



LIBERTY GLOBAL CORPORATE RESPONSIBILITY REPORT 2022

REPUBLISHED WITH AN ADDENDUM SEPTEMBER 2023

Welcome from our CEO

2022 was a year that gave us optimism as we returned to many pre-pandemic routines. At the same time, the war in Ukraine and the energy and cost of living crises united the world, making our commitments to humanity and our communities more important than ever.

During the year, we took the opportunity to reflect on the most pressing issues facing society, our unique heritage of change and growth, and our purpose of Tomorrow's Connections Today. We also revised our governance and reporting processes, and set a foundation to accelerate our ambitions in the areas we want to impact most – rooted in one thing: We care about our future.

In 2022, we formally established our **People Planet Progress** board committee, which will provide board-level guidance, expertise and endorsement

across our social impact and environmental agenda. Similarly, we expanded governance of our reporting of these commitments and initiatives with guidance from our Audit Committee.

We continued to build on our ambitions for diversity, equity and inclusion, establishing an even stronger culture of Belonging. To date, 82% of our colleagues stated they can fully be themselves at work. Our strategy also included educating our colleagues and leaders and fostering consciously inclusive work environments that attract diverse and talented people.

Through our partnerships, we continued to support digital literacy and innovation for our younger generations, including STEM for girls, with the aim to advance digital equity. We achieved record volunteer participation, with nearly 9,300 volunteer hours supporting environmental clean ups, digital inclusion, online safety, and social impact initiatives.

Toward our Net Zero goals, we have reduced our Scope 1 and 2 emissions by 25% since 2019. We are well on track to achieve our science-based reduction target of 50% by 2030, and our ambition to be Scope 1 and 2 carbon neutral before then. Overall, we are analyzing our full Scope 1, 2 and 3 footprint to reduce all possible emissions based on science-based principles. We continuously innovate to increase energy efficiency and use

responsible materials and renewable energy sources to create a cleaner environment.

This year, we recently introduced our new **People Planet Progress** strategy that brings together the work across our company that is making a difference today. In **People Planet Progress** we make clear what we stand for, the issues we want to affect, and the plans that will guide our priorities over the coming years.

This is an exciting moment and I am incredibly proud of our achievements and the commitment of our people. I hope you enjoy this report.



A stylized white signature of Mike Fries on a dark blue background.

Mike Fries, CEO
Liberty Global

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About Liberty Global

We are building
Tomorrow's Connections
Today, bringing people
together through the
power of our technology.

Liberty Global is a world leader in converged broadband, video and mobile communications and an active investor in cutting-edge infrastructure, content and technology ventures.

With our investments in fibre-based and 5G networks we play a vital role in society, currently providing over 85 million fixed and mobile connections¹ and rolling out the next generation of products and services, while readying our networks for 10 Gbps and beyond.

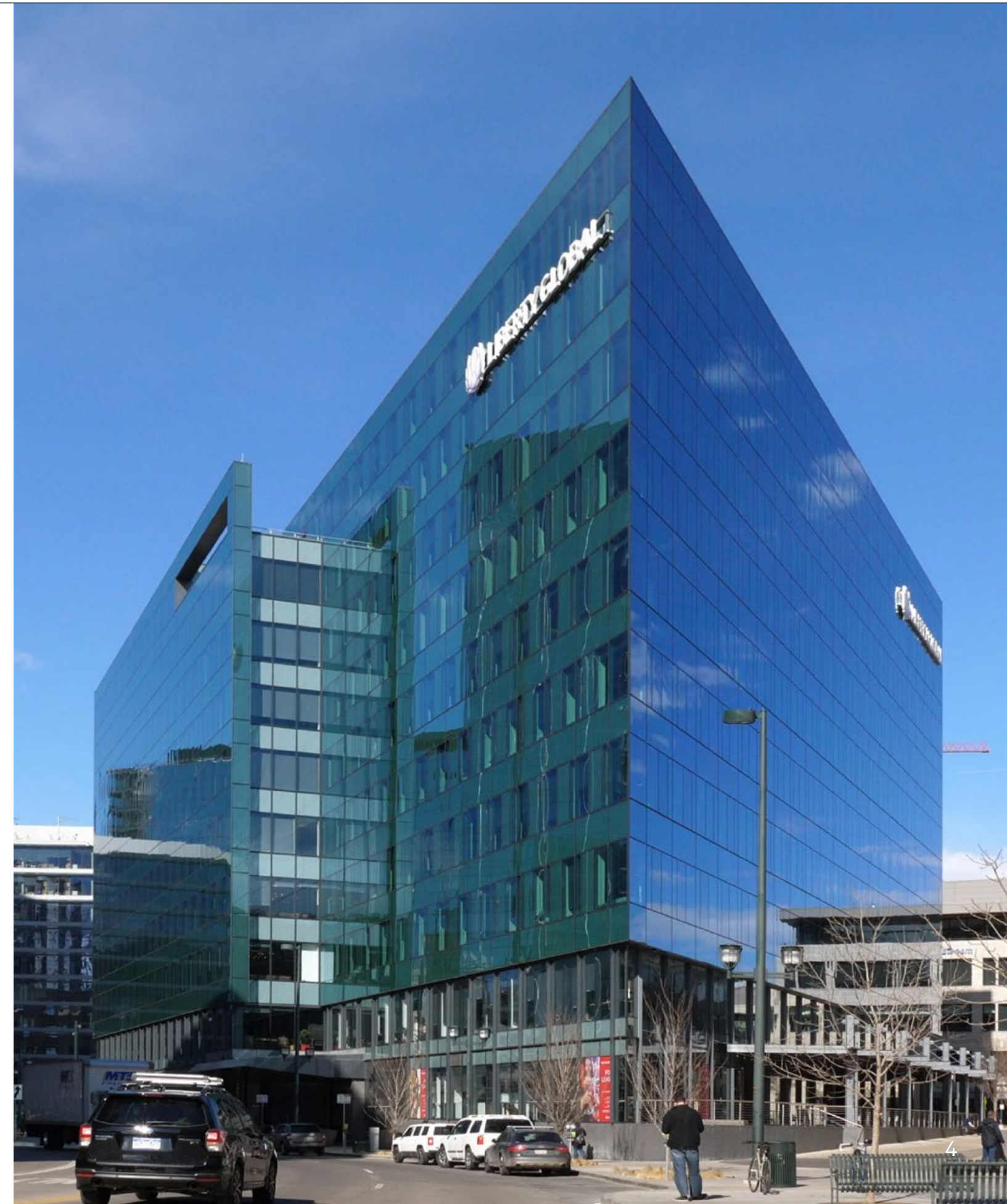
We're creating national champions, combining the best broadband and mobile networks under brands such as Virgin Media-O2 (VMO2) in the U.K., VodafoneZiggo in The Netherlands, Telenet in Belgium, Sunrise in Switzerland, Virgin Media in Ireland and UPC in Slovakia.

Our consolidated businesses generate annual revenue of more than \$7 billion, while the VMO2 JV and VodafoneZiggo JV generate combined annual revenue of more than \$17 billion.²

Liberty Global Ventures, our global investment arm, has a portfolio of more than 75 companies and funds across content, technology and infrastructure, including strategic stakes in ITV, Televisa Univision, Plume, Lionsgate and the Formula E racing series.

¹ Represents aggregate consolidated and 50% owned non-consolidated fixed and mobile subscribers. Includes wholesale mobile connections of the VMO2 JV and B2B fixed subscribers of the VodafoneZiggo JV.

² Revenue figures above are provided based on full year 2022 Liberty Global consolidated results (excluding revenue from Poland) and the combined as reported full year 2022 results for the VodafoneZiggo JV and full year 2022 U.S. GAAP results for the VMO2 JV. For more information, please visit www.libertyglobal.com.



INTRODUCTION



2022 Highlights

We have made exciting progress across our Corporate Responsibility agenda over the last years through our Belonging agenda, environmental commitments, social programmes and community engagement. In 2022, we continued to deliver on these priorities, reassessed our most material issues and opportunities, and enhanced our reporting. This has enabled us to establish a new comprehensive strategy framework, designed to help us build our future ambitions and further impact the matters we care about most – **People Planet Progress**. Here are a few of the 2022 highlights from the Liberty Global Group.

People

20 active employee resource groups across the Group

6%-point increase in a sense of **Belonging** among our employees

76% \longrightarrow 82% \longrightarrow **6%**
2021 2022 (increase)



Nearly **9,300 hours** of volunteering across the Group

Nearly **\$1.5 million** raised for **Street Child** by Liberty Global

Planet

Scope 1 & 2 emissions **reduced by 25%** since base year 2019



We gave a second life to **nearly 510,000 CPE boxes** through our refurbishment programme

Reduced transport-related CO₂ emissions by **85%** for the Apollo box and avoided **135 tonnes** of virgin plastic

Reduced electricity consumption in the network by **10% at Sunrise** by deploying AI tools and without compromising the network performance

Generated **190 MWh** of solar powered energy through our **Egg investment**, the same amount of energy that it would take to run **5 thousand light bulbs** for an entire year³

Progress

Strengthened ESG governance with our board-led **People Planet Progress Committee**



Conducted the company's first-ever **climate risk assessment** in line with TCFD

Confirmed our strategic priorities through in depth internal reviews and a third-party **double materiality assessment**



³ Assuming 4W energy saving LED light bulb.

About this report

This annual Corporate Responsibility (CR) report provides an overview of our environmental, social and governance (ESG) initiatives and performance. Additional details, including our latest stories, can be found on our [website](#).

This report has been prepared in accordance with our Environmental and Community Investment Reporting Criteria and with reference to the GRI Standards. All data in this report covers the period January 1 to December 31, 2022 unless otherwise stated.

