THE GUIDE TO ECO-FRIENDLY DIGITAL HABITS

Each and every one of us has the power to act.

June 2023

GROUP INFRASTRUCTURE PLATFORM

This guide explains how you can make your digital practices more eco-friendly.

It was designed for Crédit Agricole Group employees.

The aim is to help you play your part in our everyday efforts towards digital sobriety.

Please share this guide with your colleagues to help raise awareness of this issue within our Group.

EDITORIAL

A MESSAGE FROM OLIVIER BITON

CEO, Crédit Agricole Group Infrastructure Platform.

Through its Societal Project, the Crédit Agricole Group is taking positive climate action and supporting the transition to a low-carbon economy. Crédit Agricole Group Infrastructure Platform (CA-GIP) is part of this process. In our capacity as the home of the Crédit Agricole Group's IT production services, we contribute to these efforts through our "digital responsibility" approach, which is shared by the entire company. Building on our actions across all of our activities, we work each and every day to reduce their environmental footprint.

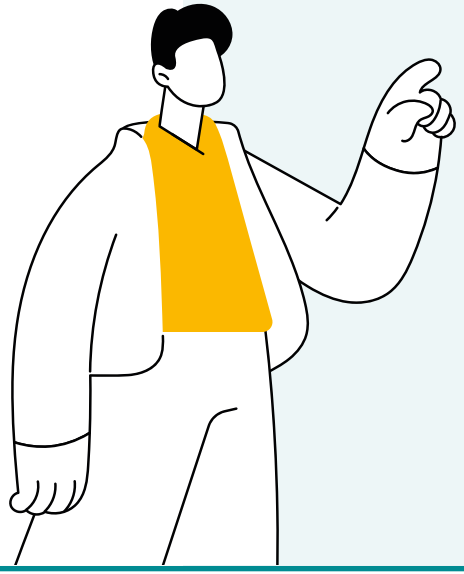
We are convinced that digital technology is a key tool in helping customers reduce their own greenhouse gas emissions (GHGs). We know that the digital world accounts for 3.8% of worldwide emissions. Devices* account for 79% of this footprint, while networks are responsible for 5% and data centres 16%.
As users of devices, by choosing to adopt eco-friendly behaviours, we can contribute in our own way to reducing the impact of our everyday digital activities[1].

> "COMMITTED TO ACHIEVING DIGITAL SOBRIETY, CA-GIP IS A LEADING PLAYER IN THE GROUP'S "DIGITAL RESPONSIBILITY" APPROACH."

***Devices:** personal and work equipment (phones, tablets and computers)

THE ENVIRONMENTAL IMPACTS AND CHALLENGES OF DIGITAL

Digital accounts for **3.8%** of greenhouse gas emissions (GHGs) worldwide (including manufacturing and use phases). This carbon footprint could rise significantly if nothing is done to limit it (a 60% increase by 2040).[2]



A MAJOR IMPACT

Worldwide, the environmental footprint of digital technology is far from negligible[2]:

4.2% of **primary energy consumption:** including oil, crude oil, natural gas, etc.

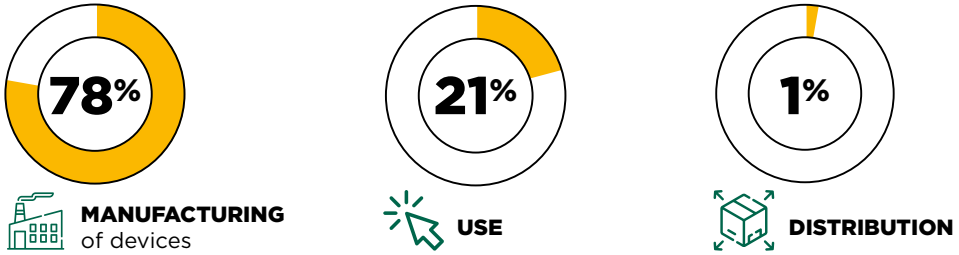
3.8% of **greenhouse gas** emissions

0.2% of **water consumption**

NB: 10% of electricity consumption in France is due to digital services.[10]

