

#smartconnection

Sustainability



Environmental Roadmap 2024

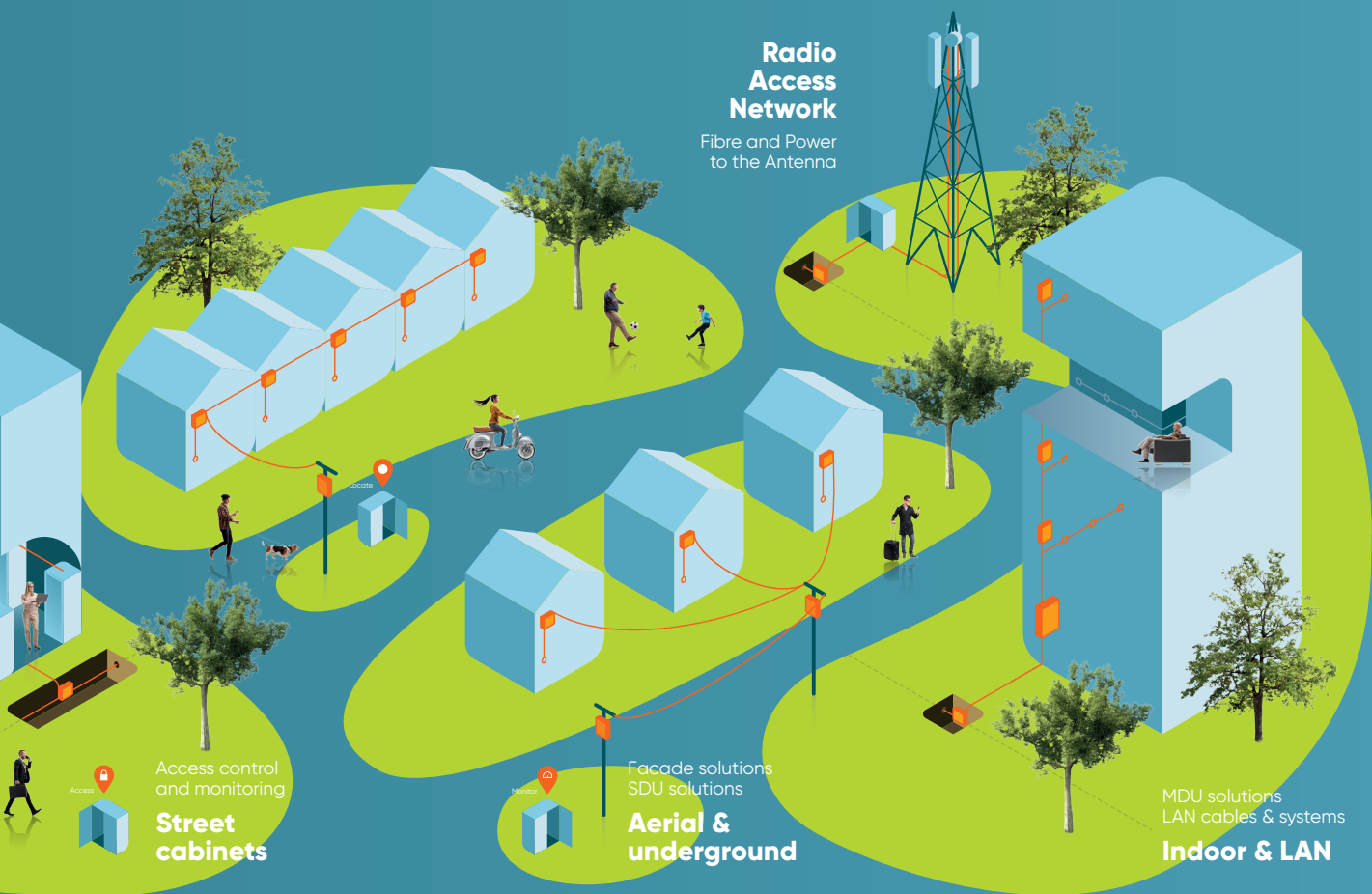
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Make #smartconnections with Aginode.

Aginode, formerly Nexans Telecom & Data, designs, manufactures & sells connectivity solutions for digital networks in FTTx, Mobile, LAN & Data Centre markets.

Our goal: to enable the infrastructure which delivers applications that make lives more connected, productive, and enjoyable; today and in future.