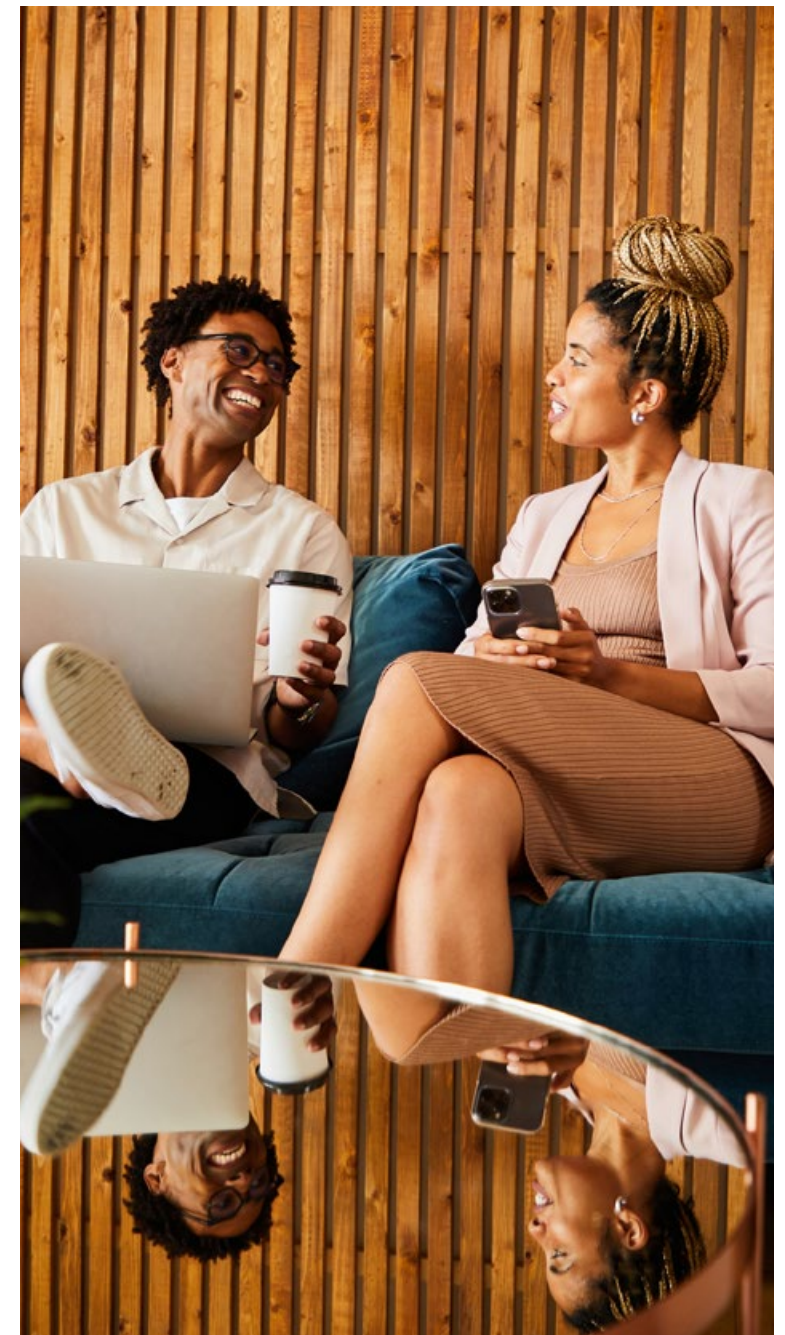
We report on our consolidated operations in Europe under the consumer brands Telenet in Belgium, Sunrise in Switzerland, Virgin Media in

Ireland, UPC in Slovakia, Egg in the U.K., as well as our centralized and corporate functions, herein referred to as Liberty Global Group or Group. Data from businesses in which we have non-controlling equity stakes are not included within our reported figures with the exception of certain emissions from our 50% interests in the VodafoneZiggo JV and the VMO2 JV. We have included 50% of the Scope 1 and Scope 2 market-based emissions from these joint ventures in our Scope 3 emissions. Our policy is to include any new subsidiaries that have been acquired in the first six months of the reporting period and to exclude any subsidiaries for which we no longer have operational control. We rebase prior year data for acquisitions and dispositions. For an in-depth overview of our reporting boundaries, please refer to the reporting criteria documents uploaded on our [website](#).

We engaged KPMG LLP to undertake independent limited assurance, reporting to Liberty Global plc, using the assurance standards ISAE (U.K.) 3000 and ISAE 3410, for selected community investment, energy consumption and greenhouse gas emissions data presented in Liberty Global plc's U.K. Companies Act Annual Report (pages 57-61) for the period ended December 31, 2022. This information is included in this Corporate Responsibility report and is highlighted on pages 41 and 46-48. Our 2022 GRI Standards

Content Index, Environmental Reporting Criteria, Community Investment Reporting Criteria and KPMG Independent Limited Assurance Statement can be found in the Reports section of our website.

Your views are important to us. Please send comments and suggestions to: cr@libertyglobal.com.





Forward-looking statement

This report may contain forward-looking statements within the meaning of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995, including statements with respect to our plans, goals and strategies regarding environmental, social, and governance (ESG) matters; improvements in operating procedures and technology, and potential benefits to us therefrom; our efforts to enable our customers and vendors to achieve their own ESG goals; revenue and cost expectations; financing of operations; source and sufficiency of funds required for building new equipment and upgrading existing equipment; demand for our services; competition; government regulation; and other matters that are not historical fact. Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts, and they often use words such as “aim,” “anticipate,” “believe,” “budgeted,” “commit,” “continue,” “could,” “estimate,” “expect,” “goal,” “intend,” “may,” “plan,” “predict,” “potential,” “project,” “pursue,” “should,” “strategy,” “target,” “will,” or “would,” or the negative thereof and other words and expressions of similar meaning. These forward-looking statements involve certain

risks and uncertainties that could cause actual results to differ materially from those expressed or implied by these statements. These risks and uncertainties include events that are outside of our control, such as changes in legislation, regulation, rules, codes of practice, and other governmental and non-governmental policies; our inability to reduce our environmental impact and emissions; our inability to perform at our desired standards; our inability to develop and deliver equipment, technology, and software solutions to enable our customers to achieve their own environmental, social and governance goals; our inability to realize intended benefits from our environmental, social and governance strategies and initiatives; global economic conditions, including inflationary pressures and risks of economic downturns or recessions, environmental risks and our ability to satisfy future environmental costs; technology-related disputes; legal proceedings and actions by governmental or other regulatory agencies; public health crises, pandemics, and epidemics; weather; operating costs; as well as other factors detailed from time to time in our filings with the Securities and Exchange Commission, including our most recently filed Form 10-K, Form 10-K/A and Form 10-Qs. The forward-looking statements are based on

certain assumptions and analyses we make in light of our experience and our perception of historical trends, current conditions, expected future developments, and other factors we believe are appropriate in the circumstances. Forward-looking statements are aspirational and not guarantees or promises that goals or targets will be met. These forward-looking statements speak only as of the date of this Corporate Responsibility report. Liberty Global expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statement contained herein to reflect any change in Liberty Global’s expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

STRATEGY



Our revitalised strategy

People Planet Progress sets out our company's priorities, ambitions and plans to address the most important issues facing society and our world today.

We care about the future. Over the years, we have reinvented ourselves through technology and a pioneering spirit that allows our customers, our people and our markets to stay ahead of the curve in an ever-changing digital world. As we progress to meet the needs of today, we also strive to enable future generations to meet their needs for tomorrow.

We are excited to build upon the progress we have made over these past years and deepen our focus on the areas we aim to impact most. Therefore, we are introducing a comprehensive strategy framework to help us grow cohesively in these areas.

This is **People Planet Progress**. These are the priorities that demonstrate how we work inclusively, sustainably, and responsibly. They are rooted in our purpose of delivering Tomorrow's Connections Today, and our unique heritage of exciting change, innovation, and growth.

- Our culture of Belonging champions diversity and representation to elevate equitable and inclusive opportunities across every part of our business. We are committed to enhancing digital equity and skills for our communities and society today, while creating positive change for the generations to come.
- We are committed to reducing our environmental footprint, innovating to save energy, ensuring the energy we do use comes from renewable sources, and that our products and fibre-based and 5G networks are as efficient as possible. We are focused on circularity, and enabling industries beyond our own to become greener through digitization.
- We value being a transparent and trusted company. We are committed to fair and sustainable operations and practices, and we hold our partners and suppliers to the ethos of responsibility that we set for ourselves.

We are setting ambitious, multi-year goals to direct our roadmap and demonstrate the progress we make across our priorities.

We stand for inclusive, sustainable and responsible growth.

We stand up for **People Planet Progress**.



Our priorities



PEOPLE

- Culture of Belonging
- Inclusive connectivity
- Tomorrow's workforce
- Community impact



PLANET

- Reducing our environmental impact
- Smart energy
- Global green transition



PROGRESS

- Employee engagement
- Enhancing our profile
- Investor engagement
- Strategic partnerships

The priorities that matter to us

Refreshing our most significant sustainability impacts seen by our own businesses, stakeholders and communities.

Our priorities are determined by the most significant sustainability impacts of our business as they affect our people, stakeholders and communities.

In 2022, we performed a new materiality assessment to ensure that our strategy remains aligned with the current concerns and focus of our business leaders and stakeholders. The assessment followed the principles of double materiality and took into consideration both financial materiality (outside-in) and impact materiality (inside-out).

The exercise was completed in cooperation with one of our specialized sustainability consultants and involved a series of workshops, interviews, and panel discussions with a diverse range of stakeholders. These interviews included customers, suppliers, investors, employees, leadership, industry associations, and non-

