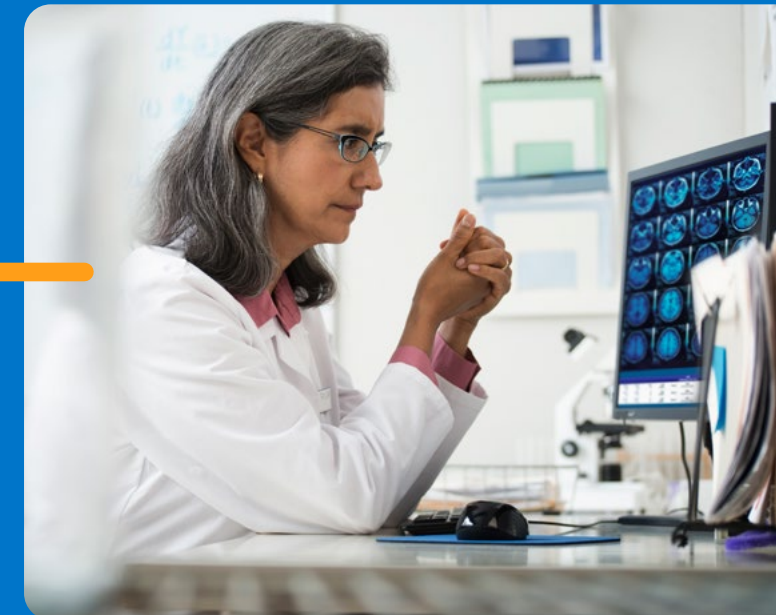


LUMEN[®]

Unleashing the World's Digital Potential



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Welcome

We are delighted to share the latest Lumen Environmental, Social, and Governance (ESG) Report.

Lumen is guided by our purpose to unleash the world's digital potential. We believe we are at our best when technology advances how we live and work. For many years, we have worked to advance sustainability goals and create lasting value for all our stakeholders. Throughout this report, we describe the steady progress we are making.

We have prepared this report in line with the Task Force on Climate-related Financial Disclosures (TCFD) and Sustainable Accounting Standards Board (SASB) frameworks. We also disclose our climate mitigation activities annually through the CDP climate change questionnaire (formerly the Carbon Disclosure Project).

Lumen is proud to announce the early achievement of our 2018 science-based greenhouse gas (GHG) emissions-reduction targets (SBTs). We have reduced our Scope 1 and Scope 2 GHG emissions by 25 percent, compared to our SBT of 18 percent reduction by 2025. Additionally, we have reduced Scope 3 GHG emissions by 39 percent from 2018 to 2022, compared to our SBT of 10 percent reduction by 2025.

As we look forward into 2023, we anticipate sharpening our focus on our key sustainability topics (see [Double materiality assessment](#)), including:

- Maintaining strong network reliability and resilience
- Evolving our cybersecurity and data privacy programs
- Maintaining high standards of ethical conduct and responsibility
- Building up our inclusive culture as we embrace the diversity of our employees

In this report, we show the improvements we continue to make to the reporting structure at Lumen and detail how we are implementing our ESG Strategy across the organization.

Following the early achievement of our 2018 SBTs, we look forward to continue building upon our long record of sustainability and social responsibility.

About this report

Data presented reflects 2022, unless otherwise noted.

In 2022, we completed the divestiture of several of our operations across the Latin America region and the sale of our Incumbent Local Exchange Carrier (ILEC) business in 20 states to Brightspeed. To reflect these changes, we have completed a re-baseline of the environmental metrics presented in this report.

In November 2023, we completed the divestiture of our operations in the Europe, Middle East, and Africa (EMEA) region. EMEA data is still included in this report.

This report has been prepared in line with the SASB and TCFD frameworks. See the [ESG appendix](#) for more information.



Operating Principles and Core Beliefs

Teamwork

Understanding, respecting, and collaborating to work toward a common goal. Commitment to achieving business outcomes and collective success. Supporting a no-hero culture, showing up for each other every day.

Trust

Consistently doing what you say you're going to do and owning mistakes. Only sharing information that is yours to share. Being vulnerable and empowering others to be their authentic self and contribute their talents.

Transparency

Telling the whole story by representing information and data accurately, completely, and timely even when difficult.

Clarity

Clear is kind. Communicating in a clear, concise, and thoughtful way. If anything is unclear, including goals, then ask.

Customer Obsession

Listening to our customers from a place of empathy to understand their needs. Taking ownership to determine priorities and advocate for the customer. Responding in a prompt manner to deliver and delight our customers beyond their expectations with a solution.

Courage

Boldly advocating an idea or opinion even if it creates a sense of vulnerability. Leaning in and being willing to rumble respectfully for the benefit of the conversation or desired result. Live into your values and support others to do the same. Ask for help when you need it.

Growth Mindset

Having an open mind and a commitment to learning. Seeing challenges, failures, and change as opportunities for growth.



A message from our President and CEO

Lumen's purpose is to unleash the world's digital potential. And, that purpose comes with great responsibility—to our people, our customers, and the world.

As a company, we are committed to playing an active role in promoting digital inclusion using the power of the Lumen network to close the digital divide and accelerate digital equity. Our commitment and investment to tackle the digital divide have led to big wins like the California Broadband for All initiative, which awarded Lumen a large, long-term contract for network infrastructure for middle mile broadband access. In addition to providing access, we aim to provide a safe network so our customers and users around the world can keep their enterprise, customer, and employee data safe and enjoy a clean internet for all.

Lumen is also committed to creating a diverse, inclusive, equitable space for our employees. Recently, we partnered with Syndio, a workforce equity analytics platform, to advance our pay equity goals and deepen our understanding of equity issues in our workplace. The data and insights coming from Syndio are creating the path for a more proactive approach to workplace equity at Lumen and helping to strengthen a culture of trust and transparency.

We are further developing our culture by partnering with Brené Brown and rolling out Dare to Lead training to all Lumen employees. The program, based on the courage-building skills of vulnerability, trust, and resilience, will be made available to the entire company, including hourly and union workers, in early 2024. All the hard work we are doing to improve our culture has not gone unnoticed—U.S. News & World Report recently named Lumen one of the 2024 Best Telecomms Companies to Work For, and we are incredibly proud of this accomplishment.

We believe our commitment to sustainability promotes the financial health of our business, the quality of service we provide, and value creation for our employees, communities, customers, and investors. Therefore, we are thrilled to announce the early achievement of our 2025 science-based greenhouse gas emissions reduction targets. From 2018 to 2022, we reduced our Scope 1 and Scope 2 emissions by 25 percent compared to our target of 18 percent reduction by 2025, and we reduced our Scope 3 emissions by 39 percent compared to our target of 10 percent reduction by 2025. This big win allows us to lock in favorable interest rates on the Sustainability-Linked Senior Notes we offered back in 2021. We are also excited to begin rolling out a sustainable packaging initiative that will help decrease our global shipping frequency, create less waste, and reduce costs, among other benefits. We aim to contribute to a more sustainable future for all.

I'm excited about the role Lumen is playing in making our world a better place for everyone. We hope this report provides our stakeholders with a deeper look into our accomplishments so far and provides some insights into the exciting plans we have for the company.

Kate



Letter from the Lumen Sustainability Team

We are focused on advancing the Lumen business strategy and enhancing value for our stakeholders through our sustainability efforts.

The Sustainability Management Committee—composed of people from across the organization—designs and oversees our companywide sustainability program, including cybersecurity and data privacy, business ethics, network reliability, and climate change. They are responsible for driving the sustainability agenda under the guidance and oversight of the Lumen Board and senior leadership.



For Lumen, 2022 was a year of significant change as our structure and strategy evolved, leading to an even stronger focus on our ESG goals and performance. We completed a transition risk and opportunity assessment process for our U.S. business. Working with an external consultant, we engaged with colleagues from 16 critical business departments and explored present-day and 2035 time horizons. See [Climate-related risks, opportunities, and impacts](#). Then, in 2023, we conducted our first double materiality assessment to identify and prioritize the most critical sustainability issues facing our business—as well as the areas where we can make the most impact. See [Double materiality assessment](#).

We regularly solicit and receive a broad array of input and feedback from internal and external stakeholders, such as employees, investors, and customers. We also routinely engage with the Nominating and Corporate Governance Committee and members of the Lumen Board regarding our sustainability initiatives, using feedback to enhance and drive our program forward. We believe that input from a range of stakeholders, senior management, and our Board is a critical aspect of our continuous improvement. Together, we aim to make a meaningful impact through our ESG efforts as we work to unleash the world’s digital potential.

The Sustainability Management Committee’s three pillars

	Executive sponsor	Purpose
Environmental	Senior Vice President—Treasurer	<p>The Environmental team is responsible for monitoring all aspects of our operations that contribute to our GHG emissions, as well as other environmental issues such as regulatory compliance, water usage, and waste management. The team works with process owners to identify and assess our impacts on the environment and develop and implement strategies to mitigate those impacts, establish targets, partner with stakeholders, and drive continuous improvement in environmental performance.</p> <p>It monitors emerging climate change issues, including the evolving regulatory landscape, and oversees data collection and environmental and sustainability reporting.</p>
Social	Chief Diversity and Inclusion Officer	<p>To ensure that we recruit and retain diverse talent, the Social team oversees our hiring practices. It is also involved with the engagement of our 11 employee resource groups and supports our corporate responsibility programs, which focus on STEM, education, and volunteering opportunities. Our Chief Privacy Officer, who leads our Global Privacy Office, ensures that everyone at Lumen has the training and support they need to protect the privacy of our customers, employees, and business partners.</p>
Governance	Vice President—Deputy General Counsel—Corporate Governance and Transactions	<p>The Governance team is responsible for helping Lumen adopt and maintain best practices when it comes to corporate governance and ethics and compliance.</p> <p>The team supports senior management and the Board through shareholder engagement and outreach, transparent disclosures in public filings, and robust risk management and mitigation efforts.</p>

2022 highlights

Innovation

99%

of electricity procured in Europe, the Middle East, and Africa from renewable sources

200 billion

NetFlow sessions monitored daily



Planet

We achieved our 2025 science-based targets well ahead of schedule as we:

Reduced our Scope 1 and 2 (market-based) emissions by

25%

through 2018–2022, exceeding our 18% goal

Reduced our Scope 3 (upstream) emissions by

39%

through 2018–2022, exceeding our 10% goal

Recycled

1,777

metric tons of electronic and communications equipment



People

71%

overall engagement in the semiannual employee engagement survey

3,448

individual nonprofit agencies supported



Transformation to disruption



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In 2022, Lumen started on a journey into a new era. We began by making bold changes to our business, forging a position as a leader in technology and customer experience. In 2023, we clearly defined the direction for our transformation with the introduction of our North Star strategy, which provides clarity to the Lumen team—and our stakeholders—on our path to growth. It defines who we are, who we serve, and how we help our customers succeed.

The foundation of our North Star is a culture based on teamwork, trust, and transparency. For us, that translates into growing sustainably. To create lasting value for our customers and stakeholders, we are transforming the carbon footprint and social impact of our operations. As one of many first steps, this has included conducting a materiality assessment to prioritize the ESG issues that matter the most to Lumen and our stakeholders.

