprint and share the output with all ecosystem

RECOMMENDED ACTION:
Update Continue to work to systematise the yearly assessment of destinE' carbon footprint, refine the data collected

EFFORT: high
IMPACT: high
TIMELINE: 12-18 months
OWNER: coordinators



DestinE Platform

ACTION

SUSPECT IDENTITY: Governance

FINDING:
Poor Green IT policy

RECOMMENDED ACTION:
Increase awareness on Green IT

EFFORT: medium
IMPACT: high
TIMELINE: 1-2 years
OWNER: management



DestinE Platform

ACTION

SUSPECT IDENTITY: Governance

FINDING:
Without a named owner, Sustainable IT effort disappear when indivuals leave…

RECOMMENDED ACTION:
Appoint a sustainable IT champion within the destinE team, a named individual responsible for tracking progress after this workshop

EFFORT: low
IMPACT: high
TIMELINE: tomorrow
OWNER: manager



DestinE Platform

ACTION

SUSPECT IDENTITY: Governance

FINDING:
Become Carbon Neutral

RECOMMENDED ACTION:
Reduce emissions, reduce plastic usage and replace som materials with more green ones

EFFORT: high
IMPACT: high
TIMELINE: 5 years
OWNER: company



DestinE Platform

DestinE Platform

DIGITAL RESPONSIBILITY ROADMAP EXECUTION

SUSTAINABLE IT – ONE-PAGERS



Destination Earth
Funded by the European Union
Implemented by ECMWF esa EUMETSAT

One pager – End user devices

Destination Earth

70-80% of the digital footprint comes from manufacturing

KEY FIGURES

800 kg
Raw materials to manufacture one laptop

190,000 L
Water to manufacture one laptop (3 years of shower)

91%
CO_2e saved when choosing a **refurbished laptop** instead of a new one

200 kg CO_2e
Extra footprint from **one additional monitor**

3.3 years
Average devices **lifespan**

200 kg CO_2e
Saved per device by **extending lifespan** from 3.5 to 6 years

KPIS TO TRACK

- Average device **lifespan**
- Fleet **renewal** rate
- **Device to employee** ratio
- Average device **power consumption**
- **Refurbished** device procurement rate

FRAMEWORKS & STANDARDS

ESPR | EU GPP IT Criteria | WEEE Directive | Right to repair

SUGGESTIONS OF ACTIONS TO IMPLEMENT

1 week

Set screen brightness max 70% + auto sleep after 5 minutes on all company devices. Audit multi-screen set-ups (check the necessity)

0-6 months

Extend laptop replacement cycle from 3,5 to 6 years minimum

6-12 months

Introduce a refurbished-first policy for all non-critical device replacements

6-12 months

Partner with a certified ITAD provided for secure, traceable end-of-life equipment recycling

All the time

Apply eco-design principles to software updates to maintain compatibility with devices up to 7 years old preventing software-driven hardware obsolescence

One pager – Uses & behaviours

Destination Earth

Employee digital habits are the fastest and cheapest lever to readuce an organisation's footprint

KEY FIGURES

121 emails

Sent & received per employee per day on average across organisations

19g CO_2e

Per email with a 1 MB attachment, equivalent to a 60W bulb lit for 25 minutes

30%

Internal emails **with unnecessary CC/ BCC**

-96% CO_2e

Video call **without camera** in comparison to a video call with camera

36g CO_2e

One hour of **HD video streaming**, multiplied by billions of daily streams globally

40%

Data stored in enterprise cloud environments considered as **dark data**

KPIS TO TRACK

- Average number of **emails sent** per employee/day
- Average **mailbox size** per user
- **Cloud storage consumption** per user (GB)
- % of employees **trained on digital sobriety**

FRAMEWORKS & STANDARDS

- ISO 26000
- Right to disconnect
- ITU-T L.1410
- W3C WSG 1.0

SUGGESTIONS OF ACTIONS TO IMPLEMENT

0-3 months

Publish a Digital Sobriety Charter covering email best practices, camera-off policy and cloud storage limits

0-3 months

Deploy auto-clean tools for mailboxes and shared drives (duplicate removal, storage quotas…)

0-6 months

Integrate a digital sobriety module into onboarding and mandatory annual training programmes

6-12 months

Measure and publish the organisation's behavioural digital fooprint annually (emails, video, cloud usage…)

All the time

Apply eco-design principles to remove emissive UX patterns (infinite scroll, autoplay) that artificially inflate session time and emissions

One pager – Software

Serco Business

Destination Earth

The most sustainable line of code is the one you don't write; Eco-design reduces both technical debt & environmental impact