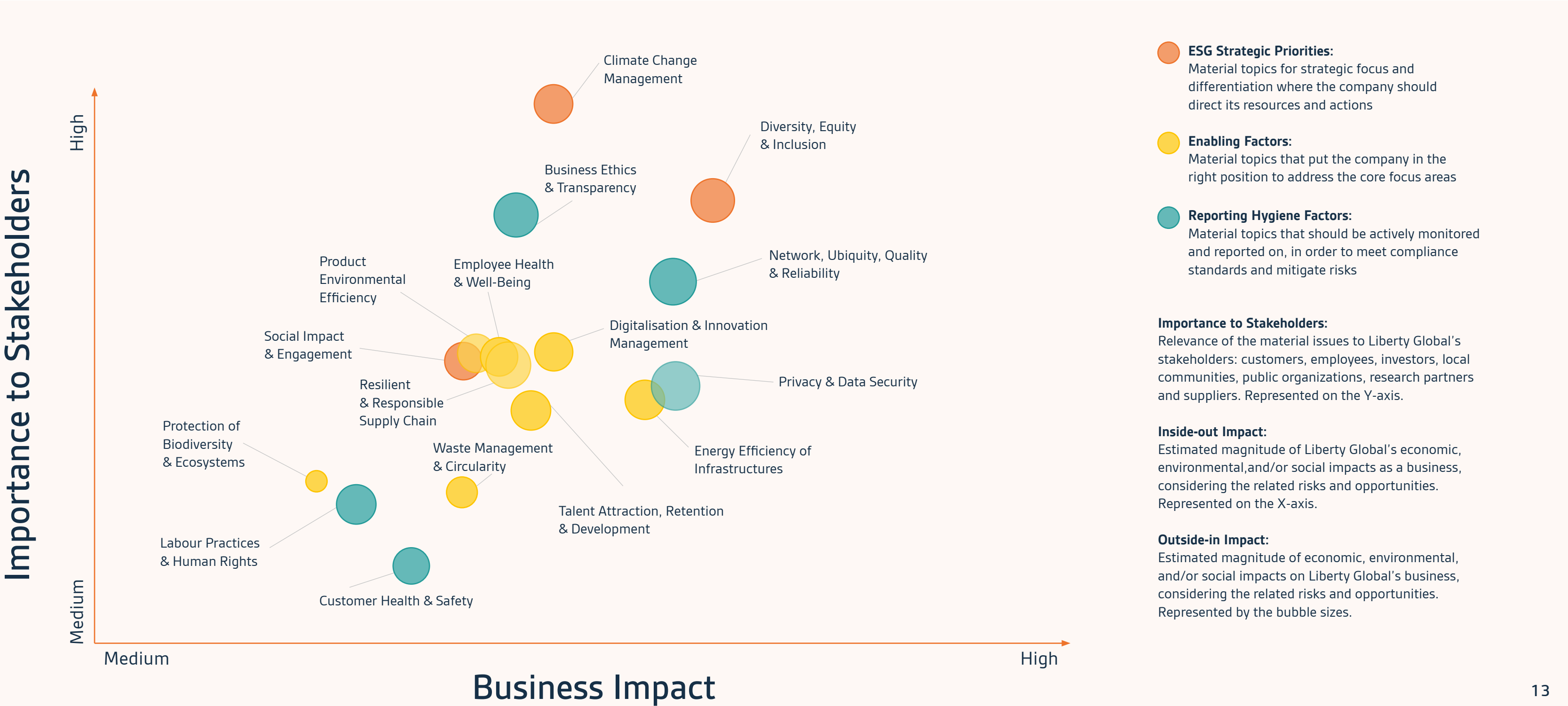
governmental organisations (NGOs). In addition, each of our Executive Leadership Team members and a member of our Board of Directors with extensive ESG experience were all personally interviewed. The double materiality study also considered many different sources of guidance from regulatory institutions, ESG benchmarks and ratings, sustainability reporting standards, industry peers, and relevant market ESG trend reports.

In terms of topics captured, we included overarching macro-themes that provided the foundation of our strategy, but also focused on topics meaningful to our purpose and values. We also made sure that topics that are critical issues today, and will continue to be in the coming years, were considered to establish an enduring strategy.

As a result of this exercise, we identified three core strategic priorities, all lining up to our strategy: Climate Change, Diversity, Equity & Inclusion, and Social Impact & Engagement.



Our materiality matrix



PEOPLE

We grow
inclusively





People.

We grow inclusively

Throughout Liberty Global, we champion diversity, equity and inclusion. But we go further than that – by instilling a culture of Belonging that empowers each of our colleagues to achieve their potential and bring their whole selves to work, every day.

We have embedded ambitions that will elevate gender representation at each level of the organisation and are committed to tackling discrimination in all its forms. As we foster a sense of Belonging, we will ensure equitable opportunities for experience and growth across our company.

We are committed to enhancing digital equity for our communities and wider society – by providing access to next-generation connectivity and refurbished devices, affordable options for underserved or vulnerable communities, and access to digital skills and online safety education to prepare the workforce of tomorrow.

We are engaged members of our communities, constantly challenging ourselves to make an impact. We support our colleagues in volunteering, as we work to scale our efforts to make a positive impact at our corporate and local market levels.

Together we create a culture of Belonging

We stand united in our resolve for diversity, equity and inclusion

2022 Highlights

- **20 Employee Resource Groups** active across the Liberty Global Group
- **700 leaders** across the Group and 100% of our Liberty Global employees attended 2022 Concious Inclusion Masterclass
- **70% response rate** for Liberty Global our second dedicated DE&I survey
- **6%-point increase** in our employees' sense of **Belonging**, with 82% of respondents across the Group reporting they can be themselves at work

**BELONGING
AT LIBERTY**



At Liberty Global, we are creating a culture where everyone is valued and respected. Where we make a positive impact on each other and our communities and are creating inclusive connections every day so that we all belong.

EMPLOYEE RESOURCE GROUPS

We want to make sure everyone feels that they can bring their true selves to work, every day. That is why we continue to support our Employee Resource Groups (ERGs). In 2022, we had 20 ERGs from across the Liberty Global Group, focusing on topics such as gender, race and ethnicity, multigenerationality, disability, neurodiversity and LGBTQIA+, helping us to actively listen and ensuring that we strive towards a culture of Belonging.

GENDER

In 2022, we announced an ambition to increase the representation of women across the Group. Each business unit has specific priorities to increase the representation of women to ensure that we incorporate a wider range of perspectives to drive innovation, collaboration, and performance and help us grow. We always seek to hire the best candidates and build on the availability of roles through natural turnover. We are also focusing on succession planning for women, ensuring equity of opportunity for career progression.

For Liberty Global U.K. we published the UK Gender Pay Gap report which can be found on our [website](#).



TOGETHER WE CREATE A CULTURE OF BELONGING (CONTINUED)



INCENTIVES

Completing Diversity, Equity & Inclusion (DE&I) training constituted part of the 2022 bonus plan. Our Conscious Inclusion Masterclass equipped 100% of Liberty Global Netherlands, U.K and U.S. employees, and 700 leaders across the Group, with deeper knowledge and practical skills for creating a consciously inclusive work environment. Pay equity is also a factor in all reward decisions taken by leaders.

HIRING PROCESSES

We have also been working to remove any potential bias in our hiring approach through inclusivity training for hiring managers, diverse interview panels, and using AI to help remove any gender-biased language from our job descriptions and adverts.

SURVEYS

We have continued to listen to our employees across the Group through our dedicated DE&I survey. In 2022 the response rate increased from 60% in 2021 to 70% at Liberty Global. In 2022 we had an increase in the feeling of Belonging too, with 82% of our employees responding that they can be themselves at work (6%-point increase from 2021).

We use the DE&I survey to monitor our progress and use the insights provided to create our multi-year strategic roadmap. It helps us to review and improve the impact we have as we build a workplace where everyone belongs and no one is left out.



Our five strategic diversity pillars

We stand united in our resolve for diversity
we believe in creating a culture that empowers our colleagues to achieve their potential and bring their whole selves to work and being a force for good in the world.



Race, Ethnicity and Heritage

Support and empower people of all ethnicities, races and heritages. Ensure we offer equal development opportunities at each level of the organisation.



LGBTQIA+

Support and empower people of all sexualities and gender identities.



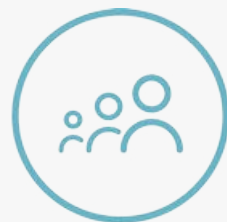
Gender

Connect, grow, and inspire women and to ensure a gender balance at each level of the organisation and equal development opportunities.



Disability + Neurodiversity

Remove barriers for all disabled and neurodivergent people. Put accessibility at the centre of everything we do.



Multigenerational

Support and empower people at all stages of their life and career.



We cultivate inclusive connections and positive change through volunteering

Our employees actively engage with local communities on issues we care about

Volunteering is an integral element of our People priorities, embodying our corporate values and deepening our employees' sense of purpose. It empowers our employees to be a part of and make a positive impact in the communities where we work and live, while building the connections that grow our consciously inclusive culture.

In 2021, we launched Connected Communities, our community investment, engagement, and volunteer programme in the Netherlands, U.K., and U.S. This initiative enables our employees to dedicate 24 hours of paid time off to engage in various volunteering activities. Additionally, similar programmes have been implemented across our broader organization. For instance, VMO2 JV's Take Five programme grants employees five days of paid time to engage in volunteering.

2022 Highlights

- **24 hours per year** of paid time off for Liberty Global Netherlands, U.K. and U.S. employees
- **41.5% volunteering participation rate** for Liberty Global Netherlands, U.K. and U.S. employees
- Nearly **9,300 volunteering hours** across the Group

WE EMPOWER POSITIVE IMPACT AND CULTIVATE INCLUSIVE CONNECTIONS THROUGH VOLUNTEERING (CONTINUED)

In 2022 we achieved a new milestone for our volunteering programme, as Liberty Global Netherlands, the U.K., and the U.S. embraced ambitious targets. We aimed to involve 30% of our corporate employees in volunteering activities. We surpassed that goal, with a participation rate of 41.5%.

Volunteering activities have played a vital role in supporting our key focus areas, which include digital inclusion, education, and online safety. Moreover, they have been supportive of environmental crisis needs, through activities such as removing plastic waste from beaches, canals and parks.

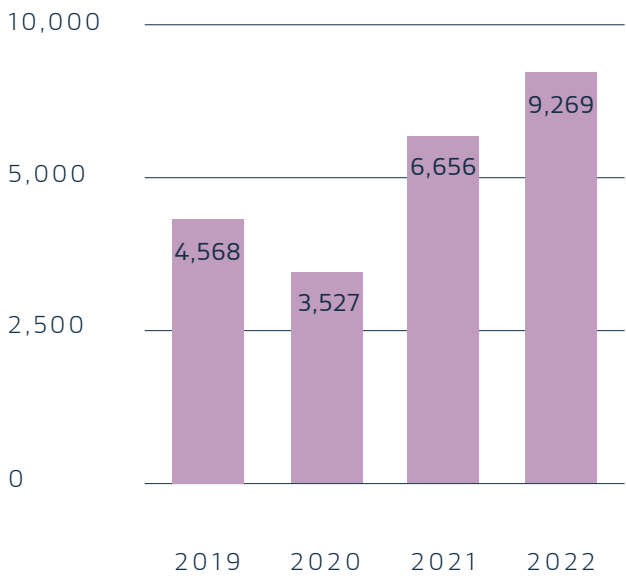
Our employees have demonstrated a keen desire to address various social issues. As our society has confronted the challenges posed by the pandemic and cost-of-living crisis, the pressing need for access to food, particularly among the socially vulnerable, has become increasingly prevalent. Many Liberty Global employees have volunteered their time at food banks and similar facilities to help address this critical need.

The devastating war in Ukraine continues to impact our people and communities. In 2022, across our companies, many of our colleagues participated in volunteer and fundraising efforts

to support those in need. The Liberty Global Group also took action to support refugees by fundraising through Street Child, offering free roaming services, TV channels and offering accelerated recruitment and employment options.

All together the Liberty Global Group dedicated 9,269 hours to making a positive difference through volunteering in our communities.

Total number of volunteering hours across the group



More information on our community investments can be found on page 41 of this report.