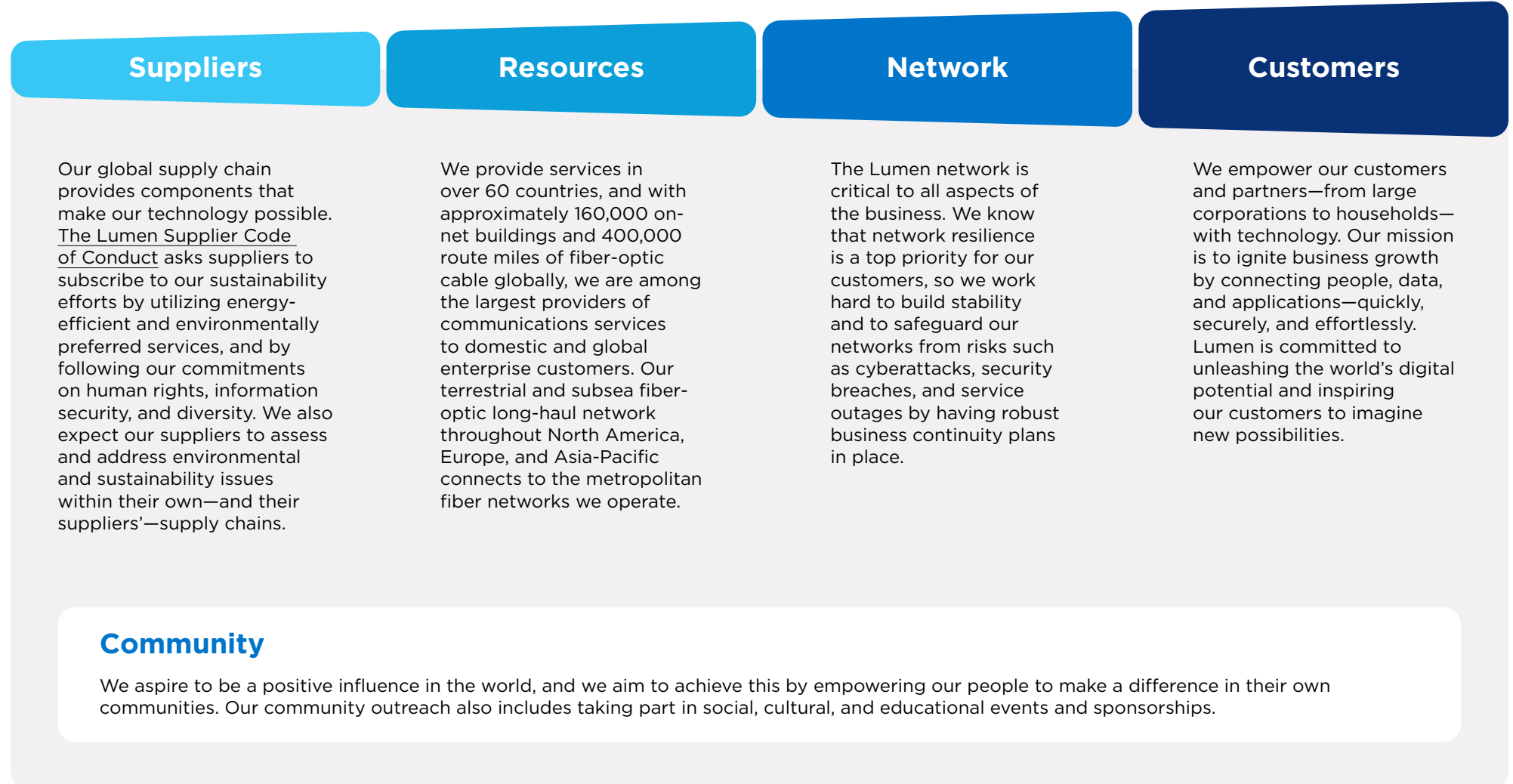
By transforming Lumen throughout 2022 and 2023, we are newly determined to use technology to empower people and protect our planet.



Our value chain

The Lumen purpose—to unleash the world’s digital potential—has never been more critical. We have been advancing our sustainability goals for many years and are focused on creating lasting value for all our customers and stakeholders.

Achieving our [ESG Strategy](#) depends on contributions from people across the world and throughout our value chain. From our partner ecosystem to customers and our communities, we collaborate to drive innovation, protect the environment, and empower people in the places where we live and work. To do this, we are actively transforming Lumen to ensure that we are customer-obsessed and can provide the best experience possible for everyone who works with us. We are doing this by simplifying our processes, reshaping our leadership, and improving the efficiency, usability, and sustainability of our products. This includes helping our customers reach their own sustainability goals.



Double materiality assessment

Double materiality¹ assessments help businesses evaluate their ESG priorities and the needs of their key stakeholders. Double materiality is industry best practice, as it not only helps a company determine their sustainability impacts and opportunities from a financial perspective, but also how business operations have an outward impact, including on people, the planet, or the economy.

Assessment process and methodology

Lead by an external consultant, we conducted extensive desk-based research and gained input from key stakeholders such as employees, customers, and investors through surveys and interviews. The Lumen ESG Strategy and documentation were reviewed, alongside key sustainability issues of our market peers and evaluators. We also held a workshop with select stakeholders, allowing us to gather insight on what we need to prioritize as a business. Finally, we asked stakeholders to rank the issues that emerged from this research based on financial and outward impact.

We identified 17 ESG topics as part of our assessment, and of those, three emerged as the highest priority. In addition to these three topics, we place high importance on other factors and considerations that contribute to our ESG Strategy. Many of these topics are interconnected, as reflected in our strategy and by the range of topics considered as part of our management approach and reporting.

Top sustainability issues



Cybersecurity and data privacy



Ethical conduct (including tax)



Network resilience and reliability



¹ ESG materiality, as referred to in our ESG reporting, and our ESG materiality assessment process are different from "materiality" in the context of Securities and Exchange Commission (SEC) disclosure obligations. Issues deemed material for purposes of our ESG reporting and for purposes of determining our ESG Strategy may not be considered material for SEC reporting purposes, nor does inclusion of information in our ESG reporting indicate that the topic or information is material to our business or operating results.

Our ESG Strategy

We believe our commitment to sustainability promotes the financial health of our business, the quality of service we provide, and value creation for our employees, communities, customers, and investors.

The Lumen ESG Strategy supports our North Star and incorporates feedback from our stakeholders on how Lumen can best endeavor to make a positive impact on the world.

Looking to the future, we are mindful that digital trust, social responsibility, and environmental stewardship are inherent in the Lumen purpose.

We believe our strong corporate governance principles and our culture of teamwork, trust, and transparency allow us to protect the interests of our company and our stakeholders.



Building strong governance and tech transparency



Unlocking sustainability through innovation

Our platform and solutions are a gateway to exploring technological potential, enabling our customers to achieve amazing things and inspiring and enabling others to join our sustainability journey.

We commit to environmental stewardship, knowing that sustainability promotes the health of our planet and our business and creates value for our employees, communities, customers, and investors.



Protecting our planet

Empowering people



We want our employees to be proud to work for us and be fully engaged with our efforts to make the world a better place.

Leadership transformed

In 2022, Kate Johnson joined Lumen as our new President and Chief Executive Officer. With previous experience as a technology executive, she specializes in leading successful digital and business transformations and has held leadership roles across multiple Fortune 100 companies. Since joining, she has spearheaded our strategic transformation while continuing to enable our customers to maximize the benefits of our products to power their digital worlds.

As we shift to our new market position as a leader in technology and customer experience, we focused on expanding our strengths. As part of our transformational plan, we made the decision to divest large parts of our Europe, the Middle East, and Africa (EMEA) business, alongside selling our Incumbent Local Exchange Carrier (ILEC) operations and Latin American business for a combined total of \$10 billion. These financial decisions have allowed us to begin the process of rebuilding Lumen from the inside out.

In 2023, we launched our new North Star strategy to help guide this transformation in the coming years. Through it, we will embed a culture of teamwork, trust, and transparency and lean intently into developing employee communication skills. We will position ourselves to support strategic business growth, invest in what we do well, and adopt an enterprisewide obsession with solving our customers' problems. This means doing fewer things, but doing them better, building our capability in areas such as customer experience, digitization, Networking-as-a-Service (NaaS), security, and IT simplification.

To position Lumen for growth and success, we have made changes to our executive leadership team that have played a critical role in modernizing our business and have improved our ability to support our transition goals. This has included aligning our marketing organizations to better support customer experience, simplifying our products to improve customer outcomes, and improving Lumen processes to make it easier for our teams to deliver high-quality work.



Our leadership team



Kate Johnson,
President and Chief Executive Officer



Ana White,
Executive Vice President and Chief People Officer



Andrew Dugan,
Executive Vice President and Chief Technology Officer



Ashley Haynes-Gaspar,
Executive Vice President and Customer Experience Officer (Wholesale and International)



Chris Stansbury,
Executive Vice President and Chief Financial Officer



India Sylvester,
Chief Diversity and Inclusion Officer



Jay Barrows,
Executive Vice President, Enterprise Sales and Public Sector



Julie Hiner-Gleason,
Chief Communications Officer



Kye Prigg,
Executive Vice President, Enterprise Operations



Maxine L. Moreau,
President, Mass Markets



Stacey W. Goff,
Executive Vice President, General Counsel, and Secretary

Lumen Board of Directors

The full Board periodically reviews our ESG Strategy and delegates primary ESG oversight to the Nominating and Corporate Governance Committee.

	Risk oversight	Frequency
Audit Committee	Internal control over financial reporting	Quarterly
	Risk factors in periodic reports	Annual with quarterly reviews
	Investment risk related to treasury activities	As needed
Human Resources and Compensation Committee	Executive compensation	Quarterly
	Human resources	Quarterly
	Workforce-related risks	Quarterly
Nominating and Corporate Governance Committee	ESG	Quarterly
	Political contributions	Annual
Risk and Security Committee	Enterprise Risk Management	Quarterly
	Cybersecurity/privacy	Quarterly
	Ethics and compliance	Quarterly

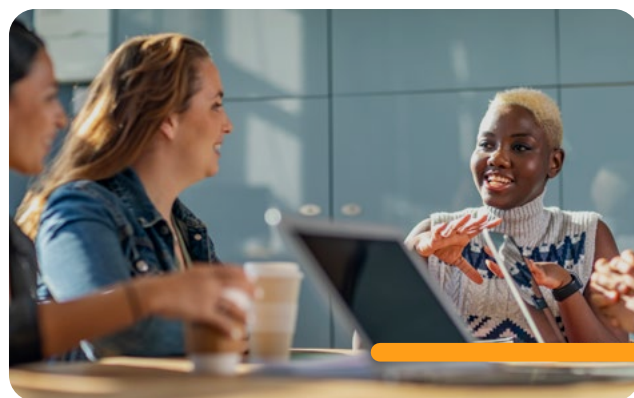
Corporate governance

Fairness, transparency, trust, integrity, and our commitment to excellence support our approach to governing for the benefit of all our stakeholders.

Our approach

Responsible corporate citizenship is the foundation of our business. We have adopted sound corporate governance practices that protect the interests of our customers, shareholders, communities, and other stakeholders.

Our Board of Directors oversees the company's management and has established a governance framework, designed to ensure the highest standards of honesty, integrity, and excellence.



The Lumen Nominating and Corporate Governance Committee conducts quarterly ESG reviews and has the primary responsibility for ESG oversight based upon its [charter](#). The committee works with our management team to evaluate our ESG program and identify meaningful ESG and financial factors. It also routinely assesses our disclosure and communication plans for strength and effectiveness. The Lumen Board of Directors annually reviews the ESG program and its initiatives, while the Risk and Security Committee, Human Resources and Compensation Committee, and Audit Committee all periodically review specific topics that are part of our ESG program.

Enterprise Risk Management

The Board, along with its committees, reviews and oversees our risk management processes in many ways, including receiving regular reports about our Enterprise Risk Management (ERM) program.