BREAKDOWN OF GREENHOUSE GAS EMISSIONS FROM DIGITAL IN 2020[8]

By life cycle stage



By digital component

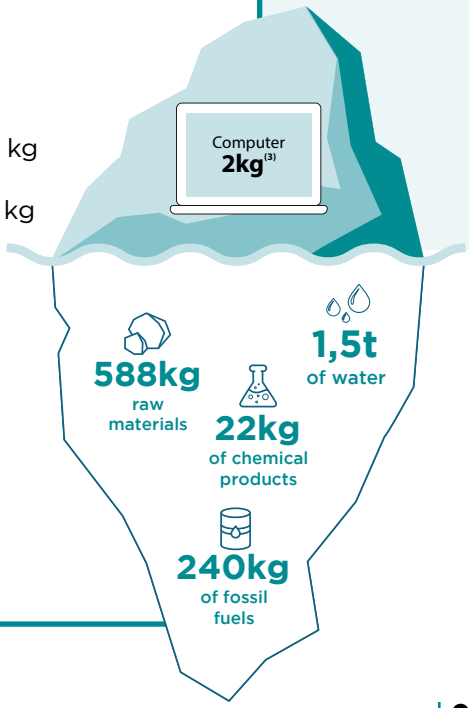
79% DEVICES

16% DATA CENTRES

5% NETWORKS

DIGITAL IMPACT

Manufacturing a 2 kg laptop computer results in over 124 kg of CO2 emissions – around 73% of its total carbon footprint.[1]



Contents

WHAT IF OUR DEVICES WERE BETTER PROTECTED?

Break-resistant glass prevents **80% of screen-related smartphone repairs**

CAN I HAVE THE WIFI PASSWORD?

4G uses **3 times more power** than **WiFi**[6]

ARE YOU SURE YOUR EMAIL IS WORTH SENDING?

10 to 12 billion emails
are sent per hour worldwide (excluding spam)[6]

HOW ABOUT HAVING YOUR DATA TRAVEL LESS?

Digital data travels an average of

15,000 km
email, downloads, video, web requests[6]

01

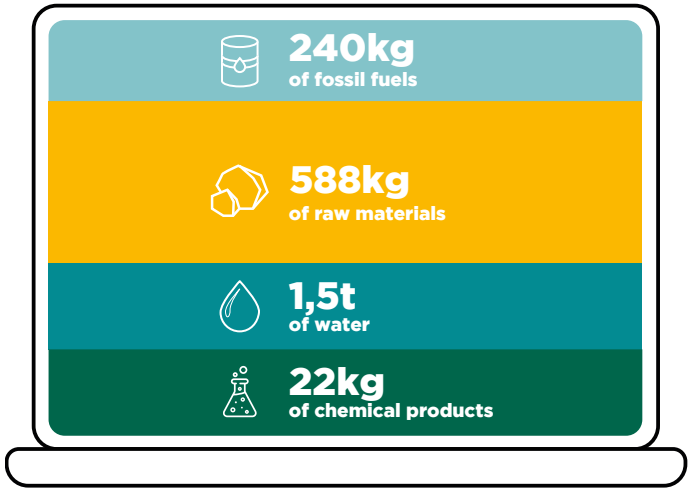
LOOKING AFTER YOUR EQUIPMENT

THE APPLE OF MY EYE

The majority of the environmental impact of our laptops, smartphones, tablets and other devices comes from the manufacturing stage. What if we used our devices for as long as possible? Here are a few things you can do to give your devices a longer lifespan.

The main way of reducing a PC's carbon footprint is to make it last longer. Looking after it and keeping it protected needs to become second nature.

What's behind a **2kg computer**[6] **?**



5,761
smartphones are broken
every hour around the world.