Volunteering activities across most supported causes:

<div>2,743hrs</div> <div></div> <div>Environment (such as litter clean-up, conservation work)</div> <div></div> <div>In Amsterdam, our employees partnered with Plastic Whale to pull plastic waste out of canals, with collected plastic recycled to make furniture and boats.</div>	<div>919hrs</div> <div></div> <div>Digital inclusion, education & online safety</div> <div></div> <div>Our employees supported early literacy, with volunteers providing one-to-one remote tutoring with students from schools in Bradford and London.</div>	<div>3,360hrs</div> <div></div> <div>Social welfare (such as food accessibility, support for socially vulnerable)</div> <div></div> <div>Our employees undertook numerous initiatives to support those impacted by the war in Ukraine. In the U.S., our colleagues sorted and packaged surplus medical supplies for shipment.</div>
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Making a difference through our charitable activities

Our longstanding partnership with Street Child continues to help educate children in the most vulnerable parts of the world



2022 Highlights

- Nearly **\$1.5 million** raised for **Street Child** by Liberty Global
- Sponsored **The Big Ride**, involving **550 participants**
- **First-time support** for participation in the World Economic Forum's Annual Meeting

We bring our community investment to life through meaningful partnerships, including our long-term collaboration with Street Child, an organisation that was founded in 2008 and since then, has improved access to basic education for over 950,000 children and has supported 135,000 adults through various programmes.

2022 marked another year of successful partnership with Street Child in support of their mission to ensure children are safe, in school and learning – especially in low-resource places and emergencies.

Our annual joint fundraiser, The Big Ride, attracted 550 participants from over 50 companies across Liberty Global Group and our supplier network. Held in Aarau, Switzerland last year, participants joined by walking, running and cycling varying distances over the two-day event. Together they covered over 90,000 km – a distance equal to circling our planet more than twice. The event raised over \$1.6 million in the process with the help of Liberty Global and other participants.

We also supported a number of other Street Child charitable events, including the Street Child gala event, which raised over \$1.2 million and the

fourth annual Street Child Cup – a friendly football tournament that included 200 participants from 24 companies – which raised \$68,000.

In 2022, we amplified Street Child’s message to global stakeholders, including to Education Cannot Wait, the United Nations’ global fund for education in emergencies, during a panel discussion we sponsored at the World Economic Forum in Davos.

Through these major events held throughout the year, our business alone raised nearly \$1.5 million for Street Child.

Nurturing digital literacy to break the digital divide

Liberty Global and Telenet were core partners of Code United, Belgium’s largest coding camp for children in 2022

2022 Highlights

- More than 700 children participated
- Five Belgian cities hosted week-long coding camps
- 44% of participants were girls
- 89% of attendees from underprivileged homes⁴

“Children are society’s most connected age group, starting their digital journey before they can even walk or talk. As a technology, media and telecoms company, we have a pivotal role in providing digital education to children – preparing them to be the skilled learners and leaders of tomorrow.”

Molly Bruce, Vice President of Corporate Responsibility & ESG Communications at Liberty Global



⁴ assessed according to their school’s overall socioeconomic status

NURTURING DIGITAL LITERACY
TO BREAK THE DIGITAL
DIVIDE (CONTINUED)

Throughout the year we have undertaken a number of initiatives and programmes to support our People priorities in our communities, focusing on bridging the digital divide, increasing digital literacy, and enhancing online safety.



CODE UNITED

We are creating exciting new ways for the next generation of innovators to learn about digital skills and online safety. The Code United programme was one in a series of initiatives we sponsored in our efforts to help youth develop the skills they need to flourish in the digital world. In 2022, we were core partners, involved in all aspects from providing funding to volunteering and analysing impact.

Liberty Global and Telenet teamed up with the non-profit BeCentral Foundation to launch the Code United camp across five cities in Belgium. Approximately 720 children, aged 8 to 12 years old, received a free week-long bootcamp where they developed digital skills, including learning about coding and robotics and understanding safe internet use.

Across each week, the Code United programme created three key opportunities: developing digital skills and online safety, nurturing creativity; and opening doors to girls, encouraging them to consider a future in Science, Technology, Engineering & Math (STEM).

Code United provided vital digital training to children who may not have access to such opportunities, with its focus on supporting low-income households. Of the children in the 2022 camp, 89% came from underprivileged or very underprivileged homes, assessed according to their school's overall socioeconomic status.

With a keen focus on gender balance each year, in 2022, 44% of attendees were girls, providing them with greater exposure to technology.

PLANET

We grow
sustainably





Planet.

We grow sustainably

Climate change and the environmental issues affecting our planet are counted among our world's most immediate crises. Our tomorrow depends on the actions we take and commitments we make today.

Across our company, we are committed to reducing our environmental footprint and laying our pathway towards net zero.

We are focused on smart energy – innovating to save energy, ensuring that the energy we use comes from renewable sources and that

the products we provide for our customers are as efficient as possible. We are also improving the energy efficiency of our fixed and mobile networks so that faster and better connectivity does not translate to higher emissions.

As a digital connectivity provider and founding member of the European Green Digital Coalition, we take an active role in supporting the green transition for industries beyond our own. We believe that digital innovations will be key to climate transition strategies, and we are proud to be a part of such important solutions.

Our Planet strategy addresses how we at Liberty Global are reducing our own environmental impact, through our journey to net zero, improving product circularity, and using AI to make networks more energy efficient. We also contribute to Planet goals through broader means: we invest in businesses that provide sustainable solutions; we empower the next generation to focus on green innovations through our social agenda and initiatives such as Coolest Projects; and as part of the European Green Digital Coalition, we focus on greening of the economy and enabling other sectors.

Our journey to decarbonisation

How we plan to reduce our carbon emissions in line with the goals of the Paris Agreement

At Liberty Global, we understand that our impact on the planet needs to be reduced, and it is our responsibility to ensure that while our business grows, our impact on the planet does not. We are working to reduce our carbon footprint in line with the ambitions of the Paris Agreement to limit global warming to no more than 1.5°C.

We believe any action starts with a solid base, be it good governance or reliable data. To ensure that we are setting ourselves up for success, we revised all processes for collecting and reporting Greenhouse Gas (GHG) emissions data, and we are currently undergoing an exercise to evaluate and address our pathway to reduce our Scope 3 emissions.

In 2022, we reviewed our organizational reporting boundaries to ensure consistent application of the operating control approach as defined under the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard. We also

updated our base reporting year from 2012 to 2019, our base year for our Scope 1 & 2 SBTi-approved 50% reduction by 2030 target, to better reflect our business structure. To ensure a like-for-like comparison of our emissions over time, we restated our previously reported figures for 2019, 2020 and 2021 to account for material structural changes that occurred between 2019 and 2022. Please see Prior Period Restatements section following the data tables on page 50.

We remain committed to delivering accurate, reliable, and audited data that supports our reporting of GHG emissions, as well as our target setting and monitoring.

DECARBONISING OUR BUSINESS

We are currently undergoing an exercise to set our long-term ambition, based on science-based net zero principles, to reduce all possible emissions across Scopes 1, 2 and 3.

In the meantime, we continue to work towards our Scope 1 & 2 net zero ambition for 2030 announced in 2021. We are focused on realizing annual emissions reductions across our business to achieve our SBTi approved Scope 1 & 2 50% reduction by 2030 target, against a 2019 baseline, and to achieve carbon neutrality for Scopes 1 & 2 before that. The figures on the following page share progress to date.

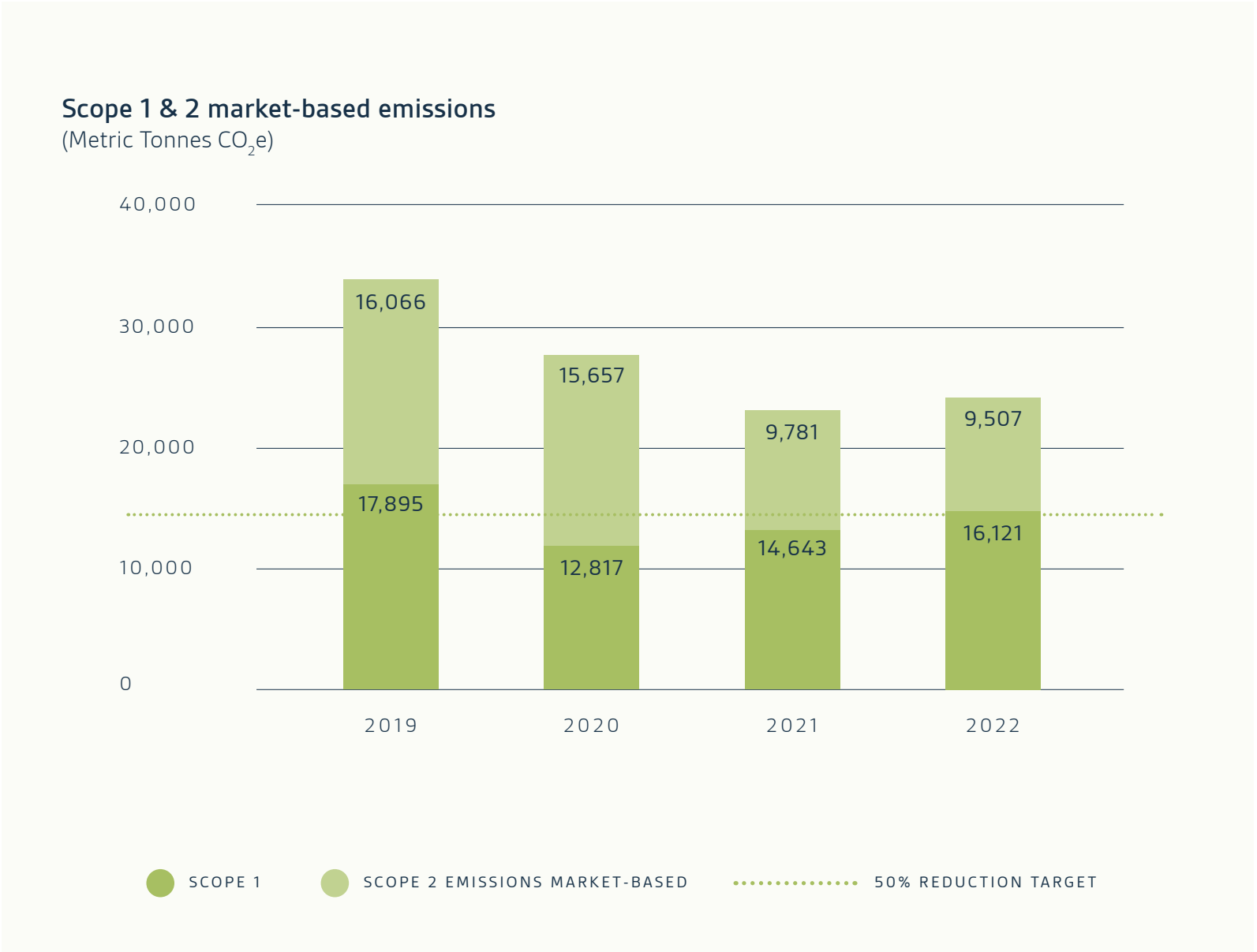


OUR JOURNEY
TO DECARBONISATION (CONTINUED)

REDUCING OUR SCOPE 1 & 2 EMISSIONS

For Scope 1 & 2, our analysis shows that even though our emissions increased 5% compared to 2021, largely reflecting the return to increased in-office working across our company, our emissions decreased by 25% compared to 2019, our base year.