Our international teams have over 30 years proven track record of developing, implementing, and servicing advanced infrastructure solutions.

With a state-of-the-art industrial footprint and recognised technological know-how in Europe, Middle East, North-West Africa, and Asia, together with international sales teams and numerous local partners, Aginode is a key player in digitalization and connectivity.

Introduction

Aginode is committed to reducing its carbon footprint. Since 2012, Aginode has been implementing multiple initiatives at all company levels and across all our sites to reduce our carbon footprint impact. We are proud to be recognized as a strong and early contributor to reducing the environmental impact of the telecom industry.

Driven by our people

Our nearly 700 employees, present in 11 countries, bring our three core values to life:

- **ADVANCED:** we anticipate needs with sustainable solutions
- **AGILE:** we secure telecom and data projects by offering innovative and reliable solutions. We go beyond passive infrastructure, creating value for all stakeholders.

- **DEVOTED:** We protect people and property by providing reliable solutions. We ensure high-performance standards and usability throughout daily operations.

Our sustainability roadmap

Our ambition and environmental roadmap are based on structural actions organized around 6 pillars:

1. Product life extensions
2. Reuse and recycling
3. Recycle high end second life products, equipment and materials
4. Increase energy efficiency
5. Reduce carbon output
6. Reduce pollution

The main actions for each pillar are presented on the following pages.







Environmental roadmap

Pillar 1 – Reduce the use of the virgin raw materials

Eco-design

Early in the product development process, we prioritize reducing the use of virgin raw materials. An eco-conception methodology is applied for all cables and accessories. We provide our engineers with guidance in order to integrate environmental information at design stage. Our process is divided into four steps that guide us throughout the project:

-  Step 1: Enter information on the project details and on the product under development.
-  Step 2: Use a systemic checklist of aspects that could be investigated at design stage. An internal catalogue of approved materials is available. This catalogue supports to rationalize the quantities of virgin materials and increase the volume of each of them.
-  Step 3: Look for ready-to-use solutions.
-  Step 4: Check of the profile at the end of process.



Select and use recycled materials

Plastic injection for FTTH accessories (OTO, outdoor boxes), uses recycled and regenerated materials which helps significantly to reducing the overall raw materials consumption.

Production waste undergoes internal treatment for immediate reuse (e.g., injection scrap is crushed and reinjected) or for use in another process (e.g., recycling empty plastic optical fibre reels for component injection).

Opticable unit uses renewable raw materials. Two part numbers are already completed, representing 5% of total consumption.

All sites use recycled pallets.



Reduction of paper consumption

All our products are delivered with detailed installation and instruction manuals. All paper installation instructions will be removed and replaced by on-line access NFC and/or QR code. Significant volume of paper is saved every year, providing in parallel advanced information to our customers via video and up-to-date product information. VAB, Buizingen and Monchengladbach sites have implemented already such initiatives.



Reduce the copper in our solution

Aginode regularly advocates for PoE and fibre-based solutions. Webinars, white papers and training are provided to explain the benefits and impact of such solutions.

By designing data cables fully compatible with Power over Ethernet (PoE)++ standards, and by promoting IP PoE solutions in commercial buildings, the overall copper consumption could be reduced by 50%.

By designing FTTH and fibre based solutions as replacements for the legacy xDSL solution, Aginode contributes to a strong reduction of copper consumption throughout the telecom industry.

By using POE of fibre optic cables, we reduce the volume of copper in our solution. Then, we reduce the use of virgin raw material. We reduce weight and volume of the cables used.



Reduce cable size

Reducing the outer cable diameter has an immediate impact on packaging: more cable on the same drum or a smaller drum can be used.

For fibre optic cable, our cables have seen their diameter reduced by up to 30%. This is achieved by optimizing the use of aramid yarns and reducing the jacket thickness. In addition, new raw materials and thinner fibres (200µm and 180µm) provide significant diameter reduction while maintaining installation performance at the front end.

For PTTA cables, the Aginode D-Shape design marks a new milestone in the RAN cable industry. It helps mobile operators efficiently roll-out the new generation of 5G radio networks by achieving up to 36% diameter reduction.