Break-resistant glass prevents 80%
of screen-related smartphone repairs.

WHAT YOU CAN DO

PROTECT YOUR DEVICES
Use a case for your laptop computer and tablette. And for smartphones, use a case, break-resistant glass or a scratch-proof film to avoid breaking it and having to buy a new one!

CLEAN YOUR DEVICES
to remove dirt, dust and other debris stuck in the keys, buttons and vents.

MONITOR YOUR COMPUTER'S TEMPERATURE
and avoid putting it on your knees, on a blanket or in full sun. Instead, put it on a flat, stable surface. Keep it away from sources of electromagnetic waves such as microwave ovens.

Depending on the layout of your desk and location, **plug in your laptop computer and mobile devices when battery life falls to less than 20% and unplug them when they reach 80%** to protect the battery. Do not leave devices charging all night.

01

LOOKING AFTER YOUR EQUIPMENT

RECONDITION OLD DEVICES

WHAT YOU CAN DO

MAKE SURE TO RETURN ALL DEVICES YOU NO LONGER USE OR THAT DO NOT SEEM TO BE WORKING TO YOUR IT SUPPORT TEAM. This way, they can be diagnosed and repaired or collected for reconditioning.

CONSIDER GIVING YOUR PERSONAL DEVICES TO BUSINESSES WORKING IN THE SOCIAL AND SOLIDARITY ECONOMY (recycling and resource centres, recycled goods shops, charity shops, etc.) or placing them in WEEE containers for recycling. You can also dispose of them in the retail locations from which you purchased them.

Up to **113 million smartphones** are lying unused in drawers, and 2/3 still work

A **reconditioned** laptop **saves 27 kg CO2 eq per year** which is equivalent to driving 82 km in a car powered by fossil fuels[7].

48 billion digital devices

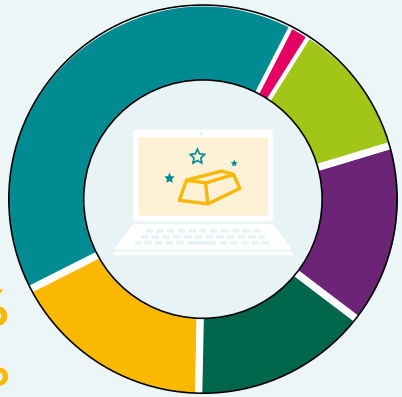
worldwide in 2025 – a 5,000% increase in 15 years[6]

DO YOU REALLY KNOW WHAT YOUR IT EQUIPMENT IS MADE OF ?

Digital devices like the laptop shown here contain rare materials, which in some cases are recyclable. So when your laptop reaches the end of its life, recycle it!

1.5%
OTHER MATERIALS
cleaned, partly recycled, sent for energy recovery, or disposed of in landfill

40%
PLASTIC
partly recycled and used in the automotive industry



11.5%
NON-FERROUS METALS[6]
aluminium, copper, etc. These metals are recycled into vehicle components, cables, and more

15%
FERROUS METALS
recycled and used to make metal frameworks for use in construction

17%
REGULATED COMPONENTS
capacitors are incinerated, batteries are processed and recycled

15%
CIRCUIT BOARDS
recycled at specialist foundries to recover the metals, while the rest is sent for energy recovery

02
MANAGING ENERGY CONSUMPTION

WHEN IT'S TIME FOR A BREAK

Limiting your use of devices and software helps to keep energy consumption to a minimum. Remember to switch off and unplug your IT equipment!

Devices consume energy even when you're not using them, which is why it's crucial to switch them off when they're not needed. What's more, only using them when you need them reduces their consumption and increases their lifespan.

1/4

of the electricity used by IT* equipment **could be avoided**
(using sleep mode or turning off devices)[6]

80% lower consumption
when a computer is in sleep mode[10]

4G uses **3 times more power** than **WiFi**[6]

WHAT YOU CAN DO

PUT YOUR COMPUTER TO SLEEP WHEN YOU DON'T NEED IT, after locking your session.