We are on track to achieve our Scope 1 & 2 50% reduction target through a combination of energy efficiency projects in our network, electrifying our fleet, and investing in renewable energy. We are working to establish a new long-term ambition, based on science-based principles, to ensure we reduce our emissions further in line with the 1.5°C pathway set out by the Paris Agreement.



Direct Emissions

SCOPE 1
refers to company's direct emissions from own or controlled resources as a direct result from its activities.

Indirect Emissions from Purchased Energy

SCOPE 2
refers to indirect emissions from the generation of purchased energy.

Other Indirect Emissions

SCOPE 3
refers to emissions that are indirect that occur in the value chain of the company from both upstream and downstream activities.

OUR JOURNEY
TO DECARBONISATION (CONTINUED)

UNDERSTANDING OUR SCOPE 3 EMISSIONS

In 2022, we began a new exercise to model and revise our Scope 3 near-term and long-term net-zero ambitions, on the principles of science-based net zero targets. Our initial findings suggest that more than 90% of our emissions come from Scope 3.

Although we did not have a finalised model to fully quantify all our Scope 3 emissions in 2022, we continue to make progress on the factors we are able to track. The bar chart on the right-hand side reflects the emissions from water, waste management (including recycling and reuse), business air and land travel, and our 50% share of the Scope 1 & 2 market-based emissions from the VMO2 JV and the VodafoneZiggo JV.

PARTIAL SCOPE 3 EMISSIONS

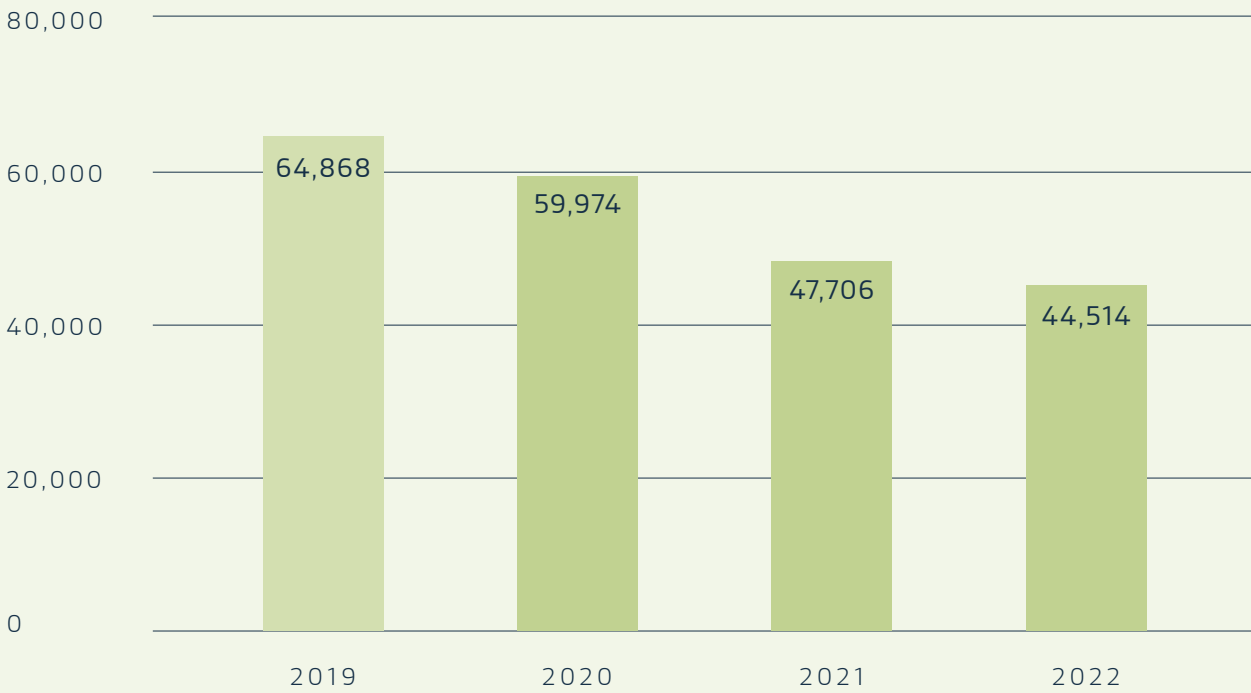
Between 2019 and 2022, the Scope 3 emissions that we report have declined over 30%. This is attributable to successful decarbonisation efforts by the VMO2 JV and the VodafoneZiggo JV as well as reduced employee travel due to of the COVID-19 pandemic.

Our data shows that one of our highest emission sources is our purchased goods & services. While we complete our Scope 3 quantification exercise, we are also partnering with our

Procurement team to engage with our suppliers, understand their decarbonisation ambitions, and collect their GHG emission data.

We remain committed to reducing our Scope 3 emissions in line with the Paris Agreement, and we will communicate our newly established targets in due course.

Reported Scope 3 emissions
(in metric tonnes Co₂e)



The circularity of our products

Designing more efficient products and processes – an energy-efficient set-top box that uses recyclable materials and limited packaging

2022 Highlights

- Prevented **135 tonnes** of virgin plastic being used with our new Apollo box
- The new box reduced transport-related CO₂ emissions by **85%**, including using over 175 fewer shipping containers, due to its smaller size
- Saved over **100 tonnes CO₂e** in the Netherlands alone by shipping our products through the mailbox
- Refurbished nearly **510,000 boxes** and redeployed them for use by our customers



Continuous improvement is our ethos and approach to product sustainability. Incremental changes to our existing products, optimising packaging to remove unnecessary plastic and shifting to recycled and recyclable materials, have led to substantial reductions in our environmental impact.

In 2022, we transitioned to 85% post-consumer recycled plastics for our Apollo set-top box casing, saving 135 tonnes of virgin plastic⁵. The box also consumes 63% less power in active mode compared to its previous generation⁶.

We removed single-use plastic in our bulk packaging of USB and HDMI cables, saving 7,300 kilograms of polyethene bags⁷.

By designing a smaller, more compact set-top box, power supply unit and remote control, we reduced transport-related CO₂ emissions by 85%⁸, avoiding the use of over 175 forty-foot shipping containers in 2022 alone.

These streamlined boxes were designed to fit through a normal mailbox, also helping to save delivery service emissions. VodafoneZiggo in the Netherlands reduced its carbon footprint by over 100 metric tonnes CO₂e last year and cut its shipping costs by €400,000 thanks to this transition⁹.

Our innovative Apollo box amplifies the progress we have made with our set-top boxes over the years. This includes removing less-used ports, buttons and LEDs, and reducing the overall power consumption of our boxes and their remote controls.

We are still on our journey to improve product sustainability. In 2023, for example, we will phase out single-use plastics from bulk packaging and plastic HDMI protective endcaps, creating transport packaging entirely free from single-use plastic. We will also increase the percentage of recycled plastic from 85% to 99% in our Apollo box.

⁵ Apollo box only, from the launch in 2020 to 2022.

⁶ Calculated as average Apollo V1 consumption of 8.39 kWh/year in 4.5 h/day active mode and 19.5 h/day standby, compared to 22.9 kWh/year for the EOS V1 box under the same conditions, resulting in a variance decrease of 63.3%.

⁷ Calculated as 2.7 million bags that were not shipped in 2022, estimated at 2.7grams/bag.

⁸ In 2022, we shipped 32 containers of Apollo V1 boxes. This would have been the equivalent of 207 containers for EOS V1, preventing 175 containers from being shipped from China to Europe. This means a reduction of 85% in shipping containers and related emissions.

⁹ Calculated at 200,000 Apollo V1 boxes shipped though post at 9 grams CO₂e/letterbox compared to 278 grams CO₂e emissions/box if they were shipped in a parcel. €2 saving/shipping/box.

THE CIRCULARITY OF OUR PRODUCTS (CONTINUED)

OUR CONTRIBUTION TO A CIRCULAR ECONOMY

We monitor the refurbishment rates for electronic waste retrieved from our customers. With regards to our Customer Premise Equipment (CPE), we make every effort to refurbish and redeploy CPEs in our markets, with a focus on energy efficient boxes.

In 2022, we gave a second life to 509,983 CPE units by refurbishing them for redeployment to customers, representing 40% of the units we retrieved from our operations. As we increase the retirement rates of our older models and replace them with newer, more energy efficient CPE units, such as the Apollo box, the proportion we redeployed last year decreased compared to 2021. In this instance, we balance our commitment to refurbish and redeploy with the benefit of ensuring our customers are using the most sustainable, energy efficient boxes to date.



CPE units refurbishment rate



*Refurbished CPE Units: Reported numbers adjusted for subsidiary dispositions, but do not include CPEs belonging to Sunrise prior to the year of acquisition



Making our networks more efficient

At Sunrise, artificial intelligence (AI) is making mobile networks more energy efficient paving the way for cost savings, carbon footprint reductions, and sustainably scaling 5G

2022 Highlights

- **Saved 6.4 GWh of energy** by deploying AI in Sunrise, the same amount of energy that it would take to run 180 thousand light bulbs for an entire year ¹⁰
- This **reduced electricity consumption** in the network by **10%** at Sunrise without compromising the network performance

¹⁰ Assuming 4W energy saving LED light bulb

Our biggest source of carbon emissions under our direct control is the energy consumed in our networks. This comprises 93% of our total electricity used.

While we procure more than 90% of our energy from renewable sources, it remains critical that we break the energy curve and operate our networks more efficiently.



POWERSTAR

At Sunrise, Artificial Intelligence (AI) solutions reduced energy usage in its mobile networks.

Energy management software, PowerStar, implemented at Sunrise in March 2021, uses AI algorithms to analyse radio access network traffic, making real-time adjustments with a focus on power-saving opportunities.

With the help of PowerStar, AI conducts real-time traffic forecasting, synchronising customer demand with network availability, optimising power supply to servers and other equipment within the mobile network.

In 2022, the energy saved from this new software amounted to 6.4 GWh, the same amount of energy that it would take to run 180 thousand light bulbs for an entire year.¹¹ PowerStar has saved more than 10% of electricity consumption by Sunrise's mobile networks without compromising network availability – striking a successful balance between conserving energy while sustaining customer experience.