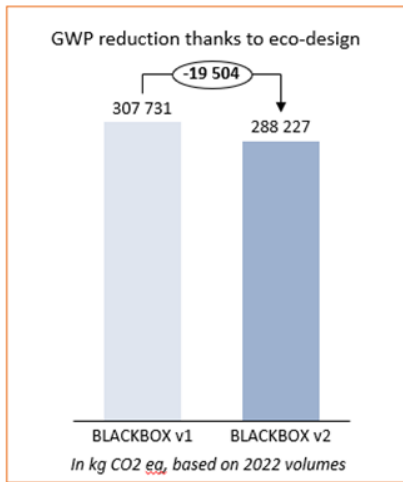


Redesigning splicing closure

We have achieved a 5% reduction in GWP (Global Warming Potential) of the BLACKBOX. This represents more than 19.5 tons of CO₂ equivalent saved annually (based on our 2023 delivery volume).

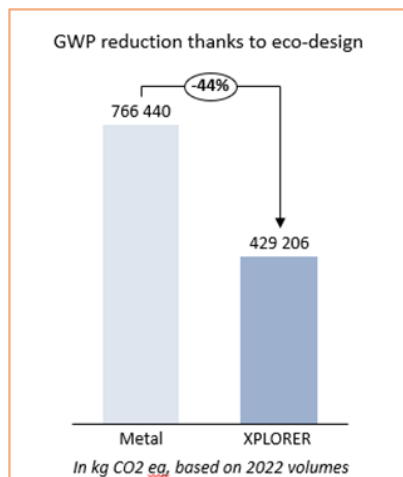
To reduce the environmental impact of the BLACKBOX, we've redesigned the splicing closure by:

- Selecting new raw materials
- Redesigning the closure shape
- Removing metallic screws



Reduce weight of ODF

Traditionally, ODFs were made with a metal housing for connectivity (fibre and/or copper). By replacing this metal with a reinforced thermoplastic material, we've significantly reduced the weight of the final product by over 44%. This translates to a CO₂ equivalent savings of more than 250 tons (based on our 2023 delivery volume).



Pillar 2 – Product life extensions

Reusing the product and/or extending the life time of the product is an efficient way to improve carbon footprint. Here are some examples that focus these actions:

- We provide installation trainings for all our products in all regions we operate, for both telecom and data solutions. E-learning training programs are available for our structured cabling and data centre solutions.
- Structured cabling and data centre solutions, when installed by Certified System Partners, are covered with an extended 25 years warranty.
- Aginode blown cable are available with extra low friction jacket material. This extends blowing performance, generating savings on installation time, reducing the number of splice closures and manholes. An overall 30% improvement has been reported.
- For the LANactive portfolio, we provide our customer with upgrade programs to extend the lifetime of the switches and drastically reduce the Waste of Electrical and Electronic Equipment (WEEE).



Pillar 3 – Reuse and recycling

Recycling fibre optic patch cords in FTTH networks is key. Patch cords are considered today as single-use products. At Aginode we have developed a complete program for FTTH patch cords, covering collection, testing, cleaning, packaging, and shipment back to customers. This creates a second and even third life for these patch cords. In our Opticable fibre-optic cable plant in Frameries, Belgium, the fibre is packaged on plastic drums. These empty drums are then shipped to our Vrigne-aux-Bois telecom accessories plant in France to be recycled and re-used as raw material for plastic injection. At Vrigne-aux-Bois plant, empty packaging for optical components is recycled primarily into water bottles.

Across our Opticable and Fumay factories, industrial plastic waste that cannot be processed internally is sold to third parties, thus giving them a second life and avoiding their landfill.



Pillar 4 – Increase energy efficiency

All our industrial sites have energy efficiency programs.

Use of solar panels

At the Frameries Plant roof: 185,90 kWc, already in production, to be extended to 500 kWc by 2024.



Optimizing lighting

Complete LED transition has been implemented in Frameries, Vigne-aux-Bois and Fumay sites, for both offices, industrial halls and outdoors.



Optimizing compressed air networks

Pressure monitoring, leak reduction and new rules and implementation scenarios are implemented in all European industrial sites.