TURN OFF YOUR COMPUTER and all smart devices at the end of the working day and before the weekend (except where told otherwise by IT for software and security updates, for example). Turn off your smartphone as well if you don't need it.

USE THE ENERGY SAVING MODE ON YOUR LAPTOP, SMARTPHONE AND TABLET as long as performance levels still meet your needs, lower the screen brightness where possible and set your apps to "dark mode"**. Do the same on your other devices.

CHOOSE AN ECO-FRIENDLY CONNECTION METHOD: use a wired or WiFi connection, and only use your 3G/4G/5G mobile connection as a last resort.

WHY IT MATTERS

- **IT equipment uses energy** even when you're not using it (when your smartphone is on outside of work hours, if you leave your laptop on inside its cover, a WiFi router that's on when no-one's home, etc.). Turning off as many devices as possible is a good way to eliminate this unnecessary consumption.
- **Transferring data** via a 4G/5G connection results in much higher emissions than via WiFi, which itself generates more greenhouse gas than a wired connection.

*IT: Information Technology
**Dark mode: choosing a dark background with light-coloured interface elements (fonts, buttons, text, links, etc.).

03

REDUCING DATA VOLUMES AND FLOWS

LESS DATA, MORE IMPACT

Storing and sharing your files in just a few clicks has never been easier. Changing your habits also means reducing the amount of energy consumed by IT infrastructure.

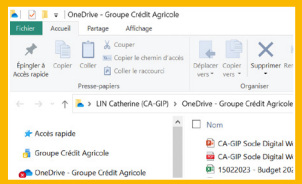
Producing a ream* of 80g/m² A4 paper, excluding use and end of life:

2.29 kg CO_2 eq

25%

of documents
are thrown away 5 minutes after printing; 16% are never read[9]

On a personal level, regardless of what device you're using (tablet, smartphone, computer), **take the time to switch off automatic cloud** synchronisation** for files you do not need to back up or view on another device



WHAT YOU CAN DO

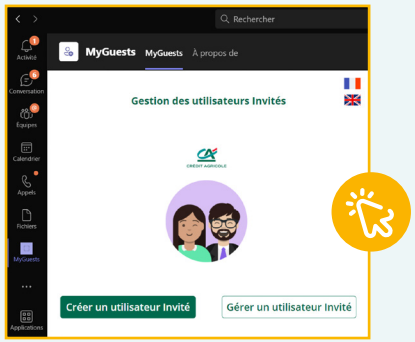
AVOID PRINTING. If you need to print, format documents so they fit on the page and print in black and white and on both sides where possible.

CHANGE YOUR WAY OF WORKING:

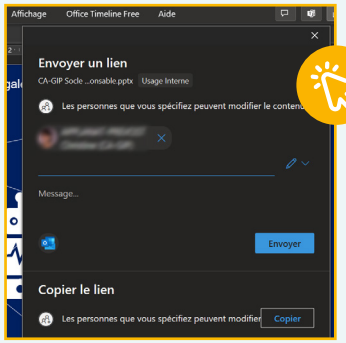
Upload your documents to a shared storage area
(for example: a dedicated folder on a server, Microsoft 365 applications – OneDrive, Microsoft Teams, SharePoint Online – or other business solutions) so you can:

- Have multiple people working on the same document
- Share your document just using a link
- Edit and share your data
- Secure your data.

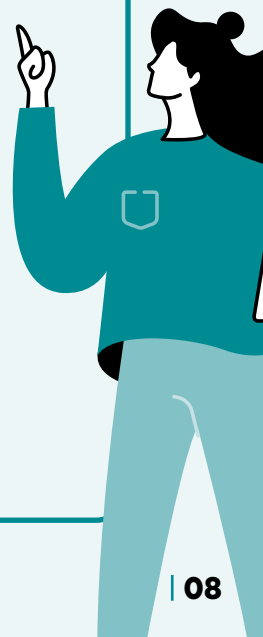
This avoids sending multiple different versions via email, eliminates the need to save all versions of documents in your "Files" area because the Microsoft platform automatically saves the version history, prevents duplicates and ultimately frees up storage space.