With a compelling proof of concept, our operating companies are currently conducting research and developing solutions to implement AI in mobile to replicate the results achieved by Sunrise. The use of AI supports the significant progress we are making in reducing our carbon emissions, groupwide.

¹¹ Assuming 4W energy saving LED light bulb.

Investing in greener businesses

Egg energy investments aid customers in making a green transition at home

2022 Highlights

- We include sustainability-focused companies in our portfolio such as **Formula E**, **Egg** and **Believ**
- We financed over **34,000 EV** charging sessions through Egg in 2022
- **190 MWh** of solar powered energy generated through **Egg** in 2022, the same amount of energy that it would take to run 5 thousand light bulbs for an entire year.¹²

We are always seeking improvements in our business operations to become more efficient and reduce our footprint. But we also look to positively impact other sectors which can help accelerate the move to green energy sources. One way we approach that is by investing in businesses that are making the green energy transition possible.

By leveraging our capabilities and services, enabled by the assets that we own throughout our markets, we are uniquely positioned to play a role in the green transition. Therefore, we take opportunities to invest in new businesses that contribute to improving the sustainability of sectors beyond our own.

In recent years, we have invested in several companies through our investment arm, Liberty Global Ventures. The investments range from electric racing cars with Formula E to public electric-vehicle charging points through our new brand Believ (the trading name of Liberty Charge Ltd) and in-home renewable energy solutions via Egg.

These investments do not only present great business opportunity, but also support our Planet agenda and contribute to broader societal goals.

¹² Assuming 4W energy saving LED light bulb



EGG, CRACKING CLEAN ENERGY

Active since 2010 and acquired by Liberty Global in 2020, the new Egg brand (formerly Phoenix Works) was launched in 2022. Egg is a renewable energy solution provider offering consumers and businesses a range of decarbonisation technologies, including at-home electric-vehicle charging, solar power, and battery storage.

In 2022, Egg’s EV chargers dispensed 672.507 MWh of electricity and ran 34,261 charge sessions¹³, while its solar panels produced 190.45 MWh of energy,¹⁴ the same amount of energy that it would take to run 5 thousand light bulbs for an entire year.¹²

¹³ Data includes commercial and excludes residential chargers.
¹⁴ Data includes energy produced by panels that were installed in 2022.



Inspiring young innovators

We sponsored the Environment category at Coolest Projects Global 2022

2022 Highlights

- Projects submitted from **46 countries**
- Over **2,500** participants worldwide
- **45%** of participants were girls
- Average **age of 12**

Digital technology plays a crucial role in the world's fight against climate change, providing innovative approaches to reducing GHG emissions.

That is why we sponsored the Environment category of the 2022 Coolest Projects Global, a world-leading technology showcase for young creators up to the age of 18 years old.

Tech projects were submitted from 46 countries from over 2,500 participants, with girls submitting 45% of the projects – an encouraging statistic reflecting growing gender inclusivity in STEM.

Through Coolest Projects, young people around the world are empowered to solve the planet's most pressing topics through tech development, including gaming, web, mobile apps, hardware, and advanced programming.

As sponsors, Liberty Global volunteers supported participants, providing feedback on the hundreds of projects submitted to the Environment category.



“Coolest Projects is a global celebration that encourages young digital makers across the globe to create using technology. From addressing the most pressing environmental challenges to designing cool games, we want to empower young people everywhere to create the projects that they care about.”

Helen Gardner, Coolest Projects Programme Manager

PROGRESS

We grow
responsibly





Progress. We grow responsibly

We bring Progress to the world with next-generation networks and digital innovations—connecting people through the power of our technology today and opening doors for an amazing tomorrow.

This means that throughout our business, we are committed to sustainable operations and practices, as well as to transparency in our ESG priorities and progress. Our governance structures and human rights, ethics, and labour management processes and practices support us in this, both within our company and across our value chain. It is our ambition to formally align our supply chain with our environmental targets and global priorities involving human rights and ethics.

We engage with our investors and key stakeholders regarding our ESG performance, publish an annual Corporate Responsibility report, and participate in the Dow Jones Sustainability Index, CDP and B4SI ratings.

Governance that supports our strategy

Our ESG strategy, risks and initiatives are governed by an executive-led **People Planet Progress** Council, DE&I Council, and board-led **People Planet Progress** Committee, while our ESG reporting is governed by the company’s Audit Committee.

We have an executive-led **People Planet Progress** Council and a Diversity, Equity, and Inclusion (DE&I) Council. These Councils, composed of executives and leaders within our organization meet regularly throughout the year to provide direction and leadership in driving our ESG efforts. They ensure that our actions align with our overall business objectives, focusing on people, the planet, and social progress. In addition, we have a board-led **People Planet Progress** Committee. This Committee, consisting of members from our board of directors, plays a crucial role in providing ESG expertise and endorsement of our ESG activities. They provide strategic guidance and ensure that our ESG initiatives align with our long-term business goals and the interests of our stakeholders. Similarly, our ESG reporting, including related commitments, targets, and performance are reviewed and guided by the company’s Audit Committee. In 2022, we undertook an extensive review of our ESG reporting platform, and data collection, controls and validation, and reporting processes. As a result, we incorporated improvements to assure data quality and integrity, in alignment with our Audit Committee.

Through these governing bodies and committees, we maintain strong governance, strategic alignment, and robust risk management in our ESG strategy and initiatives. This enables us to drive positive change, promote sustainability, and make a meaningful social impact.

We are also taking action to strengthen our governance of climate risk management. One of our first steps was to hire a Director of Sustainability and ESG Reporting with expertise in risk management.

After coordinating our first climate-related risk and opportunity assessment, her role, in collaboration with the Risk & Compliance department, is to integrate the learnings from our assessment into the business and the company’s Enterprise Risk Management. Further, as the topics of crisis management and disaster recovery are risks already being managed in the Business, we are coordinating with the relevant senior leaders to ensure elements of climate-related risks, as well as opportunities, are part of their considerations.



Climate change and our adaptation efforts

At Liberty Global, we recognize that climate change is one of the world’s most important environmental issues. It is our priority to safeguard sustainable business operations for our customers, communities, and our people.

In 2022, we initiated a climate-related risk and opportunity assessment aligned with the Task Force on Climate-Related Financial Disclosure (TCFD) framework, in collaboration with one of our sustainability consultants. This involved conducting research on sector-specific and climate scenario impacts and engaging key stakeholders across various business functions and country operations within Liberty Global to identify risks and opportunities.

The identified physical and transition risks were evaluated and prioritized by considering their magnitude, likelihood, and Liberty Global’s vulnerability to them. The assessment utilized the three climate scenarios defined by the Network for Greening the Financial System (NGFS): Hot House World, Disorderly Transition, and Orderly Transition across different time horizons: short-term (0-4 years), medium-term (4-10 years), and long-term (10-30 years).

To analyze physical risks, we focused on five key asset locations: Netherlands, Ireland, Belgium, Switzerland, and Slovakia. To represent various levels of warming scenarios, we used the Shared Socioeconomic Pathways (SSPs), specifically SSP1-2.6, SSP2-4.5, and SSP5-8.5, which correspond

to low, middle, and high warming scenarios, respectively. Data projections associated with these pathways were incorporated up to the year 2050.

Opportunities were assessed based on their size and Liberty Global's capacity to capture them, considering the potential benefits and advantages they presented.

Through this assessment we aim to proactively address climate-related risks and capitalize on opportunities to enhance our resilience and sustainability as an organization.

IMPLEMENTING OUR STRATEGY FOR CLIMATE CHANGE RESILIENCE

As part of the TCFD assessment, we aimed to better understand the impact of climate change on our organisation so we can build a resilient business model. Given our business environment, we understand that we are heavily dependent on national electricity grids with many vital physical assets connected to this grid, such as antennae, signal towers, cables, and street cabinets. These components are essential for our customers to receive our services, but at the same time, the infrastructure can be



CLIMATE CHANGE AND OUR ADAPTATION EFFORTS (CONTINUED)

susceptible to the physical effects of climate change. During this TCFD-alignment project, we conducted a climate-related risk and opportunity assessment, which is the first step towards reinforcing our climate resilience strategy.

As part of the physical risk assessment exercise, we looked at acute physical risks, including increased severity of extreme weather events, such as hurricanes or floods, and chronic physical risks such as longer-term shifts in climate patterns, such as sustained higher temperatures causing chronic heatwaves or sea-level rises.

We also assessed risks relating to the transition to a lower-carbon economy, such as policy and legal, technology, market, and reputation risks, and we investigated the changes required to address mitigation of and adaptation to climate change, or transition risks.

PRELIMINARY ASSESSMENT RESULTS

With our 2022 exercise being only the first step into a complete climate change risk and opportunity assessment, we require a few more iterations before being able to disclose a complete view of our climate related risks and opportunities. This process will happen through quarterly risk assessments conducted with the business and in cooperation with our Risk

& Compliance department. In the meantime, our preliminary exercise gave us a high-level overview of our transition and physical risks on short-, medium- and long-term timelines.

We identified that we are susceptible to the market transition risk of energy and fossil fuel price volatility on a short and medium term. Over the long-term, this risk expectedly increases. Similarly, the potential for scarcity and price increase of raw materials used to manufacture electronic devices is associated with climate related changes. On policy and legal transition risks, we anticipate changes in regulation on carbon emissions, circular economy and product design.

Our acute physical risks include a potential that our network infrastructure may be impacted by an increase of severity of extreme weather events, such as storms, floods, and heatwaves. Similarly, an increased severity of extreme weather events, such as wildfires, storms, cyclones, hurricanes and floods may pose disruption to our supply chain and that of our wider industry.

Concerning chronic physical risks, we identified an increased potential for medium- and long-term electricity grid blackouts and brownouts as a result of climate change. For example, from an increased demand for cooling due to rising temperatures.


As Liberty Global can play an important role in the green economy and more sustainable future, we identified the switch to renewable energy sources and use of digital products that require fixed and mobile network infrastructures as being some of our main opportunities in the short, medium and long-term.

We will continue to refine our methodology for identifying climate-related risks and opportunities by integrating them into our established Enterprise Risk Management methodology, owned by the Risk & Compliance function that reports into the Audit Committee. A regular update will be given on status and mitigation activities for the key risks into the Audit Committee, while specific ESG Risks will be presented to the **People Planet Progress** Committee by the Managing Director, Audit Risk & Compliance Officer.

NEXT STEPS

Apart from our commitments to reduce our emissions and transition to renewable electricity and circular economy mentioned in Planet section pages 26-32, we will look to establish a climate transition plan, as well as metrics and targets to monitor our climate change adaptation efforts.