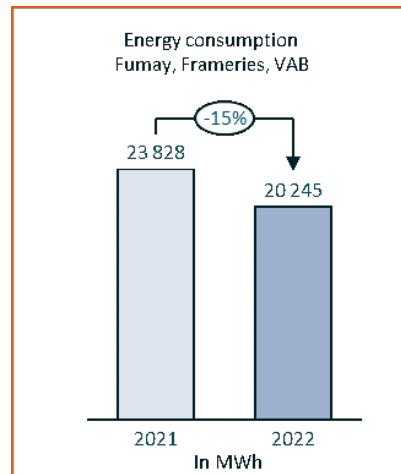
Air destratifier

Large manufacturing buildings require a lot of energy for heating. To improve the efficiency of our heating system, our Fumay factory has installed destratifiers. This system has also been implemented in the production and logistics hall at the Vigne-aux-Bois site. A air destratifier generates a minimum of 5% savings on heating system power consumption, translating to an annual reduction of 400MW.



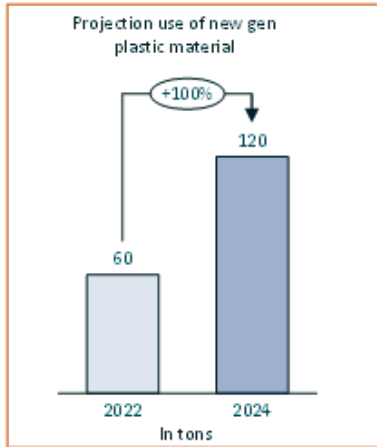
Monitoring energy consumption

We invested in an energy consumption monitoring system to optimize the energy consumption for both our industrial processes and our facilities.



Usage of new generation of plastic raw materials for injection

These new-generation raw materials require a lower heating temperature. Over 80 tons are budgeted for injection in 2024.



Pillar 5 - Reduce carbon output

At Aginode, we take action and strive to inspire our stakeholders. We are actively involved in various standardisation committees and lobbying associations, in particular:

- Europacable (European Cable Manufacturer association) with the sustainable team,
- Sycabel (French Cable manufacturer association) with the Sustainable working Groupe,
- IEC TC46 WG1: we contribute in the redaction of environmental declaration rules and harmonization.



Developing and promoting new ways of installing

The FTTH products are key. The installer pack helps installers to reduce the number of kilometers driven to optimise their day through innovative packaging and kitting solutions.



Optimized packaging

Our R&D, purchasing and supply chain teams collaborate to optimise packaging volumes. This allows us to transport more products per trip, directly reducing the carbon footprint of our distribution phase.



Assess track CO₂ impact is key using Life Cycle Analysis

All our engineering teams have been trained in Eco design and in Life Cycle Analysis computation, based on the PEP ECOPASSORT® methodology.

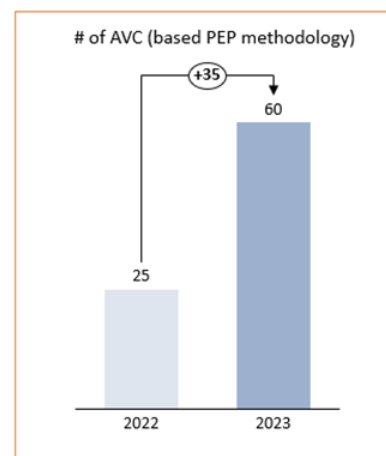
The PEP ECOPASSPORT® methodology defines, in accordance with the ISO 14 025 requirements, the management process of the PEP ecopassport® program while respecting professional ethics and transparency.

- General Instructions rules,
- Rules for Product Environmental Profile (PEP) elaboration, verification and publication rules.

The Life Cycle Assessment methodology (LCA), allowing the collection and analysis of the environmental data, based on validated scientific background. The editorial policy, allowing the communication of these environmental data through a PEP declaration.

PEP LCA currently covers most of our fibre optic cable range, LAN copper cable range, PTTA ranges and FTTH accessories.

More than 60 PEPs are available on demand. Comparative analysis on cable packaging (drum vs Reelex®, wood vs plastic drum), on transport, on production location are regularly made to deliver the best solution. On-demand LCA analyses are available to support our customers in making the right choices.