Provide access to a Files space or share files via Microsoft Teams by adding "guest" access via the "My Guests" add-in *(request to be made by your manager).*



Store your files in OneDrive, Microsoft Teams or SharePoint Online and share office documents (PowerPoint, Word, etc.) using the "Share" button within the software.



***Ream:** a ream is a pack of paper
****Cloud:** cloud computing, an IT structure that provides access to digital resources whose storage is outsourced to multiple external servers

03

REDUCING DATA VOLUMES AND FLOWS

LESS DATA, MORE IMPACT

WHY IT MATTERS

- **The carbon footprint** associated with storing a document increases with its size, the length of time it is stored for, and its number of instances – the copies created from the same template.
- **Data centres account for 3%** of worldwide electricity consumption[11]
- **In presentation documents,** the number, size and quality of the images are the main factors that increase the file size.
- **Transferring information** from one colleague to another involves a large number of network devices, all of which consume electricity.

A video file (~1 GB) is around 100 times bigger than an image file (~1 to 10 MB), which itself is 100 times bigger than a text file (~10 KB). (Image not to scale)

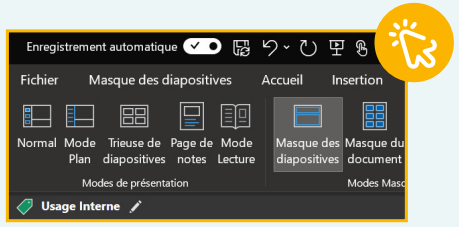
WHAT YOU CAN DO

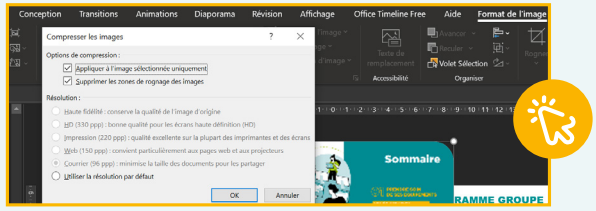
DELETE ALL OLD VERSIONS OF OFFICE SOFTWARE FILES once the final version is ready and make them available via an accessible space.

MAKE A HABIT OF REGULARLY CLEANING OUT YOUR FILES, getting rid of anything you don't need any more (photos, videos, documents and emails).

CLEAR POWERPOINT MASKS to avoid including large unnecessary images.

COMPRESS THE IMAGES in your office software files (PowerPoint, Word, etc.)





03

REDUCING DATA VOLUMES AND FLOWS

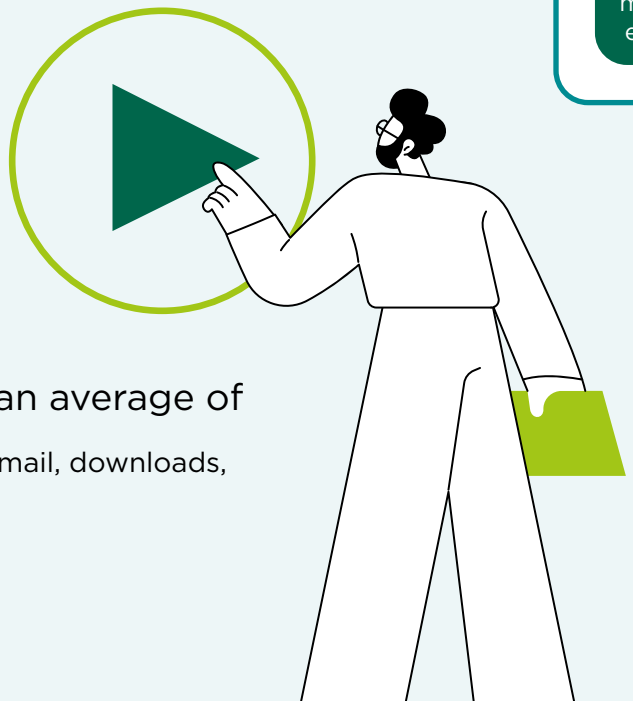
LESS DATA, MORE IMPACT

Internet traffic is growing by around **20% per year**[8]