Through ERM, we comprehensively identify and respond to high-priority risks and monitor lower-priority issues to determine if mitigation is needed. Management teams provide regular activity reports to the Risk and Security Committee. The Board also works with management to assess our key short- and long-term risks and mitigation efforts relating to regulatory risk, cybersecurity, data privacy, financial reporting, strategic plans, operations, capital budgets, corporate functions, business units, and other operational factors.

The Technology Security Privacy Council (TSPC) provides formal management oversight for Lumen IT, Global Security Services, and our Global Privacy Office. The TSPC establishes awareness and direction by providing formalized processes, which include a risk management framework, risk taxonomy, policies, and reporting structures, while continuing to enable business agility.

To reduce organizational risks and in response to security concerns, during the first quarter of 2022, we terminated our commercial activities within Russia, and these operations have been fully shut down.

Sustainability governance

Lumen has a Sustainability Management Committee that designs and oversees our sustainability program. Comprising colleagues from across the business, the committee meets both before and after each meeting of the Nominating and Corporate Governance Committee to prepare reports on ESG outcomes and assign actions arising from the meetings. See [Letter from the Sustainability Team](#).

Building a culture of teamwork, trust, and transparency

Lumen is transforming from the people up. In partnership with Brené Brown, we began rolling out our Dare to Lead training to all 29,000 Lumen employees to build a culture firmly committed to the operating principles of teamwork, trust, and transparency. The program, which is based on the courage-building skills of values, vulnerability, trust, and resilience, will be made available to the entire company by the end of 2024.

Ethics and compliance

Lumen culture is grounded in our commitment to teamwork, trust, and transparency and guides our interactions with customers, shareholders, employees, business partners, elected officials, and the public.

Our approach

We continue to evolve, communicate, and enforce our Global Code of Conduct and commitment to compliance with laws everywhere we do business. Our range of initiatives, policies, and processes cover everyone who works with or for Lumen, including our agents, contractors, partners, suppliers, and vendors.

We have zero tolerance for forced or child labor, human rights violations, bribery, corruption, money laundering, or engagement with blocked parties or sanctioned countries. In addition, we remain committed to supporting diversity, upholding human rights, international trade compliance, antitrust and fair competition laws, and transparency in political contributions.

Our Code of Conduct training includes information on sustainable supply chains and procurement practices to ensure we partner with ethical third parties. Further, in response to the constantly changing business landscape, we develop targeted training, including on international trade compliance for our non-U.S. sales teams and anti-corruption.

Ethics and Compliance program

Our global corporate Ethics and Compliance program—overseen by the Risk and Security Committee of the Board—is a regularly renewed working partnership with our employees and the third parties with whom we do business, communicating the ethical and legal standards that govern our business conduct.

We regularly review and improve the program, and in 2021 and 2022, several areas of the program were audited, including the whistleblower program, the Integrity Line, compliance training assignments, third-party screenings, and the insider trading program. We report all audit results and actions to the Audit Committee.

Importantly, the program has continued to evolve to reflect the priorities and ethics of our leadership team. In 2022, this included work to break down silos, build trust across Lumen, enhance communication, and create openness

within our partnerships. We also issued 10 all-employee communications spotlighting our Ethics and Compliance program, including anonymized investigation stories and an interactive quiz.

Our Ethics & Compliance Survey, first launched in 2022, is designed to help us better understand how accessible and trusted our processes are, employee comfort reporting concerns, and to identify areas for improvement. Around 10,000 of our employees, or 32 percent of our workforce, participated. We achieved an average positive score of 89 percent and are tracking multiple areas for improvement. For 2023, we are updating the survey's questions to further reflect the principles of teamwork, trust, and transparency and will review and report year-over-year changes and trends to the Board and leadership.

To help ensure our processes remain aligned with industry best practice, in 2022, our corporate investigation function was subject to an audit, and as a result, we made certain improvements to our processes to ensure our program is best suited to adequately investigating and addressing reports of misconduct and other employee concerns.

This focus on a transparent culture has continued to drive employee reports. A consistently low rate of anonymous reporters indicates that our colleagues feel comfortable reporting concerns and testifies to our efforts to build a shared mindset of honesty and transparency among employees.

Looking ahead, our Ethics and Compliance group will continue to focus on topics including education and training, continual risk assessments, and automation, by:

- Making training and communication more engaging, for example by sharing real-life anonymized investigations stories through the Ethics and Compliance Campaign
- Carrying out focused risk assessments and ensuring we are continually evolving our priorities and focus areas based on these assessments
- Automating various functions, including elements of our sanctions compliance program and vendor risk assessments



Global Code of Conduct

Our [Code of Conduct](#) provides detailed guidelines and ethical standards for employees worldwide, including executive management, and offers resources to help our people seek guidance and report concerns.

All employees must complete training on our Code of Conduct annually. In 2022, we achieved a 99 percent completion rate. We also created an automated disclosure tool in 2022, released in 2023, to support mandatory disclosures of potential conflicts of interest as part of the training.

Assessing evolving AI technology

Lumen evaluates artificial intelligence (AI) tools to identify risks that may arise from their use, for legal and security implications, and for their general usefulness to the company. We responsibly use the data science models that are often referred to as AI and consist of algorithms, code, or techniques for machine learning. All Lumen Data Scientists and others who work in the AI Center of Excellence complete “Trustworthy AI Training.”

Global Integrity Line

The Lumen Integrity Line is a multilingual global compliance hotline that gives our employees and stakeholders a way to seek guidance or report concerns. Available 24/7, individuals can reach the Integrity Line via telephone, email, or an online form.

Allegations of misconduct are referred for investigation either to Human Resources or the Corporate Investigations team. We do not tolerate retaliation for seeking guidance, voicing concerns, or participating in any internal or external investigations. Our Whistleblower Policy outlines the protections set forth in our Code of Conduct and by the law and includes the ways employees can make whistleblower reports.

We evaluate Integrity Line data each quarter, monitoring its effectiveness through analytics and surveys, and we make program enhancements in response to this data. We also report this data on a quarterly basis to the Risk and Security Committee of the Board of Directors.

Commitment to human rights

Lumen is committed to proactively addressing human rights issues and risks within our business and in our relationships with third parties. Our Code of Conduct and Supplier Code of Conduct address topics relating directly to human rights, while our Human Rights Policy outlines our expectations in areas including:

- Privacy and data security
- Individual rights
- Freedom of association
- Diversity, inclusion, and fair treatment
- Working conditions, including our prohibition of forced and child labor

We train our employees to recognize and report concerns in these and related areas. In addition, in 2022, we launched a new Whistleblower Policy, which reiterates employees' rights and legal protections to voice concerns, both internally and externally. Our people teams make regular changes to our practices and policies to ensure that everyone feels they belong at Lumen.

Our [Modern Slavery Statement](#), published annually in accordance with the U.K. Modern Slavery Act, further describes how we combat modern slavery and human trafficking in our business and supply chains globally, and how we plan to build on these efforts.

Anti-bribery, anti-corruption, and anti-money laundering

Our Anti-Corruption Policy and Supplier Code of Conduct require all our people and the third parties with whom we do business to adhere to all applicable anti-bribery and anti-corruption laws, including the Foreign Corrupt Practices Act and the U.K. Bribery Act.

In 2022, we updated our Anti-Corruption Policy and further improved our program by implementing a new policy and process to manage public policy and lobbyist business courtesies in response to continual risk assessment.

We train all our employees annually on anti-corruption laws and policies with supplemental targeted training and communications. In 2022, we achieved a 98.8 percent completion rate for our Anti-Corruption Training course. Our strict Anti-Bribery Policy defines appropriate interaction with government officials, government customers, and nongovernment third parties, and the program is regularly audited to ensure continued compliance.

We also strictly prohibit financial crimes such as money laundering, the facilitation of tax evasion, terrorist financing, securities fraud, and market manipulation. Our Insider Trading Policy informs our employees about what constitutes insider trading and our zero-tolerance approach to it.



Anti-competitive behavior

We support fair competition in the global marketplace. We recognize the benefits of a free market ensuring competition for consumers, and we strongly oppose anti-competitive practices that stifle economic growth. Our policies require compliance with all antitrust and fair competition laws. We reinforce our policies through training, communication initiatives, and provide scenario-based examples.

Supplier management

Delivering our services and building network resilience means working closely with an ecosystem of suppliers around the world. We work diligently to partner with the right suppliers—those with the capabilities we need as well as the commitment to meet the same high standards to which we hold ourselves. As part of our vendor risk management process, we screen and conduct due diligence on our suppliers, both of which have seen automation progress in 2022.

Policies and Supplier Code of Conduct

The Lumen Supplier Code of Conduct—updated in July 2023—covers various expectations, including:

- Sharing our global commitment to human rights and prohibiting and preventing the use of any form of forced labor or child labor
- Recognizing and protecting employees’ freedom of association
- Maintaining a healthy and safe working environment that adheres to applicable health and safety laws for employees and representatives
- Following all local privacy laws, including providing clear and accurate privacy notices
- Complying with applicable environmental laws

All suppliers must agree to comply with the Supplier Code of Conduct, which emphasizes our global commitment to high standards of corporate behavior. Our supplier portal provides suppliers and prospective suppliers access to policies and requirements relating to a range of topics.

Supplier due diligence and audit

We employ a thorough diligence review process for our suppliers. This includes supplier agreements requiring certification of compliance with anti-bribery laws, international trade requirements, and conflict minerals provisions.

Our supplier agreements also contain audit rights to ensure compliance with the Supplier Code of Conduct and applicable legal ethical provisions. We conduct assessments of certain higher-risk suppliers, evaluating topics such as their ethical, security, privacy, environmental, and sustainability practices.

We use our vendor diligence tool to enhance our management of risk ranking, audits, and continuous monitoring of our suppliers. We have used this tool to conduct a review process with a number of our higher-risk suppliers, which, based on their risk scores, are issued questionnaires and other diligence requests relating to their operations.





Customers are our cornerstone

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At our core is the desire to deliver state-of-the-art products and services that are efficient, secure, and effortless. In order to keep doing that for our customers, we need to better know and understand them. That is why we are embedding a culture of customer obsession into every facet of our work—helping us continue to grow by acting on their feedback with empathy and curiosity—to solve their challenges.

We know the people who use our products put their trust in us, and we take their trust seriously. That is why we constantly update our cybersecurity and privacy measures, as well as continuously work to ensure the resilience of our network and business. Lumen products are key to supporting the smart industries of the future. By providing security, privacy, unity, access, and speed, we keep pace with a rapidly evolving digital world and help drive change for good.



Cybersecurity, data, and customer privacy

Security and privacy are fundamental to our mission because they are fundamental to the missions of our customers. We value the trust our customers place in us, and we are passionately committed to handling, managing, and securing their information in an appropriate, safe, and ethical manner.

Lumen helps customers operate and innovate with confidence by delivering greater security to our global network. Being on our shared platform means that our customers—no matter their size—all enjoy the same industry-leading levels of security.

Our Trust Center, launched in 2021, is designed to make it easier for customers and other stakeholders to access information about our approach to privacy, security, transparency, and other key issues. It hosts policies, notices, documentation, reports, and self-service options—including access to the Lumen Privacy Notice and our Vulnerability Disclosure Program.

Our approach

As a company that enables the global transmission of large amounts of information, maintaining the security, privacy, and integrity of information and systems is a priority for our operational risk management work.