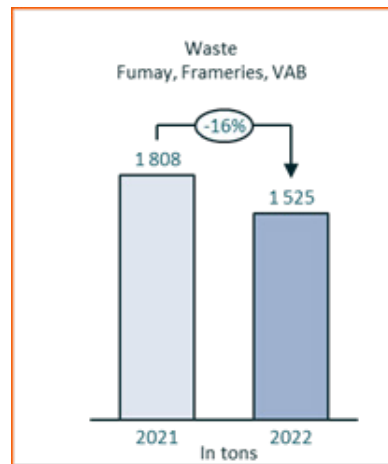
IoT solutions to improve FTTH roll-out and maintenances

At Aginode we also work to improve the way our products are installed, used and maintained. INFRABIRD™ is a field-site intervention monitoring solution for FTTH infrastructure nodes, based on IoT and NFC technologies. Easy to deploy and based on existing field site technician tools, INFRABIRD™ has successfully been trialed on a large scale with all 5 major Telcos in France. Besides the reduction of more than 45% of network failures, we have been able to quantify the positive impacts in terms of kg CO₂ equivalent emissions for the Telco. An extrapolation made on 20 000 street cabinets (representing approx. 30% of the French market) shows significant benefices (on a yearly basis):

- Increase life expectancy of equipment installed inside street cabinet: -382 tons CO₂ eq.
- Reduction of technician travel due to reduced maintenance: -9750 tons CO₂ eq.
- Reduction of technician travel due to reduced subscriber disconnection: -3000 tons CO₂ eq.



- Reduce diversity of raw material,
- Polyurethan foams are swapped for carton packaging,
- Reduce microplastics and plastic pellets in water and oceans is achieved thanks to the GPI certification of our French units. This French initiative is shared with our units outside France,
- Consistently recycle scraps and waste internally in our production processes.



Pillar 6 – Reduce pollution

Aginode is committed to reduce pollution and has implemented several actions:

- Reduce plastic packaging for finished goods and inbound materials: Plastic packaging is swapped for paper/carton packaging,
- Reduce the overall packaging volume, this is achieved by increasing the number of product within a single packaging (e.g, LAN cable optimised drums and palettisation, eco packaging for LANmark EVO RJ45 jack, smart packaging for FTTH OTO...),

Conclusion and next steps

Aginode is committed to reduce its carbon footprint. As described above, we have implemented several long-lasting actions throughout our operations, from product design and manufacturing to logistics, purchasing, maintenance and stakeholder support.

2024 marks a new milestone in our dedication to a more sustainable world. Here's how:

- Assessing our overall carbon footprint,
- Defining our climatic strategy (via SBTi reduction trajectory). Science-based targets provides companies with a clearly-defined path to reduce emissions in line with the Paris Agreement goals,
- Preparing our CSR report in line with the CSR Directive. This report will be based on dual materiality and a gap analysis.

Glossary

Here are some fundamental sustainability terms and ESG concepts..

Business sustainability. Also known as corporate sustainability, business sustainability is the ethical, responsible management of an organization's continued success with environmental, social and financial concerns.

Carbon credit. When companies create carbon offsetting initiatives, they receive a transferable or tradeable carbon credit, or token. A credit represents the right to emit greenhouse gas and make up for it elsewhere. A credit represents one ton of carbon dioxide reduced or removed from the atmosphere. In practice, taking advantage of these credits lets owners reduce greenhouse gas emissions to get closer to net zero. The term also refers to purchased credits that will fund emission-reducing projects.

Carbon footprint. A carbon footprint measures the amount of carbon dioxide and methane produced by individuals, organizations, products or practices.

Carbon neutral. The ideal balance between carbon dioxide emissions produced by human activity and carbon absorption by the atmosphere; the calculation should come to zero.

Carbon offset. A carbon offset is an activity or purchase that is intended to compensate for carbon emissions produced by individuals and organizations. Carbon storage through tree planting or land restoration is a common example. Businesses that create carbon offset programs receive carbon tokens.

Carbon token. A digital asset governed by a smart contract on a blockchain that represents a real-world reduction in one metric ton of carbon dioxide emissions. The asset exists to verify ownership and to simplify the carbon credit trading process. Another example is a nonfungible token, or NFT, representing single, unique shares of captured carbon dioxide associated with a specific time and place. The dependence on blockchain technology to administer carbon tokens is controversial due to blockchain's energy-intensive processes.

CDP. A not-for-profit global environmental disclosure system for investors, companies, cities, states and regions use the system.

Circular economy. The circular economy keeps products in circulation to the fullest extent possible by reducing material consumption, streamlining processes and collecting waste for reuse.

Clean tech. Technologies and processes that are meant to limit negative environmental impact, such as waste and carbon emissions, especially in comparison to fossil fuels. Examples of clean technologies -- sometimes referred to as green technologies or eco-technologies -- include solar power, wind power, biofuels, recycling and smart lighting.