KEY FIGURES

80%
Software features rarely or never used by end users in production

4MB
Average webpage size vs 500 KB in 2010

106
SaaS apps used per organisation on average with many underuses of duplicating functionalities

1000x
Software bloat growth rate vs hardware performance gains over 30 years

75x
Python language energy consumption compared to C



KPIS TO TRACK

- Active vs unused **SaaS licences**
- Total estimated **CO_2e from software usage**
- **% of unnecessary data** requests eliminated through API optimisation



FRAMEWORKS & STANDARDS

ISO 25010 | EU ESPR | ITU-T L.1410 | W3C WSG 1.0



SUGGESTIONS OF ACTIONS TO IMPLEMENT

1 week

Audit all active SaaS licences to identify unused, underused or duplicate tools for decommissioning

0-3 months

Introduce eco-design criteria into new software development projects and IT procurement RFPs

0-6 months

Run performance audits on the top 10 internal applications (load time, resource consumption…)

6-12 months

Deploy a "Green Design" checklist at the architecture review stage of all new IT projects

12+ months

Measure and publish software carbon footprints for the business-critical applications

One pager – Network

Serco Business

Destination Earth

Networks are invisible but not weightless, every byte transferred has an energy cost, and data flows can be designed to be leaner

KEY FIGURES

1.4 millions
Submarine cables allowing **internet connectivity**

20-25%
Network share in digital carbon footprint

500 exabytes/month
Global internet traffic in 2024 (double every 3 years)

4
Companies from 4 countries control **~90% of the world's submarine cable battleground**.

3-4x
Energy per 5G base station vs 4G, despite higher throughput gains (5G paradox)

60%
Video streaming services share of total digital internet traffic

KPIS TO TRACK

- % of applications using **data compression protocols**
- **Energy per GB transferred**

FRAMEWORKS & STANDARDS

ISO 25010

EU Green deal

ITU-T L.1470

SUGGESTIONS OF ACTIONS TO IMPLEMENT

1 month

Define a media quality policy for internal videoconferencing (block 4K, default SD for non-essential use)

0-3 months

Adopt a team email charter: no unnecessary CC, clear subject lines, unsubscribe from unused lists…

0-6 months

Implement a data transfer protocol: compress before transfer, eliminate duplicate transfers, schedule large transfers during low-carbon grid hours…

12+ months

Integrate network carbon footprint into the organisation's carbon footprint accounting

One pager – Datacentres

Serco Business

Destination Earth

From 2025, EU datacentres above 500kW must report energy efficiency data, compliance is no longer optional

KEY FIGURES

415 TWh
Datacentres **electricity consumption**

2%
Datacentres share in **global electricity consumption**

500mL
Water consumption for a **standard ChatGPT conversation**

1.58
Global average **Power Usage Effectiveness** (PUE)

5000 - 15000
Tonnes CO_2e required to train GPT-4

21 billions
Google consumption in **liters of water** in 2022 for its datacentres

KPIS TO TRACK

- **Power Usage Effectiveness**
- **Water Usage Effectiveness**
- Server **utilisation rate**
- % of **renewable energy** in datacentre energy mix

FRAMEWORKS & STANDARDS

- ISO/ IEC 30134
- The Green Grid
- EU Energy Efficiency Dir.
- EU CoC for DC Energy

SUGGESTIONS OF ACTIONS TO IMPLEMENT

0-3 months

Audit cloud resource utilisation, identify idle instances, over-provisioned and zombie workloads

0-3 months

Define a cloud sobriety policy (right-size instances, auto-scaling, auto-shutdown…)

0-6 months

Require Cloud & Datacentres providers to disclose PUE, renewable energy mix and carbon intensity per region

6-12 months

Factor provider's renewable energy commitments into contract renewals and procurement scorecards

One pager – Governance

Destination Earth

Without governance, Digital responsibility remains a declaration of intent, not a transformation



KEY FIGURES

55%

Companies with a **formal Sustainable IT / Green IT policy** today

2050

Year by which EU public sector IT must be **carbon neutral**

38%

Companies that track **Scope 3 emissions**



KPIS TO TRACK

- % of **employees trained** on digital responsibility
- % of suppliers with **contractual Sustainable IT clauses**



FRAMEWORKS & STANDARDS

GPFEDS

EU Green Deal

ITU-T L.1470



SUGGESTIONS OF ACTIONS TO IMPLEMENT

1 month

Appoint a Responsible Digital referent and create a cross-functional steering committee

0-3 months

Conduct a data audit: map all assets & quantify dark data

0-6 months

Define and enforce a data minimisation and retention policy with automated deletion rules

6-12 months

Integrate a responsible digital criteria into all IT procurement and supplier scorecards