Our approach to cybersecurity and privacy is aligned with the new Lumen North Star strategy. We prioritize implementing security and privacy at the onset and throughout our product development lifecycles. We have also launched an ongoing security control refresh, retiring legacy controls and implementing advanced capabilities that leverage automation and integration. Further, we have developed self-service incident response processes designed to support key business functions, such as mergers and acquisitions, compliance, and procurement. These steps help us maintain a proactive and comprehensive approach to cybersecurity and privacy that is aligned to our wider operational strategies.

In addition to securing our network, we protect the data and information we collect, store, use, and share. Employee and customer data is encrypted, consistent with industry standards or legal requirements, both at rest and in transmission. Our data management practices are ISO 20000 certified, demonstrating that we continuously meet international standards for information security management systems. As a service provider, we are ISO 27001 certified for certain services and products.

Our employees and contractors play a vital role in protecting Lumen information assets and data. Therefore, we develop and adopt robust policies and standards and deploy training to educate and drive adherence. We also publish monthly articles about relevant security topics and engage our workforce with cybersecurity awareness activities and information. For example, in 2022, we invited a renowned ethical hacker specializing in social engineering and strengthening first-line defense to help us raise awareness of risks related to identity protection and hacking.

Award-winning security

In 2022, we were named "Overall Network Security Solution Provider of the Year" by the CyberSecurity Breakthrough Awards for our DDoS Hyper® product. DDoS Hyper stands out with its self-service features that allow customers to turn up their DDoS-mitigation service in as little as 15 minutes if they find themselves under attack. DDoS Hyper also has extensive protection capabilities, such as high-fidelity threat intelligence from Black Lotus Labs®, multitiered scrubbing architecture, and proactive monitoring and support.



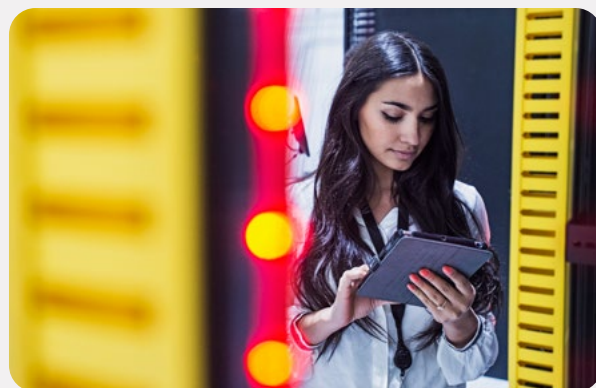
Gold Award Winner for the US Customer Experience Awards



Our vision and mission for cyberdefense

Our vision is to provide an agile, scalable, and seamless approach to cybersecurity service delivery, ensuring constant alignment to the current threat landscape.

Our mission is to continue to be a world leader in cyberdefense by making our cybersecurity posture a competitive advantage that supports our core business offerings.



Lumen core imperatives link to our cybersecurity imperatives:

- We will build the fastest and most secure platform to enable advanced digital transformations and create the best possible interconnected customer experience
- We will enable secure and resilient interconnectivity of digital ecosystems while reducing the exposure of customer and business data
- We will align our cybersecurity services to leading industry practices to meet business and market needs, regulatory requirements, and risk tolerance levels
- We will surpass the maturity of industry peers and protect our platform and operations
- We will deploy safeguards and controls as close to Lumen core assets as possible

Cybersecurity

As an industry leader in the telecommunication and technology sector, we recognize cyberthreat actors continue to target our technology assets and information systems. We know the importance of protecting our organization and our customers and have made cybersecurity and risk management a priority.

We think of cybersecurity as an enterprisewide responsibility, subject to risks that require controls and continuous monitoring at various levels throughout the company. We regularly assess our program, including the adequacy and effectiveness of our internal controls. Quarterly, we report emerging developments and threats, response and contingency plans, and enhancements to our cybersecurity program to the Board's Risk and Security Committee.

Lumen shares information with, and receives information from, the U.S. government, primarily through the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA), the designated national coordinator for sharing threat information and initiatives to assure infrastructure security and resilience.

We have developed a detailed plan to enhance our cyber and resilience strategy in alignment with the National Institute of Standards and Technology (NIST) Cybersecurity Framework. We continue to invest in our people, process, and technology to mature our capabilities and secure our organization. Key areas of investment include:

- Developing cybersecurity knowledge among the Board and senior leadership
- Strengthening the relationships between the security organization and other business functions to drive a security mindset
- Using a layered security architecture
- Creating a dedicated analytics and innovation team
- Building strong vendor relationships and partnerships
- Continuing to shift to cloud and hybrid hosting models
- Adopting robust security compliance programs

Adapting to a changing threat landscape

To effectively respond to an evolving cybersecurity threat landscape, we implement adaptive measures that align with new and concerning security threats. We have prevented sophisticated attempts to compromise Lumen systems and environment, and in response, have prioritized addressing these specific threats as a fundamental aspect of our operations. Accelerating our multiyear roadmap, we are investing in our teams, refreshing our security controls, as well as providing additional training to end users who play a crucial role in maintaining security.

AI as a security threat and business enabler

Artificial intelligence (AI) opens our world to many possibilities and benefits. It also brings an increased need for security expertise to make sure businesses have a measured approach to the operational benefits, risks, and potential security threats posed by AI. For Lumen, this includes investing in commercial AI capabilities rather than immediately using generative AI models. This has given us access to a range of commercial, contractual, data, and legal protections that offer greater security assurance than open systems. Threat actors using advanced AI capabilities remain a core concern for our industry. In response, we are executing a roadmap to deploy more sophisticated detection and monitoring capabilities that are designed to detect any source of malware, whether from human actors or AI.

Cyber resilience and readiness

Internet service providers are threat actor targets. Lumen is vigilant, prioritizing the development of secure systems and the deployment of layered security controls to harden our systems. These additional layers of defense have improved how we detect, respond to, and recover from threats to our network, systems, and customers. We have accelerated our investments to mature our capabilities.

Black Lotus Labs: protecting and defending a clean internet

We operate one of the largest, most connected, and deeply peered internet networks in the world. Black Lotus Labs—the threat intelligence arm of Lumen Technologies—uses that network visibility to help protect our customers and keep the internet clean.

Black Lotus Labs has developed a custom-built threat reputation system, using AI and machine learning to rapidly and automatically discover threats and act on data.

200 billion

NetFlow sessions monitored daily

1 billion

DNS queries monitored daily

Conducting original discovery and analysis, Black Lotus Labs has integrated data holdings to detect the unique digital footprint our adversaries leave across the internet. This research is used to train machine learning algorithms to perform automated threat validation for high-fidelity intelligence, which feeds the Lumen Connected Security portfolio and is shared with the information security community.

In the last year, Black Lotus Labs research has illuminated the capabilities and techniques of both cybercriminals and nation-state actors. Furthermore, our team has published more on malware that impacts small office/home office routers in the past two years than any other threat intelligence organization.

Beyond identifying and tracking malicious activity, whenever our team or tooling discovers a malicious node on the internet, we act quickly to disrupt it.

150

command and control servers disrupted monthly through takedowns and notifications



ZuoRAT: defending against a new malware threat

In 2022, Black Lotus Labs discovered a sophisticated new malware known as ZuoRAT. By infiltrating and hijacking small office/home office routers, it can silently monitor network traffic, capturing login credentials, financial data, and personal information, putting the confidentiality of sensitive data at risk. The rapid shift to remote working caused by the COVID-19 pandemic allowed an opportunity for malware to avoid the traditional defenses of well-established organizations and target vulnerable, home office networks instead.

The consequences of a ZuoRAT infection can be severe, resulting in the theft of sensitive data, unauthorized access to private devices, and the potential for additional malware propagation within the network.

To defend individuals and businesses against the reputational damage and financial loss of a potential ZuoRAT attack, Black Lotus Labs is currently tracking its use to target North American and European networks of interest and continuously adding its findings to the Lumen Connected Security Portfolio. Black Lotus Labs will also continue to collaborate with the security research community to monitor for new infrastructure and targeting activity while ensuring the public stays informed on how to best defend themselves against new and sophisticated cyberthreats.

Data privacy

Our policies and processes are designed to comply with applicable state, federal, and international jurisdiction laws and to ensure appropriate privacy protections when sharing or disclosing information to third parties, including vendors. As part of the Enterprise Risk Management (ERM) process, the Risk and Security Committee receives regular reports on data privacy efforts and controls.

In privacy strategy, everyone who works at Lumen forms the first barrier against privacy and security risks. The Global Privacy Office and Chief Privacy Officer are the second line of defense, and the Global Data Protection Office the third.

We have built our Privacy Program around the American Institute of Certified Public Accountants Privacy Management Framework, which establishes nine key components to design, implement, maintain, evaluate, and audit a privacy program in an ever-changing global privacy landscape: Management; Agreement, Notice, and Communication; Collection and Creation; Use, Retention, and Disposal; Access; Disclosure to Third Parties; Security; Data Integrity and Quality; and Monitoring and Enforcement.

Control and risk management process

We have developed a robust information security program to safeguard the confidentiality, integrity, and availability of technology systems and information assets. Our information security policy and standards provide technical, administrative, and organizational measures to help protect Lumen and customers. We have implemented controls to identify, protect, and detect threats. We have robust capabilities to effectively respond to potential security incidents. At least annually, we engage internal or fully accredited external auditors and consultants to assess and enhance our program.

In 2022, no incidents occurred that required the filing of an 8-K with the Securities and Exchange Commission (SEC).

Lumen privacy governance

We have committees responsible for overseeing and reporting on issues relating to compliance, technology, privacy, security, and risk. The Technology Security Privacy Council (TSPC) communicates risk decisions up to the Risk Oversight Committee, which itself reports to the Risk and Security Committee. The Risk and Security Committee oversees ethics, compliance, privacy, security, technology, and operational and business risk.

Customer privacy

Like many companies, we have access to information about our customers that is used to support our products and services. We also share customer data, where appropriate, to meet our business goals or to fulfill legal obligations. We take all legally required and reasonable actions to protect this information and expect those we share it with to appropriately protect it as well. The [Lumen Privacy Notice](#) describes how we use and protect the data we collect about customers and their privacy options.

Law enforcement and government data requests

We are legally obligated to respond to lawful requests for customer information by government agencies, but we are also committed to protecting our customers' privacy. That is why we carefully review every inquiry, making sure the request is appropriately limited to the government's need, and we narrowly tailor our response to correctly align.

Twice a year, we publish the number and category of legal demands for customer information we receive from federal, state, and local governments in the U.S., including requests made by national security agencies and requests made under the Foreign Intelligence Surveillance Act (FISA). See our [Transparency Reports](#) for more information.

Lumen closely monitors changes in U.S. laws as well as the evolving approaches of non-U.S. jurisdictions to data and privacy issues. This enables us to provide informed guidance to our customers on how we appropriately manage and share personal information, both internally and with third parties.

Employee and contractor training

At Lumen, we believe security and privacy are everyone's responsibility. Our employees and contractors serve as the first line of defense—and we put significant focus in educating, training, and testing our people to protect themselves and the company. Our Security Awareness Training and Privacy Awareness Training are both designed to help employees and contractors recognize and appropriately respond to potential cyber, privacy, and data security risks for our customers, vendors, employees, and the company. These training programs extend to our Board of Directors and cover core information security and privacy topics including, but not limited to, data security, hacking risks, malware, personal information handling restrictions, and phishing.



Public policy and Business Continuity Management

Our approach to political action and contributions

We encourage our colleagues to be politically active, including through the support of political candidates and initiatives of their choice. Lumen has established various political action committees (PACs), legally recognized organizations that accept voluntary contributions and make expenditures to support candidates for elected office. We do not attempt to influence employee contributions or political activities.