Climate adaptation. The act of preparing for and adjusting to climate change's current and projected consequences. For example, cities can build seawalls to protect from rising sea levels.

Climate change. The shifts over time in the average temperature and weather patterns that define specific locations. In particular, climate change has come to mean the rise in global temperatures from heat-trapping gases resulting from mining and using oil, coal and other fossil fuels. Climate change indicators include rising sea levels; increase and severity of extreme weather, such as hurricanes, droughts and floods; and ice loss at the Earth's poles.

Climate mitigation. The process of decreasing the flow of heat-trapping pollution. For example, reducing fossil fuel burning by using renewable energy sources may help.

Climate resilience. The ability to support a community, company or the natural environment before, during and after a climate event in a timely, efficient manner. Climate resilience differs from climate adaptation, but the two are often used synonymously.

Climate risk. As wildfires, droughts, food scarcity, hurricanes and other climate change effects happen, businesses face increased vulnerability. Climate risk describes that vulnerability. It is the potential for climate change to create negative effects on human or ecological systems. Risks fall into two main categories: risks based on the transition to a greener economy, such as losing market share by moving away from fossil fuel-based products, and risks related to the physical effects of climate change, such as flooded offices.

Closed-loop. A production process that reuses material waste to create additional products or repurpose recycled materials.

Conscious capitalism. Conscious capitalism is a socially responsible framework for capitalism in the corporate and political spheres. It emphasizes creating human value alongside profit value.

Corporate social responsibility (CSR). For-profit companies use the CSR business model to gauge social and environmental benefits alongside organizational goals such as profitability.

Digital carbon footprint. The digital carbon footprint is the amount of greenhouse gas emissions digital devices, tools and platforms produce. All tech, from cloud computing to mobile phones to internet usage, produces a digital carbon footprint.

Digital sobriety. Digital sobriety aims to limit the harmful environmental impact of smartphones, internet usage, digital media and other tech in large and small ways on a daily basis. Moving toward digital sobriety includes a wide range of actions. buying fewer devices, deleting emails, opting for lower-definition media consumption, sustainably developing software and buying less-powerful machines.

Drawdown. A drawdown is the point at which atmospheric greenhouse gas levels stop climbing and start declining.

Electronic waste (e-waste). Electronics at or nearing the end of their useful life. Green tech and sustainability approaches seek to extend the useful life of devices and use circular economy principles to keep the amount of e-waste to an absolute minimum. The priority is to first reduce waste, then refurbish devices and only then move toward recycling.

Energy efficiency. The same task or result is achieved with less energy. For example, heating, cooling and operating appliances and electronics are less energy intensive in energy-efficient homes and buildings.

Environmental justice. Environmental justice aims for fair treatment of all people regardless of race, colour, national origin or income equally regarding environmental laws, regulations and policies. The approach holds that no group should bear a disproportionate share of negative environmental consequences.

Environmental, social and governance. Sustainable and ethical interests that can be central to an organization's financial and corporate interests. Otherwise known as ESG.

ESG framework. A set of objectives that companies can use to report on ESG issues. The process begins when an organization selects an ESG reporting method. Examples of standardized reporting frameworks include the following.

Global Reporting Initiative. A non-profit and independent standards organization that helps organizations report ESG impacts.

Feed-in tariff. A policy designed to accelerate investments in renewable energy. A policy of this type usually involves long-term government contracts.

Global warming. Global warming refers to Earth's heating from trapped greenhouse gases resulting from human activities such as transportation, agriculture, overfishing, fossil fuel energy production and overconsumption. Unless companies, governments and consumers make major shifts, global warming and climate change will heat the planet so much that it will be unlivable in the near future.

Green cloud. The green cloud refers to the possible environmental benefits for IT services delivered over the internet. Typically seen as a buzzword, reliance on the alleged benefits enables technologists to feel that further efforts to reduce carbon footprints are unnecessary.

Green computing. The sustainable approach to using computing devices and equipment is green computing. Some methods include reducing resource use, responsible disposal of e-waste and deploying energy-efficient IT equipment.

Green hushing. Green hushing involves companies intentionally hiding sustainability goals. Companies may do this for fear of greenwashing accusations or falling short of stated goals.