Video accounts for

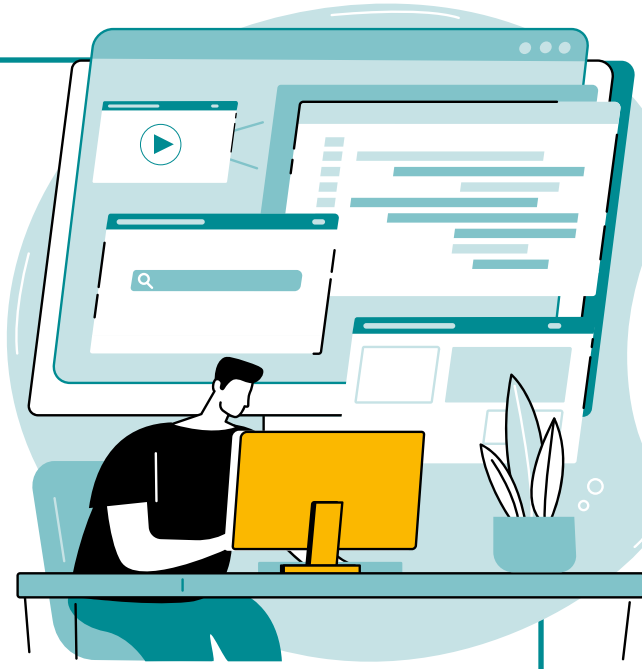
80%

of worldwide online data traffic[6].



Digital data travels an average of **15,000 KM**[6] (email, downloads, video, web requests).

WHAT YOU CAN DO



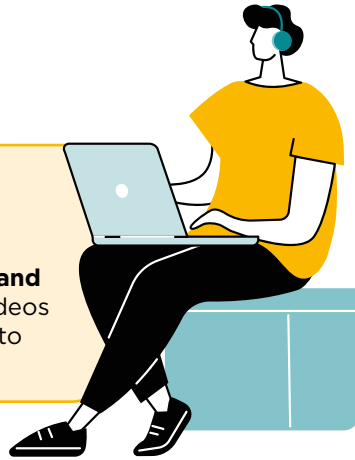
WHEN BROWSING ONLINE, LIMIT YOUR USE OF VIDEO to the bare minimum and switch off autoplay in your browser or in the site or app settings.

ENTER THE MOST PRECISE KEYWORDS POSSIBLE when searching the web.

CLOSE TABS YOU DON'T OR NO LONGER NEED, turn off unused widgets (such as news and weather) and regularly clear cookies and browser history.

All of these actions help to save on bandwidth and limit the number of requests made to servers, which results in lower energy consumption and greenhouse gas emissions.

WHY IT MATTERS



Video files are much larger than text or images.

The volume of video traffic has doubled since 2020 and is still growing: we are watching increasingly more videos and they are getting heavier and heavier (mainly due to higher video quality).

04

ADAPTING YOUR TOOLS AND WAYS OF COMMUNICATING

COMMUNICATE, BUT ONLY WHAT'S ESSENTIAL

New ways of working have increased our use of digital communication, whether when sharing documents, working with colleagues or attending meetings. Videoconferences produce a lot of data, but they often avoid the need for business travel and the high levels of GHG emissions that these trips produce (fuel, heating for premises, transport, etc.).

A 10-fold increase

in the number of email recipients increases the environmental impact by a factor of four[6].