We are transparent in our political contributions and expenditures, and we publish a semiannual Political Contributions Report on our corporate website. This report discloses our corporate political contributions and those of our PACs in accordance with federal and state campaign finance laws, as well as contributions to trade associations and 501(c)(4) organizations.

Our approach has been recognized with a Tier 2 placing in the 2022 CPA-Zicklin Index of Corporate Political Disclosure and Accountability.

Advancing digital equity

With our North Star strategy has come a renewed focus on engaging with federal, state, and local policymakers to bring broadband to more Americans and help close the digital divide.

We focus our advocacy on the effective use of government funds to advance digital equity, for example by building out networks and increasing the accessibility of broadband. We are active participants in several government programs that extend connectivity, including to low-income households and rural areas. See [Driving digital equity through connectivity](#).

Business Continuity Management

Our Business Continuity Management (BCM) program is designed to safeguard our employees, assets, stakeholders, and our reputation in the event of an accident, incident, or critical business disruption.

By aligning to the company's goals and using a proven standards-based framework, our BCM program supports an environment of prevention, collaboration, communication, and response. This enables us to effectively adapt, respond, and recover if a major incident occurs. Our BCM adheres to ISO 22301:2012, the international standard for BCM, and engages internal and external auditors to assess the program's efficacy and compliance with customer requirements.

For example, in March 2023, Lumen attended the Federal Emergency Management Agency (FEMA) Emergency Support Function 2 (ESF2). The purpose of this conference is to meet the telecommunications needs of a range of public and private actors, including federal government agencies. At ESF2, we participated in the utility residency panel.

We further attended the Florida Public Service Commission in April 2023 and were one of the only telecommunications providers to speak on Florida's annual hurricane preparedness in May 2023.

Our BCM supports our vision, strategy, and corporate objectives by:

- Annually evaluating the purpose and operations of every business unit in the company by identifying threats, hazards, and potential impacts to critical business priorities
- Developing strategies for mitigation, continuity, and recovery
- Maintaining uninterrupted service whenever possible and, when necessary, coordinating recovery from business disruptions safely, securely, and quickly
- Enabling continuous improvement by periodically reviewing program strategy and performance



Lumen, with the support of our Government team, protects our operations and those of our customers and helps support the nation's continuity of communications as an Alliance partner in the Cybersecurity and Infrastructure Security Agency's (CISA) Joint Cyber Defense Collaborative (JCDC) and as a resident member in CISA's National Coordinating Center for Communications (NCC).

We require our business unit teams to annually evaluate how critical their processes are to our business operations. Processes identified as critical undergo a business impact analysis, which includes change-related hazards. We communicate our overall business continuity strategy, processes, and results to the executive leadership team and make it available to all employees.

Providing unity, access, speed, privacy, and security

Working toward a more sustainable and equitable future requires organizations of all kinds to take more strategic and collaborative approaches. That is the spirit in which we work with our customers and partners to build a more sustainable world through our technology.

As a customer-centric company committed to unleashing the world’s digital potential, our purpose has never been more critical. Lumen delivers on this vision by offering unity, access, speed, privacy, and security—helping keep our customers’ employees productive and engaged with trusted, reliable products.

To provide greater flexibility for our customers, we aim to deliver technology innovation to scale Quantum Fiber.

Putting the customer at the center

Customer centricity is a way of doing business that fosters a positive customer experience at every stage of the customer journey. We put the customer at the forefront of everything we do by listening to, learning, and acting on customer feedback.



Unity

Combining connectivity, Edge Cloud, security, and collaboration in a single platform that’s designed to meet the application and data needs of today’s digital businesses.



Access

Unlocking cutting-edge technologies that inspire our customers to innovate in ways that were previously out of reach.



Speed, privacy, and security

Delivering the fastest, most secure platform for applications and data to support businesses, governments, and the communities we serve.



Enabling a new wave of innovation

Bold innovation is at the heart of forward-thinking, resilient, and successful businesses that are creating positive change. By empowering innovation, Lumen is helping build businesses that serve the world. Through our products, customers without deep technological specialization can access essential architecture—from connectivity, to the cloud and security services—to support their technology solutions.

We are also enabling our customers to leverage and benefit from data to create better experiences for their customers. We are increasing our AI governance capabilities, including to better understand how AI capabilities can be deployed and configured at the front end of our platform. By exploring AI innovation, we can help meet our customers' expectations for the highest standard of experience.

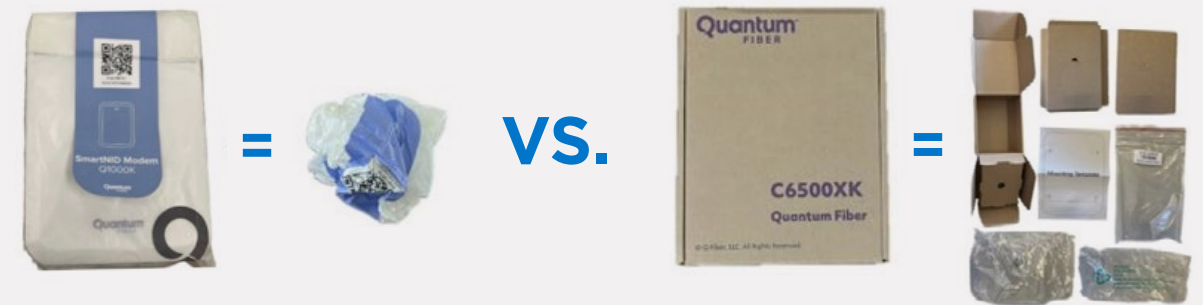


Driving toward sustainable packaging

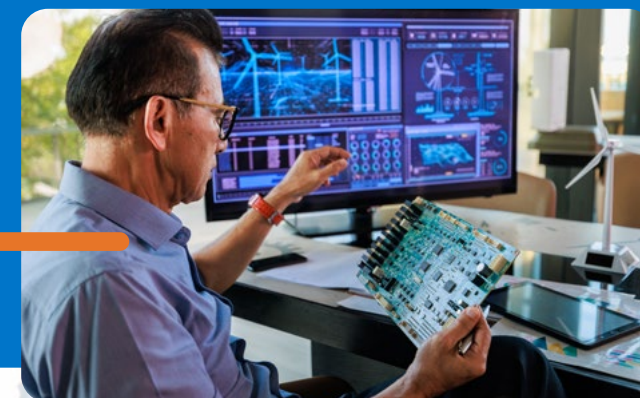
After thorough testing and data collection, Lumen is excited to launch a sustainable packaging initiative in 2023. Designed for our mass markets sector, the project aims to reduce our carbon footprint and enhance our role as a good corporate citizen. Leaning into our ability to innovate and think differently, we will be able to unlock benefits including decreased frequency of global shipments, reduced costs, less waste, and increased rates of recycling, all driving toward reduced carbon emissions.

The push toward sustainable packaging has begun to inspire advancement in other areas of work, such as the development of plans for customer premise equipment (CPE) to be manufactured with recyclable materials. Additionally, we are working with our partners to develop state-of-the-art products that, over time, will lower an average household's CPE power consumption by reducing the typical quantity of equipment installed. We are eager to launch sustainable packaging for mass market CPE and will continue to partner and build upon our learnings to further reduce carbon emissions across the company.

Sustainable packaging prototype compared to our existing packaging



Growth powered by innovation and investment



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Every day, Lumen is empowering our customers to create a positive momentum in the marketplace. There are many ways we do this, including through composability, software as a service, and Network-as-a-Service offerings, which help our customers achieve their own sustainability goals using innovative technological solutions.

Our platform enables customers to adopt new technologies to manage their digital transformation, create sustainable supply chains, and drive data

security and privacy, all while building solutions that drive efficiencies and growth. We empower our customers to imagine exciting new possibilities and foster bold innovation across industries and sectors—innovation that ignites business growth.

By investing early in pioneering and disruptive innovation, including the use of machine learning, we remain at the forefront of rapid changes in the technological landscape.

Empowering others to do good

We are passionate about our purpose—to unleash the world’s digital potential—and offer products and services that enable connectivity in a world that demands it at lightning speed. The positive reach of our platform goes far, empowering our customers to seize digital opportunities and drive the next-generation solutions at the heart of a more sustainable future.

By harnessing the possibilities of smart technology, businesses around the world can become more efficient and play a part in the world’s collective efforts to make sustainability improvements. Our products support our customers’ goals to reduce their environmental footprint and achieve greater sustainability, including by:

- Helping our customers enable IT architecture that reduces costs and their carbon footprint through digital transformation and by moving applications to the cloud

- Providing Edge Computing services that enable sustainable decision-making from fleet maintenance and the development of autonomous vehicles, to reducing manufacturing waste and resource consumption in the agriculture sector. Our Edge Computing allows our customers to acquire, analyze, and act on data where it matters most
- Connecting “Internet of Things” (IoT) devices and sensors to the internet to provide deeper analytical insights that can help enable real-time changes and decisions to improve operational efficiency and reduce environmental impact
- Offering remote energy management through smart home technology to give customers “anywhere management” of thermostat settings and the ability to preprogram energy efficiencies such as turning lights on or off at set times
- Minimizing emissions through technology solutions, such as Voice over Internet Protocol (VoIP), that support a remote or hybrid workforce and reduce the need for business travel



Smart solution for U.S. agriculture

Lumen enables solutions that support our customers' sustainability goals, from fleet maintenance to reducing resource consumption in agriculture.

Our work with the U.S. Department of Agriculture (USDA) shows how our technology is supporting smart agriculture by delivering a fully integrated wide-area data transport service. The system will provide secure remote access, cloud connectivity solutions, and a contact center to more than 9,500 USDA locations across the U.S. and beyond.