Further metrics can be found in the Planet and Progress sections of this report.



OUR DATA





Introductory explanations to our reported figures:

With our evolving strategy and enhanced focus on ESG Reporting, in 2022, we prioritised the reporting and restatement of information that is regarded as significantly material to our organisation and stakeholders. While we continue to expand our data collection and reporting across areas secondary to our material topics, we have made the following changes to our 2022 CR Report:

1. We shifted our base reporting year for our sustainability reporting and disclosures from 2012 to 2019 to better reflect our business structure as well as improvements made in our data accuracy and collection methodologies. In addition, we restated our previously reported figures for 2019, 2020 and 2021 to account for structural changes that occurred between 2019 and 2022 in order to ensure a like-for-like comparison across periods. The specific restatements and periods impacted are explained in the section “Prior Period Restatements” following the data tables.

- 2. We excluded the previously reported "Water withdrawal by source" table as water is not a material topic for Liberty Global. However, with climate change and water scarcity risks potentially impacting our company in the future, we will be looking at ways to accurately capture and report on water consumption while intensifying our focus on responsible practices and ways to conserve water across our businesses.
- 3. We excluded the previously reported "Environmental Initiatives" as these will move to our net-zero decarbonisation plan and will be reflected accordingly.
- 4. "Sustainability Linked Loan KPIs", are included in the Addendum of this report which was included in the republished version September 2023.
- 5. We replaced our previously reported "Energy Intensity" metric calculated as kWh of electricity / TB of data usage with an

"Emissions Intensity" metric calculated as metric tonnes CO₂ e / USD million of revenue to align with current reporting across our industry and our internal view that carbon emissions and revenue are more relevant components to measure performance.

Certain of our reported amounts as denoted with an asterisk (*) are within KPMG LLP’s independent limited assurance scope. Please see the KPMG Independent Limited Assurance Report on our website for further information.

We have restated certain prior period information. Please see “Prior Period Restatements” section following the data tables.

Community investments

We measure the impact of our community investment programmes using the globally recognised B4SI model (formerly known as London Benchmarking Group). This methodology records the inputs, outputs and positive community impacts of our investments in cash, time and in-kind contributions. During 2022, our total community contribution was \$6.2 million, of which \$4.0 million was in the form of cash donations.

	Measure	2022	2021	2020	2019
Total Community Investments	Million USD	6.2*	5.0	8.4	4.1
Cash	%	64%	58%	39%	67%
Time	%	5%	5%	1%	4%
In-kind	%	31%	37%	60%	29%
Employee volunteering time	Hours	9,269	6,656	3,527	4,568

Total workforce and breakdown by employee category

Measure		2022			2021			2020			2019		
Workforce including outsourced employees (headcount, year end)													
Employees	Number	10,087			9,790			8,180			8,123		
Outsourced employees	Number	3,683			3,323			5,550			5,707		
Total	Number	13,770			13,113			13,730			13,830		
Employees by region and gender (headcount, year end)		Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
North America	Number	65	44	109	63	51	114	60	58	118	60	63	123
Europe	Number	6,397	3,581	9,978	6,318	3,358	9,676	5,187	2,875	8,062	5,196	2,804	8,000
Total	Number %	6,462 (64%)	3,625 (36%)	10,087	6,381 (65%)	3,409 (35%)	9,790	5,247 (64%)	2,933 (36%)	8,180	5,256 (65%)	2,867 (35%)	8,123
Employees by contract type (headcount, year end)													
Employees on permanent contracts	Number	9,547			9,282			7,833			7,701		
Employees on temporary contracts	Number	540			508			347			422		
Employees by employment type (headcount, year end)													
Employees in full-time employment	Number	9,344			8,768			7,679			7,570		
Employees in part-time employment	Number	743			1,022			501			553		
Employees by age group (headcount, year end)													
Employees under 30 years old	Number (%)	1,769 (18%)			1,693 (17%)			1,398 (17%)			1,603 (20%)		
Employees 30 - 50 years old	Number (%)	6,346 (63%)			6,341 (65%)			5,383 (66%)			5,243 (64%)		
Employees over 50 years old	Number (%)	1,972 (19%)			1,756 (18%)			1,399 (17%)			1,277 (16%)		

Total workforce and breakdown by employee category (continued)

Measure		2022			2021			2020			2019		
Women in management													
Percentage of management positions filled by women	%	29%			27%			28%			27%		
Percentage of executive positions filled by women	%	28%			15%			8%			14%		
Employee training													
Average training hours (Hours per FTE)	Number	6.62			5.99			4.75			11.84		
Average training investment (Currency per FTE)	USD	710			522,79			674,89			716,37		
Occupational health & safety													
Injury rate (per 200,000 hours worked)	Number	1.04			0.56			0.74			1.36		
Occupational disease rate (per 200,000 hours worked)	Number	0.16			0.70			0.37			0.54		
Lost day rate (per 200,000 hours worked)	Number	9.06			8.98			18.44			7.92		
Absentee rate (Percentage of total workdays)	%	6%			4%			5%			6%		
Work-related fatalities		-			-			-			-		
New employee hires and employee turnover													
New employee hires by region and gender (headcount, year end)		Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
North America	Number	6	4	10	7	11	18	8	11	19	7	4	11
Europe	Number	1,060	772	1,832	823	530	1,353	631	376	1,007	771	488	1,259
Total	Number	1,066	776	1,842	830	541	1,371	639	387	1,026	778	492	1,270

Total workforce and breakdown by employee category (continued)

Measure		2022			2021			2020			2019		
Rate of new hires (Percentage)	%	18%			14%			13%			16%		
New employee hires by age group (headcount, % of total)													
Employees under 30 years old	Number (%)	795 (43%)			475 (35%)			372 (36%)			625 (49%)		
Employees 30 - 50 years old	Number (%)	930 (51%)			421 (30%)			572 (56%)			580 (46%)		
Employees over 50 years old	Number (%)	117 (6%)			475 (35%)			82 (8%)			65 (5%)		
Employee turnover by region and gender (number of leavers)		Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
North America	Number	5	10	15	7	15	22	7	15	22	11	7	18
Europe	Number	899	552	1,451	821	492	1,313	680	360	1,040	737	491	1,228
Total Rate of Employee Turnover Percentage	Number %	904	562	1,466 (15%)	828	507	1,335 (14%)	687	375	1,062 (13%)	748	498	1,246 (15%)
Employee turnover by age group (number of leavers, turnover rate by age)													
Leavers under 30 years old	Number (%)	417 (28%)			446 (34%)			245 (23%)			382 (31%)		
Leavers 30-50 years old	Number (%)	877 (60%)			804 (60%)			676 (64%)			725 (58%)		
Leavers over 50 years old	Number (%)	172 (12%)			85 (6%)			141 (13%)			139 (11%)		
Employee performance reviews													
Employees reviewed		32%			33%			57%			93%		
Employee performance reviews - by gender & employee category ¹⁵		Men	Women		Men	Women		Men	Women		Men	Women	
Percentage of appraisal - executive management	%	19%	16%		52%	50%		92%	100%		100%	100%	
Percentage of appraisal - senior management	%	23%	12%		95%	94%		97%	92%		100%	100%	

¹⁵ Liberty Global changed methodology from yearly appraisal reviews with ratings to quarterly objective driven conversations focused on performance and wellbeing without ratings, and the inclusion of a new definition for "management by objectives performance appraisal"

Total workforce and breakdown by employee category (continued)

Measure		2022		2021		2020		2019	
Employee performance reviews - by gender & employee category		Men	Women	Men	Women	Men	Women	Men	Women
Percentage of appraisal - managers/supervisors	%	18%	13%	57%	63%	56%	100% ¹⁶	99%	98%
Percentage of appraisal - non-management	%	47%	31%	23%	32%	50%	53%	84%	100% ¹⁶

¹⁶ Numbers manually updated to 100% to correct a previous clerical error

Energy consumption

Measure		2022	2021	2020	2019
Non-renewable fuels					
Diesel (static + mobile)	Gigawatt-hours	28.30	25.22	25.59	38.08
Petrol	Gigawatt-hours	9.90	5.01	4.66	5.48
Petrol/Diesel blend (from hybrid vehicles)	Gigawatt-hours	0.11	1.34	0.96	1.12
Natural gas	Gigawatt-hours	10.83	12.31	15.10	15.91
Gas oil	Gigawatt-hours	0.12	2.28	3.00	0.98
Fuel oil	Gigawatt-hours	0.49	0.55	0.55	0.64
Jet fuel	Gigawatt-hours	10.15	8.05	4.65	4.59
CNG	Gigawatt-hours	-	-	-	0.01
Total non-renewable fuels	Gigawatt-hours	59.90	54.76	54.51	66.81
Sustainable fuels					
Jet biofuel	Gigawatt-hours	0.26	-	-	-
HVO heating oil	Gigawatt-hours	0.01	-	-	-
Total sustainable fuels	Gigawatt-hours	0.27	-	-	-
TOTAL fuel consumption	Gigawatt-hours	60.17	54.76	54.51	66.81

Energy consumption (continued)

Measure		2022	2021	2020	2019
Electricity ¹⁷					
Non-renewable electricity purchased	Gigawatt-hours	31.70	34.65	105.39	256.73
Renewable electricity purchased (0% emissions)	Gigawatt-hours	375.50	361.95	272.57	112.28
On-site renewable electricity produced and consumed	Gigawatt-hours	0.55	0.54	0.23	0.21
Total electricity consumed	Gigawatt-hours	407.75	397.14	378.19	369.22
Percentage renewable electricity	%	92%	91%	72%	30%
Heating & cooling	Gigawatt-hours	6.26	2.12	0.19	0.19
Total energy consumption ¹⁸	Gigawatt-hours	474.18*	454.02	432.89	436.22
Electricity sold (from onsite renewables)	Gigawatt-hours	0.02	0.06	0.06	0.06

¹⁷ Electricity reporting format changed in 2022 to highlight investments made in renewables.

¹⁸ Represents the total energy consumption within our direct operational control from sustainable and non-renewable fuel, renewable and non-renewable electricity and heating and cooling.