Green IT. The practice of designing, manufacturing, operating and disposing of IT products and devices to minimize the negative effects of IT operations on the environment is green IT.

Green premium. Coined by Bill Gates, green premium refers to the economic and environmental costs of choosing clean tech over financially sound options with higher greenhouse gas emissions.

Green software. Green software refers to applications that are designed, developed and implemented in ways that are meant to minimize energy consumption and environmental effects.

Greenhouse effect. The result of carbon dioxide, methane and nitrous oxides in Earth's atmosphere trapping the sun's heat.

Greenhouse gas emissions. The sum of emissions of various heat-trapping gases. Greenhouse gases include carbon dioxide, methane, nitrous oxides and fluorinated gases such as hydrofluorocarbons.

Greenhouse Gas Protocol. A globally recognized set of reporting and accounting frameworks for managing greenhouse gas emissions from private and public sector operations, value chains and mitigation actions.

Greenwashing. Deceptive, misleading or false claims or actions that an organization, product or service has a positive environmental effect is called Greenwashing. Whether intentional or unintentional, the practice is detrimental.

High emitters. A designation given to companies or countries that emit comparatively high volumes of greenhouse gas. Per capita emissions are used to measure the emissions of nations.

Impact investing. An investing strategy that directs money towards companies that create a measurable, positive change in the world. This may also be called socially responsible investing.

Impact sourcing. A sourcing strategy that directs employment and career development opportunities toward people from economically disadvantaged backgrounds.

Intergovernmental Panel on Climate Change (IPCC).

The United Nations' body for evaluating scientific climate change information. The IPCC releases regular reports on climate impacts and risk and offers options for mitigation and adaptation.

Loss and damage. Climate-change related consequences that people are unable to adapt to, either because the consequence is too severe or because the affected community doesn't have access to the resources to adapt. Loss and damage results from sudden natural disasters, such as floods, or gradual change, such as desertification.

Materiality assessment. A materiality assessment is a formal way of assessing stakeholders' commitment to specific ESG issues and calculates an organization's ESG score. It works by identifying the impact of a certain issue on a company's performance and competitiveness in the market.

Net zero. The result of lowering greenhouse gas emissions as close as possible to zero and balancing remaining emissions with removals.

Paris Agreement. The Paris Agreement is a legally binding international treaty on climate change that aims to limit global warming to a 1.5°C temperature increase by the end of the century. The Agreement was adopted at the 2015 UN Climate Change Conference.

Recycling. The process of collecting and processing waste materials, ideally to make new products.

Responsible innovation. Responsible innovation prioritizes ethics and social responsibility in the research, design and production of new technologies or evolutions of existing technology. Responsible innovation posits ethics as a design problem.

Science Based Targets Initiatives. A non-profit partnership that helps private sector organizations set science based emissions goals meant to uphold climate science and the Paris Agreement. The partnership is between the CDP, World Resources Institute, World Wide Fund for Nature and UN Global Compact.

Sustainability Accounting Standards Board. A non-profit that sets sustainability standards for numerous industries relevant to financial performance.

Scope 1, 2, 3 emissions. Developed by the Greenhouse Gas Protocol, scopes give organizations a way to categorize their emissions. Organizations may find it easier to control scopes 1 and 2, but scope 3 emissions are the most difficult to track.

Scope 1 emissions. The direct emissions generated by an organization's operations. Running machinery, manufacturing products, driving vehicles, heating buildings and providing power to devices generate emissions.

Scope 2 emissions. The indirect emissions generated by an organization's energy purchase and usage. Investment in renewable energy sources may help lower these emissions.

Scope 3 emissions. The indirect emissions generated by an organization's customer and supplier activities.

Supply chain traceability. In sustainability, traceability not only identifies, tracks and traces materials and commodities, but it also verifies sustainability claims across the value chain.

Sustainability. The ability to meet present needs without compromising the needs of future Generations. In practice, sustainability aligns environmental protection, human well-being and economic development.

Taskforce on Climate-Related Financial Disclosures. TCFD develops voluntary climate risk disclosures. The recommendations are divided into operational categories: governance, strategy, risk management, and metrics and targets.

Triple bottom line (TBL). According to the TBL accounting framework, the bottom lines calculate financial performance alongside environmental and social effects.

Zero waste. The concept of managing products, packaging and materials responsibly to minimize environmental harm.

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