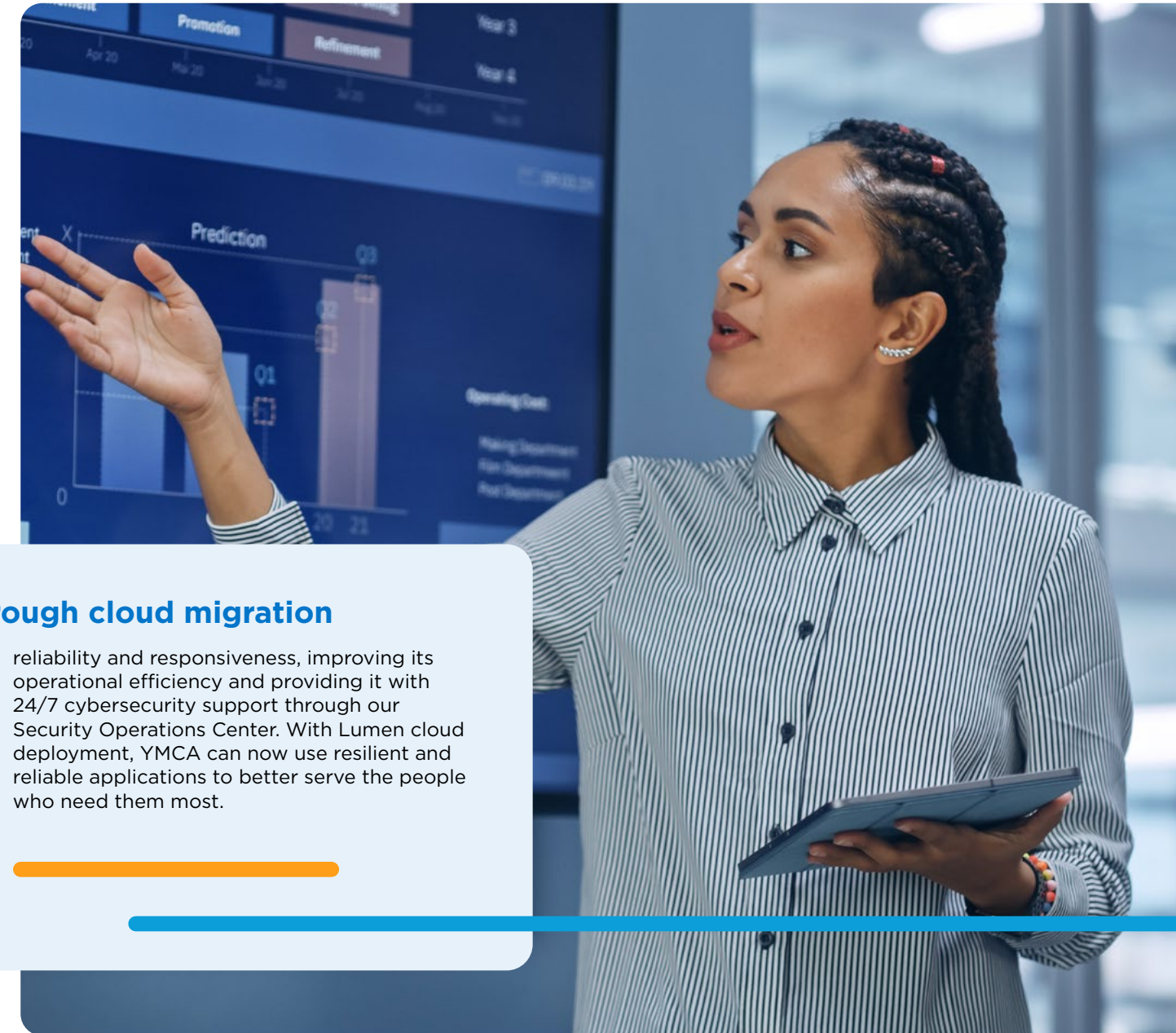
In use, it helps USDA employees effectively manage the farming, food and nutrition, forestry, and rural economic development services on which the U.S. relies.

Digital inclusion

Lumen is charting a new path forward, using the power of the Lumen network, to help close the digital divide and accelerate digital equity.

Our digital inclusion mission is to unleash the full power of our network and our people to unlock the power of technology in historically unserved or underserved communities. Digital inclusion at Lumen means tackling the digital divide to address the unmet connectivity needs of millions of people globally.

Lumen infrastructure equals opportunity—powering connections to economic, education, and health opportunities and driving innovation. Now is the time to prioritize each aspect of digital inclusion, from access to literacy, to partnerships, so that we can make the world a better place.



Driving resilience for YMCA through cloud migration

YMCA of Singapore is a social service that provides support, empowerment, and education to less-privileged communities. Lumen supported that mission by tackling inefficiencies in YMCA's cloud deployment; before we partnered with YMCA, its business activities and growth were limited by a lack of IT resources and aging hardware. By implementing solutions such as our Cloud Consulting, Migration, and Managed Services, we increased the organization's application

reliability and responsiveness, improving its operational efficiency and providing it with 24/7 cybersecurity support through our Security Operations Center. With Lumen cloud deployment, YMCA can now use resilient and reliable applications to better serve the people who need them most.

Composable infrastructure

The Lumen composable infrastructure initiative helps reduce our infrastructure's carbon footprint and decrease power and water consumption by utilizing our computing resources only when required.

Reducing emissions by increasing efficiency

Traditional server designs are both power-intensive and limited in their ability to call on multiple resources, such as graphics processing units (GPUs). However, composable infrastructure separates resources and allows them to be flexibly combined for different tasks. This boosts performance without the need to add servers and multiply greenhouse gas emissions.

When resources such as data storage, networking devices, and servers are proactively readied for peak workloads, they use excessive amounts of power. By composing these resources only when they are needed, customers can significantly reduce their power usage while increasing their utilization rate. With a software-defined control plane, customers can quickly design and deploy servers to match specific workload requirements with certainty that the server can handle the resources required. This dynamic system means additional resources, such as GPUs essential to tackling use cases, can be added as needed. Simultaneously, excess resources can be quickly reclaimed and made available for other servers to use. As a result, composability is dynamic, easy to maintain and upgrade, and a step toward more sustainable infrastructure.

This all translates to lower power requirements and a reduced carbon footprint.

Enabling our customers' sustainability

Preserving water and energy with decreased cooling needs

By using efficient composable infrastructure, Lumen can reduce the water required to cool our various execution venues, including our Edge locations. By limiting the quantity of physical equipment in use, less water is needed for cooling systems, conserving one of the world's most precious resources.

Since cooling, alongside electricity, comprises a significant portion of the cost of running a large data center, composable infrastructure can provide financial benefits to our customers while driving sustainability and responsible resource use.

Reducing waste by maximizing lifespan

Composability can also extend the lifespan of existing assets by taking a software-defined approach to new additions, moves, and adjustments. By maximizing the capability of the technology that Lumen customers already own, the lifespan of these assets can be increased. This not only reduces the total cost of ownership of these assets, but also reduces their disposal rate, minimizing waste.

Network solution for Indigenous people

Lumen helped provide wireless internet to a tribal nation by using our technology solutions to serve a community that had been experiencing connectivity challenges. Using a combination of units, Lumen was able to extend the signal from a main distribution point in town to remote development locations, then onto individual homesites. Lumen also added dedicated internet access to the local clinic, fire station, and tribal headquarters building.



Innovating sustainable products and services

We collaborate with stakeholders across our value chain to drive operational excellence through continuous innovation. Our aim is to empower others to deliver next-generation digital experiences.

The Lumen Customer Advisory Board—composed of around 25 of our larger customers—meets twice a year to discuss emerging trends in technology and is an important way that we remain responsive to evolving needs. In addition, the Lumen Customer Community connects our customers with our teams and each other, providing feedback and insight that informs our product and service development.

We sponsor InspireCIO, a networking organization to connect technology chief information officers and chief information security officers across the United States. Our participation allows us to engage directly with customers and others to help us understand the biggest technology challenges they face and how to be more reactive to their needs.

Our software-defined platform is designed to help businesses, governments, and communities acquire, analyze, and act upon their digital innovations, in whatever model best supports their development pipeline.

Lumen-certified experts, proven methodologies, and innovative products and services embody decades of experience spanning Adaptive Networking, Connected Security, Edge Cloud, applications, and data. Across the company, our leaders, technologists, and strategists are driving a wide range of innovative projects, such as:

- The continuous evolution of a suite of platform enablement tools, including application programming interfaces (APIs) based on an open and modular architecture that enable the deployment of the low-latency services driving real-time waste reduction and optimization of energy and water usage in industrial applications
- Cloud monitoring and analytics capabilities that turn data into actionable insights, enabling automation and reducing risk of downtime in manufacturing

- Private wireless capabilities that use the latest cellular technology, enabling Lumen to cover large outdoor and indoor spaces such as warehouses, ports, and manufacturing plants, while simplifying deployment, management, and ongoing support. Customers benefit from a fewer number of radio access points that provide more coverage than alternative wireless solutions
- Cutting-edge network technologies such as open-source SD-WAN and data access acceleration that enable enterprises to extend the use of reporting tools to remote sites, reduce the unnecessary movement and duplication of data, and reduce overall IT resource consumption
- The application of AI and machine learning to monitor and proactively manage next-generation IoT devices, including self-provisioning to address urgent challenges such as emergency healthcare and disaster relief
- Polymorphic network and embedded systems that enable AI-driven automation of IT resources, which improve their own performance and adapt to changing environmental conditions in real time



Laying the foundation for future-forward solutions with VMware

We have partnered with VMware, Inc. to form the Joint Innovation Lab (JIL), a collaboration that will fast-track the development, design, and delivery of Edge Computing and secure, work-from-anywhere solutions. By combining our capabilities, we aim to enable customers to deliver experiences for any application, to any device, from the global cloud core to the distributed network edge. The JIL aims to make this possible by creating efficient use of hosting infrastructure while promoting shared management functions that can be extended to any hosted location.

By collaborating with VMware to advance these opportunities, we aim to unleash the world’s digital potential by laying the technological foundations for future-forward experiences, such as telemedicine, smart cities, and automated factories.

“LIGHT, DATA, ACTION!”

In 2022, we launched a new podcast that explores how trends in technology and shifts in business culture are transforming the workplace and driving success in today’s market. Light, Data, Action! is a platform for Lumen experts, industry executives, and thought leaders in enterprise business and tech innovation to speak on a diverse range of technological issues, from digitalizing healthcare to immersive experiences in the metaverse.

Upgrading the Seattle Seahawks fan experience

At Lumen Field—home of the professional American football team the Seattle Seahawks—rising data demands, combined with legacy servers and storage, necessitated a network overhaul to meet the needs of live broadcasting and to provide a top-quality fan experience. By upgrading the stadium with two 10-Gbps circuits, hardware under the seating, and Lumen Vyvx® Broadcast Solutions, we have helped the team deliver best-in-class connectivity that will support the expected 10 percent growth in data use each year, handle more devices simultaneously, and offer a faster and more reliable connection for TV broadcasters.

Enabling sustainable Bitcoin with fast, secure, and flexible solutions

Emerging technologies such as cryptocurrency, NFTs, Web3, and blockchain have a wide and diverse scope of potential across established industries. However, they require speed, security, and flexibility to function. U.S. Bitcoin, a provider of cryptocurrency mining services, worked with Lumen in 2023 to launch its newest Bitcoin mining center. It is one of the largest sites in North America and uses renewable energy to provide consumers with a more sustainable approach to mining. Lumen designed the network infrastructure for this center, using our Customer Premises Equipment as a Service (CPEaaS) to provide a fast, secure, and flexible network of supercomputers. Leveraging our expertise and working with a foundation of trust, we removed the time-consuming process of infrastructure deployment so that U.S. Bitcoin could focus on the other complexities of their expansion.



Implementing with intention for the environment



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We are committed to environmental sustainability that promotes the health of both our planet and our business and creates value for our customers, employees, suppliers, communities, and investors. It is inextricably tied to our purpose to unleash the world's digital potential.

Working toward a more sustainable and equitable future requires organizations of all kinds to take a more strategic and collaborative approach. It is in this spirit that Lumen works with our customers and partners to explore how we can build a more sustainable world through our technology.

Every day, our platform is enabling a range of solutions that support the sustainability goals of our customers as well as their customers, from fleet maintenance and the development of autonomous vehicles in the transportation sector, to reducing manufacturing waste and resource consumption in agriculture.

Embedded in our culture are teamwork, trust, transparency, and customer obsession. We know our customers want the flexibility to be both sustainable and productive, and we make it easy for them and others to join our sustainability journey through digital automation and our smart network and technologies. We regularly assess our environmental impact to find new ways to reduce greenhouse gas (GHG) emissions, eliminate waste, and manage water consumption.



Driving environmental sustainability at Lumen

Lumen is pleased to announce the early achievement of our 2018–2025 science-based GHG emissions-reduction targets (SBTs).

Third-party-verified data demonstrates that from 2018 to 2022, Lumen has reduced Scope 1 and Scope 2 GHG emissions by 25 percent, compared to our SBT of 18 percent reduction by 2025. Additionally, we reduced Scope 3 GHG emissions by 39 percent from 2018 to 2022, compared to our SBT of 10 percent reduction by 2025. These targets were achieved through a companywide cross-functional effort that included a combination of energy-efficiency initiatives, renewable energy procurement, and real estate consolidation.