GHG emissions

Measure		2022	2021	2020	2019
Scope 1 emissions (Direct) ¹⁹	metric tonnes CO ₂ e	16,121*	14,643	12,817	17,895
Scope 2 market-based emissions (Indirect)	metric tonnes CO ₂ e	9,507*	9,781	15,657	16,066
Scope 2 location-based emissions (Indirect) ¹⁹	metric tonnes CO ₂ e	53,226*	50,610	59,016	54,328
Scope 3 emissions (Indirect) ^{20 & 21}	metric tonnes CO ₂ e	44,514*	47,706	59,974	64,868
Total Scope 1, 2 & 3 market-based emissions	metric tonnes CO ₂ e	70,142	72,130	88,448	98,829
Total Scope 1, 2 & 3 location-based emissions	metric tonnes CO ₂ e	113,861	112,959	131,807	137,091
Total market-based emissions per USD million of revenue	metric tonnes CO ₂ e / USD million of revenue	3.50*	3.30	3.97	4.72

¹⁹The increase in Scope 1 emissions in 2022 compared to 2021 is primarily attributable to the release of previous COVID-19 pandemic-related restrictions that impacted normal business operations in 2021.

²⁰ Scope 3 indirect emissions include (i) emissions arising from waste and water, which include the impact of recycling customer premises equipment (category

5), (ii) business air and land travel, including the use of employee-owned vehicles for business purposes, flights taken by employees and travel in rental cars, taxis and public transportation (category 6) and (iii) our 50% share of the Scope 1 and 2 market-based emissions from the VMO2 JV and the VodafoneZiggo JV (category 15-investments).

²¹ The decline in Scope 3 emissions in 2022 compared to 2021 is attributable to the decarbonization efforts by the VMO2 JV and the VodafoneZiggo JV.

Waste by type and disposal method

Measure		2022	2021	2020	2019
Total waste generated - reuse ²²	metric tonnes	48	416	268	437
Total waste generated - recycling onsite waste (excl. composting)	metric tonnes	1,397	1,384	1,228	1,740
Total waste generated - incineration	metric tonnes	396	388	539	921
Total waste generated - landfill ²³	metric tonnes	147	553	519	261
Total waste generated - composting	metric tonnes	10	14	154	216
Total waste generated	metric tonnes	1,998	2,755	2,708	3,575
Percentage of waste recycled & reused	%	72%	65%	55%	61%

²² The reduction in reuse waste compared to 2021 is attributable to Telenet’s donations of office furniture to schools and employees.

²³ The reduction in landfill waste between 2021 and 2022 is predominantly due to an overall decrease in landfill waste.

Prior period restatements

Amounts for the 2019-2021 periods have been restated for the following changes to our organizational and operational boundaries:

- a. In April 2022, we disposed of UPC Poland and have therefore excluded all data associated with our Polish operations from all periods.
- b. In June 2021, we completed the U.K. JV Transaction and have excluded all data associated with our previously consolidated Virgin Media U.K. operations from all periods.
- c. In June 2019, we acquired De Vijver Media NV (De Vijver Media) in Belgium and began including its actual data from 2020 onward. We have restated our 2019 energy consumption and emissions data to include an estimate of the energy consumption and Scope 1 & 2 emissions associated with De Vijver Media’s operations. Other types of data, such as employee data, and community investment have not been restated due to unavailability of data.
- d. In November 2020, we acquired Sunrise and began including its actual energy consumption, emissions and waste from 2021 onward. We have restated our 2019 and 2020 energy consumption, emissions and waste

- data to include an estimate of the energy consumption and emissions associated with Sunrise’s operations. We have not restated employee data or community investment information due to unavailability of data.
- e. In November 2020, we acquired Egg and began including its actual energy consumption and emissions from 2022 onward. We have restated our 2019-2021 energy consumption and emissions to include an estimate of the energy consumption and emissions associated with Egg’s operations. We have not restated employee data, community investment information or waste due to unavailability of data.
- f. We have restated our Scope 3 emissions for 2019-2021 to reflect our 50% share of the Scope 1 and 2 market-based emissions of the VMO2 JV and the VodafoneZiggo JV. We included the 2021 emissions from these investments in our previous report and these amounts have been adjusted in the current period due to refinements made by the joint ventures.

ENERGY CONSUMPTION AMOUNTS HAVE BEEN RESTATED FOR THE FOLLOWING:

- a. The fuel associated with hybrid vehicles was excluded from our 2019-2021 fuel data and has now been included. This resulted in increases in our total fuel consumption of 1.33 GWh, 0.97 GWh and 1.13 GWh for 2021, 2020 and 2019, respectively;
- b. Our share of the electricity consumed by the VodafoneZiggo JV was included in our 2021 consumption data and has now been excluded (VodafoneZiggo JV emissions were not reflected in our 2021 Scope 2 emissions data). This resulted in a reduction of 140.89 GWh in our 2021 electricity consumption;
- c. Electricity sold from onsite renewables was reflected in our consumption tables for 2019-2021 and has now been removed. This resulted in an increase of 0.06 GWh per year for the 2019-2021 periods; and
- d. The conversion calculations from litres or m³ to GWh were not updated on an annual basis to reflect the latest conversion factors. We have now applied the relevant conversion factors for the 2019-2021 periods, resulting in increases to our total fuel consumption of

3.56 GWh, 2.92 GWh and 3.69 GWh for 2021, 2020 and 2019, respectively.

EMISSIONS AMOUNTS HAVE BEEN RESTATED FOR THE FOLLOWING:

- a. Scope 1 emissions were understated in 2021 by 908 MtCO₂e as we identified certain mobile and fugitive emissions that had been excluded;
- b. Scope 2 market-based emissions were understated by 3,986 MtCO₂e, 9,002 MtCO₂e and 6,559 MtCO₂e in 2021, 2020 and 2019, respectively, due to a computational issue associated with emissions factors applied;
- c. Emissions associated with our central corporate U.K. operations were understated in 2021 as these emissions were removed with Virgin Media U.K.’s emissions in 2021. Understated emissions were as follows: Scope 1: 109 MtCO₂e; Scope 2 market-based: nil; Scope 2 location-based: 804 MtCO₂e; and Scope 3: 181 MtCO₂e;
- d. Scope 3 emissions were overstated in 2021 by a net 129 MtCO₂e due to an overstatement

PRIOR PERIOD RESTATEMENTS (CONTINUED)

- of travel-related emissions partially offset by an understatement in waste emissions;
- e. Previously reported emissions associated with travel by third-party service and installation vehicles of 3,691 MtCO₂e, 4,026 MtCO₂e and 7,297 MtCO₂e in 2021, 2020 and 2019, respectively, have been excluded from our Scope 3 emissions as management has concluded that supporting data is not sufficient. We are currently developing a process to collect accurate and reasonably verifiable data from suppliers as part of our Scope 3 decarbonisation plan.
 - f. For a detailed overview of changes to previously reported energy consumption and emissions data and comparison between amounts previously reported and restated amounts, please see the 2022 U.K. Companies Act Report (page 60).



ADDENDUM



Sustainability linked loans

Sustainability Linked Loans (SLLs) aim to facilitate the key role that credit markets can play in encouraging borrowers to contribute to sustainability. The economic characteristics of the SLLs vary depending on the borrower’s performance against predetermined sustainability objectives across environmental, social and governance (ESG) metrics. At Liberty Global, we consider SLLs a meaningful way to demonstrate our sustainability commitments to stakeholders and drive our performance both transparently and responsibly. Below is a summary of the SLL performance for our Sunrise and Virgin Media Ireland operations. Items denoted with an asterisk (Δ/◊) are within KPMG LLP’s independent limited assurance scope.

IMPROVEMENT IN ENERGY EFFICIENCY

We measure the energy efficiency of our networks by calculating the amount of electricity used in networks¹ to transport ² customer data³. An improvement in efficiency is defined by a year-on-year stabilization or decrease in electricity consumption, while the data consumption of our customers continues to increase. We do this through investments, energy saving initiatives,

cooling innovations and deployment of artificial intelligence to save energy in our networks.

Sunrise	In 2022, Sunrise achieved a measured electricity intensity of 42.44◊ KWh/TB, which represents a 7.6% improvement in energy efficiency compared to 2021
Virgin Media Ireland	In 2022, Virgin Media Ireland achieved a measured electricity intensity of 9.70^Δ KWh/TB, which represents a 2.7% improvement in energy efficiency compared to 2021

RENEWABLE ELECTRICITY

We monitor the amount of renewable electricity⁴ generated or purchased by our operations in an effort to reach 100% renewable electricity target for the entire Group. For Sunrise, we linked this target to the performance of the Sustainability Linked Loan.

Sunrise	In 2022, Sunrise acquired 100%◊ renewable electricity
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EMISSIONS REDUCTION

As part of our SBTi commitments and Net Zero plans, we also monitor the emissions reductions in our operations. For Virgin Media Ireland, we linked the absolute emissions reduction in Scopes 1 & 2 location-based⁵ emissions to the Sustainability Linked Loan.

Virgin Media Ireland	In 2022, Virgin Media Ireland reduced their Scope 1 & 2 location-based emissions to 9,590,809^Δ Kg CO2e, which represents an 8.8% decrease compared to 2021
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¹ Total electricity used to run our networks, including renewable electricity produced and consumed in our networks, but excluding electricity consumed in non-network facilities (for example offices or shops) and excluding electricity consumed for customer data transported through leased lines for which electricity is not recharged by the lessor.
² Reflects both internet protocol (IP) based data traffic from fixed broadband services (such as web browsing, IP TV streaming, voice services) and data traffic from mobile services.
³ Reflects customer data per terabyte (TB) of data traffic generated.
⁴ Renewable electricity percentage includes the following:
a. Renewable electricity generated on-site
b. Renewable electricity purchased directly from producers or suppliers; and/or
c. Grid electricity blend consumed for which the operation has acquired an accreditation, certificate, or any other measure from a regulatory body for renewable electricity produced.
⁵ Calculated based on the average emissions intensity of the grid on which the energy consumption occurred (using grid-average emission factor data).

EXTERNAL ASSURANCE

We engaged KPMG LLP to undertake independent limited assurance, reporting to Liberty Global, using the assurance standards ISAE (U.K.) 3000 and ISAE 3410, for the selected energy consumption, GHG emissions and Terabytes of data usage that have been highlighted above with an Δ/◊. KPMG LLP’s full statements are available on our website at www.libertyglobal.com/impact. KPMG LLP has provided a conclusion over this selected data. The level of assurance provided for a limited assurance engagement is substantially lower than a reasonable assurance engagement. In order to reach their conclusion, KPMG LLP performed a range of procedures, including interviews with management, examination of reporting systems, online meetings with each of our operating companies, as well as specific data testing with our corporate offices. A summary of the work that they performed is included within their assurance conclusion. Non-financial performance information, GHG quantification and data usage in particular, is subject to more inherent limitations than financial information. It is important to read the GHG emissions and intensity information in the context of the full KPMG LLP limited assurance statement and our reporting criteria as set out in our updated ‘Environmental Reporting Criteria’ available at www.libertyglobal.com/impact.