10 to 12 billion emails are sent per hour worldwide (excluding spam)[6]

WHAT YOU CAN DO

REDUCE THE NUMBER OF EMAILS SENT EACH DAY TO A MINIMUM
Your emails should contain information that's useful and important to the recipient. Reduce the number of recipients and only use the "reply all" function when necessary.

WHERE POSSIBLE, USE INSTANT MESSAGING APPS (Teams, Skype, etc.) for informal chats.

MAKE SURE TO LEAVE YOUR MEETING at the end of the session after video or audio calls (e.g.: Microsoft Teams).

FIND OUT WHERE PARTICIPANTS WILL BE when setting up a meeting so you can choose the best format (on site, remote, or in hybrid mode by providing a physical room and a videoconference link).

FIND OUT MORE...

PRACTICAL GUIDES AND SHEETS

- **Mowe project use cases**
- **Guide to best practices in digital responsibility for organisations**
- **Practical Guide for responsible digital purchases**

Practical sheets for different types of purchases are available:

- Office equipment
- Printing solutions
- Networks and telecoms
- Infrastructure and cloud
- Intellectual services (P2I)
- Software

TRAINING

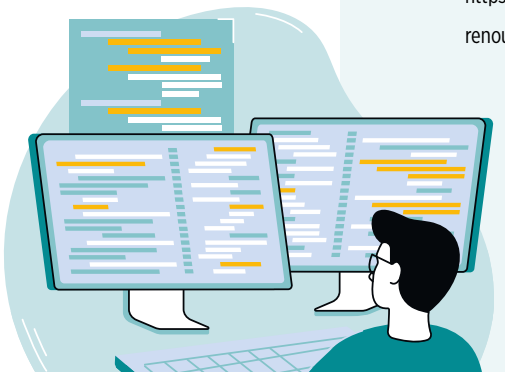
- **Learn about the challenges of digital responsibility**
- **The Sustainable IT MOOC is a short training programme that provides an introduction to digital responsibility, designed for all audiences.**

A FEW ADDITIONAL FIGURES AND EQUIVALENCIES

- **Base Empreinte (ademe.fr)**
- **Discover the climate impacts of everyday objects and actions**

OTHER REFERENCE INSTITUTIONS

- Alliance Green IT
- Fondation Internet Nouvelle Génération
- INR: Institut du Numérique Responsable



SOURCES AND REFERENCE INSTITUTIONS

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(12) Negaoctet

(13) Internal study by CAPGEMINI on behalf of Crédit Agricole Group Infrastructure Platform, 2022.

GLOSSARY

Kg eq CO2: this unit of measurement is used to compare the impact of different GHGs in terms of global warming and can be used to arrive at a total figure for emissions. For instance: 1 tonne of methane is equivalent to 28 tonnes equivalent of CO2 when assessing GHG emissions.

Greenhouse gases (GHGs): gases present in the atmosphere that trap infrared thermal radiation emitted by the surface of the Earth.

Raw materials: materials of natural origin that undergo artisanal or industrial processing: wool and cotton are examples of raw materials.

Rare earths: the rare earth metals are lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium.
Often added to this group are scandium and yttrium, which have very similar properties. These metals are often found together in their ores.

Carbon footprint: the volume of greenhouse gas produced by an activity, a vehicle, an individual, etc., expressed in CO2 equivalent or carbon equivalent.

Digital sobriety: a process designed to minimise the environmental impact of the digital world by reducing the energy consumption of the technology and smart devices all around us.

Primary energy: this term refers to all energy forms that are not converted, whether used directly or imported. The main examples include crude oil, oil shale, natural gas, solid mineral fuels, biomass, solar radiation, hydroelectric power, wind energy, geothermal energy and energy from uranium fission (source: INSEE).

GROUP INFRASTRUCTURE PLATFORM

Trust, security and value for money: together, every day,

delivering technological services and supporting the Crédit Agricole Group with its digitisation

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