We're proud of having achieved our Science Based Targets initiative (SBTi)-approved targets early and remain focused on doing our part to mitigate the effects of global climate change. We are currently in the process of developing a low-carbon transition plan, which will include a detailed strategy for achieving our future goals. We remain committed to exploring ways to reduce emissions through our operational, customer, and employee initiatives—actions that will contribute to the United Nations Sustainable Development Goals.

Environmental sustainability vision

Lumen is committed to incorporating appropriate environmental sustainability principles and practices throughout our operations as we work to serve our customers and our communities. Our ESG Strategy informs and drives our sustainability efforts by:

-  Identifying and implementing sustainability initiatives aligned with our overall business objectives
-  Building an energy-efficient global communications network, thereby reducing GHG emissions
-  Reducing GHG emissions, energy and water consumption, and waste generation
-  Engaging employees and suppliers in our sustainability efforts
-  Meeting applicable sustainability legal requirements
-  Establishing sustainability goals and metrics to track the performance of our efforts



Environmental compliance and management

Our environmental management system (EMS) is an important tool in our pursuit of our environment, health, and safety (EHS) and sustainability visions. These systems help us control and reduce our environmental impact, as well as meet our regulatory obligations and drive continuous improvement.

Environment, health, and safety vision

We are committed to achieving excellence in our protection of health, safety, and the environment for our people, business partners, and global communities by:



Identifying and evaluating risks to the company and developing and implementing effective strategies for mitigating these risks



Complying with applicable regulations and company requirements



Allocating appropriate resources to facilitate the implementation of the EHS function



Communicating responsibilities and requirements through training and awareness programs and encouraging employee participation



Developing innovative and flexible solutions that drive improved EHS performance and contribute to achieving company objectives

Environmental practices and procedures

To determine the scope of our EMS work, we explore the most material environmental issues inside and outside our business alongside our legal requirements, and we consider where and how we can make an impact. We assess and review our programs, operational facilities, and designated suppliers through our EHS team. We also monitor emerging legislation and regulation.

To drive improved performance, we collaborate with teams across our business to develop effective, documented practices and procedures, which we make available to all employees on our intranet.

We broaden our impact by participating in the Environment, Health & Safety Communications Panel (EHSCP) Environment Committee, a forum through which industry professionals share best practices, monitor emerging issues, and engage with policymakers.

Environmental training

The day-to-day success of our EHS efforts depends on the capabilities and commitment of our people. To accomplish this, our EHS team collaborates with managers to develop task- and role-specific training content, which is delivered through a combination of instructor-led web-based learnings, awareness campaigns, and facilitated meetings.

ISO-certified facilities

We have successfully maintained our ISO 14001 certification in the United Kingdom. ISO 14001 specifies the requirements for an EMS that an organization can use to enhance its environmental performance. Our facilities in Belgium, France, Germany, Italy, the Netherlands, and the United Kingdom also maintained their ISO 50001 certifications. This standard specifies requirements for establishing, implementing, maintaining, and improving an energy management system. It is intended to enable an organization to follow a systematic approach in achieving continual improvement of energy performance. Our EMS in North America is not third-party certified.

Noncompliance with environmental laws and regulations

We operate approximately 13,000 global facilities that are subject to national, state, and local environmental laws and regulations. In 2022, we had three instances of noncompliance that resulted in fines totaling \$5,254.

Significant chemical spills

In 2022, Lumen had no chemical spills that exceeded quantity thresholds that require reporting to a regulatory agency.

Supplier environmental management

Our environmental management efforts extend beyond our own operations. We expect our suppliers to embrace and share our commitment to ethical conduct by complying with environmental laws and requirements, including those related to:

- Management and disposal of hazardous materials
- Contaminants in air, soil, or water
- Protection of natural resources, wildlife, and wetlands
- Recycling

Our Supplier Code of Conduct urges suppliers to assess and address environmental and sustainability issues within their own supply chains. To drive performance, we encourage suppliers to implement EMSs and continuously monitor their performance, make reasonable efforts to employ environmentally preferable and energy-efficient services, and to provide commercially available services that:

- Reduce or eliminate hazardous waste/materials
- Limit special material processing
- Use services and products that promote the use of nonhazardous, recovered recycled materials



Climate-related risks, opportunities, and impacts

Weather events such as severe flooding, windstorms, hurricanes, and wildfires can impact our ability to deliver services, so business resilience and adaptability is key to the long-term viability of our business.

Our corporate Business Continuity Management (BCM) program supports an environment of prevention, collaboration, communication, response, and recovery. This enables us to serve customers, shareholders, and employees in the face of disruptive events. See [Public policy and Business Continuity Management](#) for more information.

In 2021, we conducted a physical climate change risk assessment to help us evaluate specific threats and identify mitigation opportunities. In August 2022, we built on this by completing a TCFD-aligned, qualitative scenario analysis of our transition risks and opportunities. Conducted with support from consultant WSP, the assessment engaged key stakeholders representing 16 critical Lumen business functions and explored present-day and 2035 time horizons for our U.S. business.

To avoid catastrophic climate change outcomes, the Intergovernmental Panel on Climate Change (IPCC) Assessments Reports state that the world must keep warming below 1.5°C. This goal requires rapid decarbonization of the global economy, and the resulting shifts in climate policy, technology, and consumer preferences will create both risks and opportunities.

Our assessment considered:

- Transition risks across policy and legal, technology, market, and reputational areas
- Transition opportunities related to resource efficiency, energy sourcing, products and services, and new markets
- Future impacts, including financial, and implications for our strategy and risk management



Summary of key transition assessment findings

- Changes to our U.S. business model enhance our ability to benefit from a low-carbon transition through support for digitalization.
- Our efforts to expand our Quantum Fiber network and retrofit facilities with energy-efficient systems, such as building automation and chiller upgrades, can help us capture climate-related opportunities.
- We may face greater risks and opportunities in a transition with rapid carbon policy and market shifts than if these changes occur more slowly.
- Our greatest transition risk exposure and opportunity is related to the potential changes in behavior or shifts in preferences of our customers. For example, climate- and sustainability-related behaviors may change in the future, influenced by policy incentives or customer sentiment.
- The cost of transition to low-carbon technologies is a potential near-term risk. If the U.S. government makes research and development and technology deployment central to its climate and energy policy, it will accelerate technology innovation, eventually driving down costs and increasing availability.
- Sourcing renewable energy in the U.S. may be more difficult or costly in the short term. As the economy decarbonizes, renewable energy costs and availability are projected to improve over time in both rapid and slower transition scenarios.
- Fossil fuel costs are projected to increase due to carbon pricing in a rapid transition or increasing demand in a slower one. We are projected to experience growing financial impacts from rising fuel costs if we do not continue to increase our investment in renewable energy, energy efficiency, and the electrification of our operations.
- We have already experienced financial impacts and changed business decision-making due to existing climate-related regulatory requirements. In a rapid transition scenario, we are projected to see greater compliance, assurance, and operating costs as a result of regulatory and policy changes.

In the near term, we intend to incorporate the assessment findings into our strategy, business planning, and risk management as we prepare a low-carbon transition plan. In the longer term, we plan to extend our scenario analysis to our value chain, assessing risks and opportunities as they relate to our suppliers, customers, and other stakeholders. We also intend to conduct a quantitative assessment that builds upon the qualitative findings of this assessment.

We continue to align our ESG reporting with the TCFD. See our [TCFD Index](#).



Climate

We all share a responsibility for looking after our planet. For us, that means finding ways to reduce our carbon footprint for the benefit of our environment and stakeholders and for the long-term health of our business.

We are pleased to have reached our SBTs, approved by the Science Based Targets initiative (SBTi), early, reducing our Scope 1 and Scope 2 GHG emissions by 25 percent and Scope 3 emissions by 39 percent from 2018 to 2022 (see [Emissions approach](#)). We respond annually to CDP's climate change questionnaire, providing comprehensive data and metrics about our energy and emissions-reduction initiatives, energy consumption, GHG emissions, renewable energy purchasing, and climate-related risks and opportunities. Our 2022 CDP Climate Change Response, covering the 2021 calendar year, received a B score for our climate change mitigation efforts.

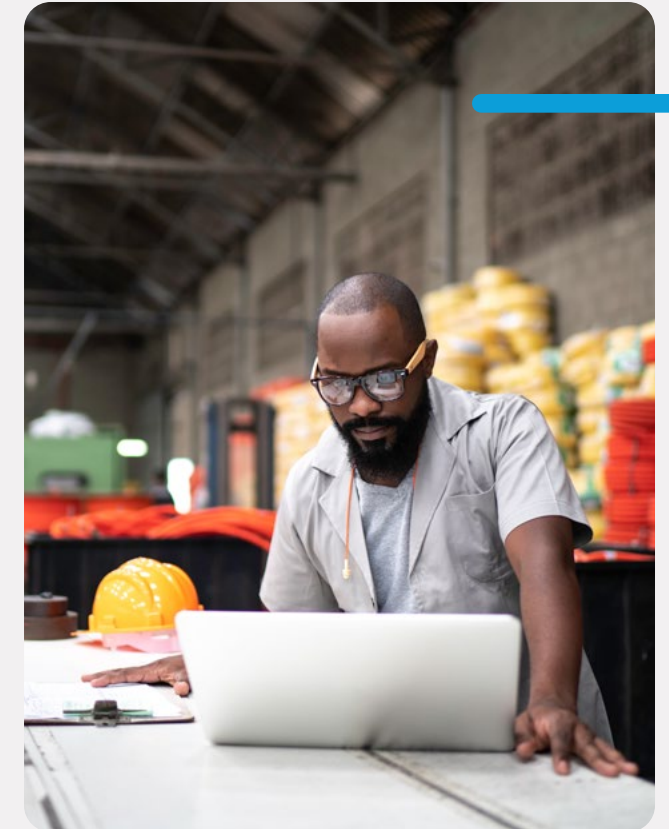
Lumen has been a member of the Global Enabling Sustainability Initiative (GeSI) since 2020. A membership organization of major information and communication technology companies, GeSI offers impartial information, resources, and best practices, which we use to advance our sustainability programs and initiatives.



Engaging our employees

Across Lumen, our people are supporting and enabling our sustainability efforts through:

- Volunteering activities, including community clean-ups and engaging with nonprofits to learn how to limit negative impacts on the environment
- Offering sessions to employees such as “Reducing Food Waste” and “Learning Sustainable Gardening Practices”
- “Going Green”—a mailbox for employees to submit ideas for environmentally sustainable practices
- Providing electric vehicle (EV) charging stations—at our Broomfield, Colorado, office, our Level 2 ChargePoint dual-port charging stations can accommodate up to eight EVs
- Hosting periodic e-waste drop-off events for employees at the Broomfield, Colorado, office, enabling them to conveniently and responsibly dispose of their old electronics



Emissions approach

We are proud to have achieved our 2025 SBTi-approved targets early. Lumen has reduced our Scope 1 and Scope 2 GHG emissions by 25 percent, compared to our SBT of 18 percent reduction by 2025. Additionally, we reduced our Scope 3 GHG emissions by 39 percent from 2018 to 2022, compared to our SBT of 10 percent reduction by 2025.

These targets were achieved through a companywide cross-functional effort that included a combination of energy-efficiency initiatives, renewable energy procurement, and real estate consolidation. We are currently in the process of developing a low-carbon transition plan for our business that will include a detailed strategy for future goals achievement.

To allow us to better capture emissions reductions across our supply chains, in 2022, we moved from an economic and financial metric-based methodology to a supplier-specific approach.

Lumen encourages our suppliers to adopt certain practices to support our environmental sustainability journey, such as implementing EMSs and monitoring their performance and using energy-efficient products and processes—see our [Supplier Code of Conduct](#). We are also proactive about responding to surveys and inquiries we receive from our customers asking about our climate plans and ambitions.

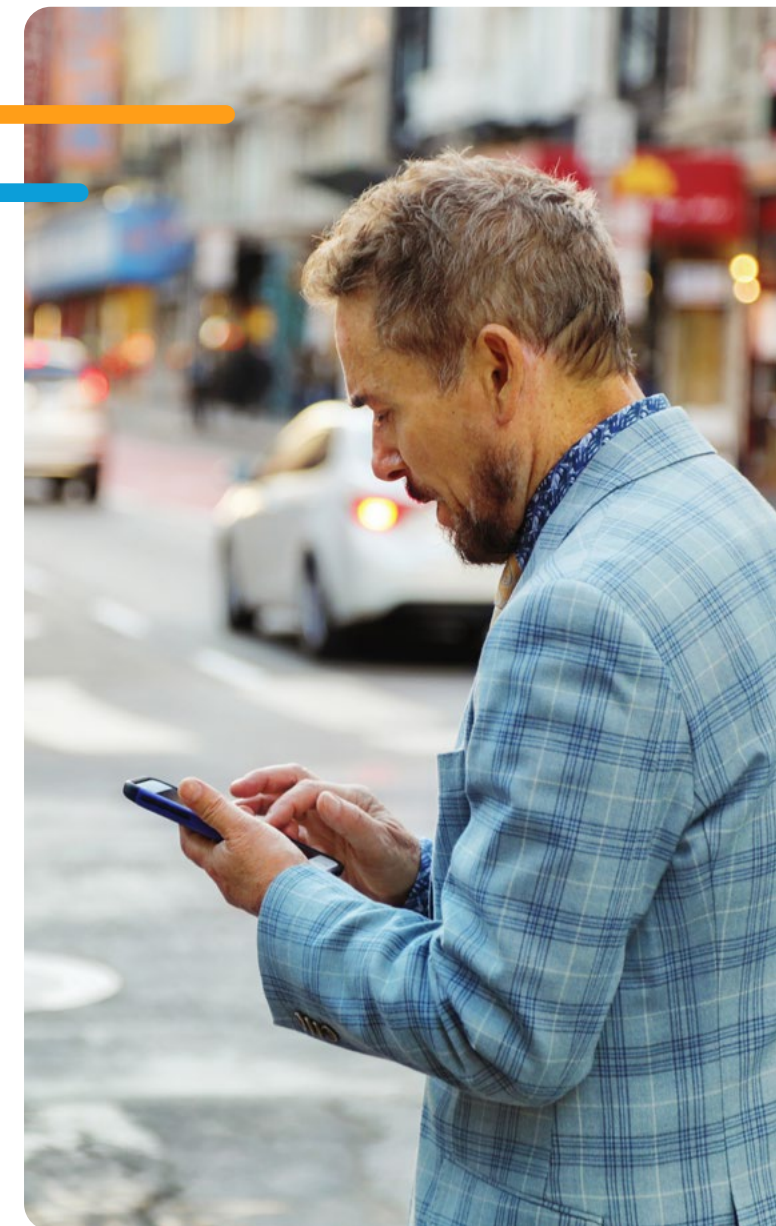
In January 2021, we announced our inaugural offering of sustainability-linked notes. Aligned with our SBTs and other ESG initiatives, Level 3 Financing—a wholly owned subsidiary—completed its offering of \$900 million of its Sustainability-Linked Senior Notes, due in 2029. The early achievement of our SBTs has allowed us to secure a lower applicable interest rate. [Find out more.](#)

Our GHG emissions (metric tons CO_{2e})*

	2018	2019	2020	2021	2022	Goal	Percent of target achieved
Scope 1	223,629	191,267	160,686	160,637	173,906	N/A	NA
Scope 2 (market-based)	1,674,423	1,477,235	1,351,016	1,321,592	1,250,240	N/A	NA
Scope 1 and 2 (market-based)	1,898,052	1,668,502	1,511,702	1,482,229	1,424,146	SBT-1: 18% reduction (of Scope 1 and 2) by 2025, compared to 2018	138%
Scope 3 (upstream)²	1,639,158	1,239,016	1,009,322	1,098,520	999,252	SBT-2: 10% reduction (of Scope 3 upstream emissions) by 2025, compared to 2018	390%

* Historical GHG emissions figures have been adjusted due to improved data quality and 2022 divestitures.

² Includes only upstream emissions.



Energy approach

Our energy management teams are constantly looking for ways to improve energy efficiency at our nearly 13,000 active real estate sites around the world. In 2022, we avoided 23,615 metric tons of GHG emissions through initiatives such as:

- Deploying and enhancing building energy management and control systems
- Developing an Energy Network Operations Center (ENOC) to centrally monitor, manage, and reduce facility energy use through control systems and advanced analytics
- Turning down underutilized critical infrastructure equipment, including excess rectifiers and power plants
- Consolidating and updating network switch equipment
- Installing and upgrading mechanical systems to improve efficiency, including variable frequency drives and variable speed fans
- Installing LED lighting retrofits and controls
- Improving facility airflow management, including deployment of hot and cold aisle containment
- Increasing power usage effectiveness monitoring and reporting
- Upgrading facility mechanical system chilled-water systems
- Upgrading, replacing, and decommissioning UPS batteries
- Upgrading copper-based wiring and connections in data centers

Wherever feasible, we source energy from renewable sources. In 2022, we purchased and generated 208,252 megawatt-hours (MWh) of renewable energy, including zero-carbon electricity and biofuels.

Transportation initiatives

Emissions from our fleet—which numbered 7,260 vehicles in 2022—as field technicians travel to support our customers in their communities represent a significant portion of our carbon footprint. We continue to work to reduce fleet emissions, including by:

- Completing the rollout of sensors to our fleet to monitor vehicle idling time. By using data to identify opportunities for improvement, our field technicians are able to reduce emissions and costs by saving fuel.
- Dispatching and operating our fleet more efficiently through the installation of GPS in 7,260 Lumen vehicles, resulting in reduced fuel use and GHG emissions.
- Using flex-fuel vehicles, which produce significantly less GHG emissions than traditional vehicles.

Our energy procurement (MWh)*

Measure	2018	2019	2020	2021	2022
Renewable energy	169,533	250,205	255,272	229,076	208,252
Nonrenewable energy	4,898,833	4,492,988	4,321,073	4,170,091	3,863,813

* Historical energy procurement figures have been adjusted due to improved data quality and 2022 divestitures.



Water stewardship

Water is a precious and limited resource. We strive to reduce our consumption, especially in the water-stressed regions where we operate. We track our usage and closely monitor consumption trends to improve water efficiencies and reduce site discharge.

Our approach

Drinking water, irrigation, and sewage are our main water consumption and discharge impacts. We also use water in cooling systems at some North American facilities. We track water consumption and closely monitor deviations from historical use to improve efficiency and reduce excess discharge at our sites—especially in drought-stricken areas. We know that climate change can impact water availability, so we use the World Resources Institute’s Aqueduct Water Risk Atlas to assess susceptibility to future water stress across our areas of operation.

Our progress

In North America, we continue to manage our water use and have achieved steady reductions since 2018. Reduction levers include water-efficiency projects and real estate consolidation efforts. In addition, fewer people in offices due to COVID-19 and subsequent hybrid or remote working models have contributed to the decrease.

Our water use in North America (gallons)³

	2018	2019	2020	2021	2022
Withdrawal	443,968,404	433,024,175	428,250,047	396,741,104	352,970,087



³ Historical water use figures have been adjusted due to improved data quality and 2022 divestitures.

Reducing waste impacts

Reducing waste protects our environment and helps to preserve natural resources. It can also reduce emissions through less energy-intensive circular economies. That is why we are committed to reusing and recycling products and minimizing material use.

Our approach

To reduce our environmental impact, we establish and maintain effective waste management programs and initiatives that focus on reducing waste through minimization, reuse, and recycling. Our approach is also designed to ensure that hazardous waste is properly disposed of. Our EHS team collaborates with various business units to implement and optimize waste management methods, policies, and procedures. We also aim to partner with suppliers that adhere to the same standards we do. See [Supplier environmental management](#).

Waste reduction

Recycling and product end-of-life management

Each year, we divert millions of pounds of electronic and communications equipment away from landfills. We recycle telecommunications equipment and items such as batteries, wood poles, electronics, copper wire, fluorescent lamps, fleet oil, and solvents.

In the U.S., our modem and router takeback program makes it simple for our customers to dispose of electric equipment, which we reuse or send to an R2-certified recycler for secure disposal.

Paper recycling

Doing more business digitally has enabled us to cut our paper use, and we encourage our employees to use paper efficiently, such as through double-sided printing. Our secure shred program enables employees to recycle documents and media safely, securely, and responsibly.

In 2022, our participating U.S. sites collected, securely shredded, and recycled 420 metric tons of paper. Since we are using less paper overall, we expect our paper recycling volumes to decrease over time.

Our paperless billing initiative encourages and incentivizes customers to switch to digital billing. From January to December 2022, we achieved a

27 percent reduction in printed invoices by migrating around 200,000 customers to paperless billing through automatic enrollment, the Brightspeed divestiture, system enhancements, and engagement with sales agents.

Our progress

We continue to manage our waste in ways that promote reduction, reuse, and recycling. In 2022, we recycled approximately 1,777 metric tons of electronic and communications equipment. Additionally, our waste intensity was 1.35 metric tons per million dollars of revenue.



Our waste performance in the U.S. (metric tons)^{4,5}

	2018	2019	2020	2021	2022
Waste generated	27,606	26,662	30,090	27,373	23,549
Waste to landfill	20,489	19,780	22,557	20,691	17,938
Waste reused	93	147	213	180	105
Waste recycled	7,024	6,734	7,320	6,501	5,506

⁴ Historical waste figures have been adjusted due to improved data quality and 2022 divestitures.

⁵ Data presented may not accurately reflect our solid waste metrics for sites where Lumen waste is not managed directly by Lumen, for example at multitenant buildings where waste may be mixed.

Invigorating our culture



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We want our employees to feel proud to work at Lumen, to be fully engaged with our purpose, and to be empowered to achieve change. That means creating a positive culture rooted in teamwork, trust, and transparency. We strive to infuse clarity, customer obsession, courage, and a growth mindset into everything we do. We are prioritizing the delivery of best-in-class employee relations, total rewards, inclusion, and talent development—particularly among Generation Z.

Our successes are built on a workforce that feels happy, healthy, safe, and included at their job. That is why we have taken the time to build a sense of belonging and ensure employees receive a competitive range of benefits that improve both their lives and the lives of their families.

We engage with and inspire others to pursue careers in tech, empower our employees to thrive and belong, and support community volunteerism by giving to the most vulnerable and the traditionally excluded. Our community efforts are guided by giving back and following the numerous and varied passions of our employees who dedicate their time to making a difference.



Talent, recruitment, and retention

Our highly competitive business depends on attracting, developing, and retaining a motivated team that is inspired by our leadership, engaged in meaningful work, and motivated by career growth opportunities.

We employ people around the world, and one of our strengths as a company is its diversity. The mix of viewpoints, talents, experiences, backgrounds, and beliefs at Lumen is respected and valued and contributes to a thriving workplace culture.



Our approach

We focus on treating talent as a differentiator and as a leading indicator of business performance. We strive to hire and retain the best talent available, to be transparent with regards to new career and promotional opportunities, to mitigate bias, and to champion fair selection and best hiring practices.

Our approach is two-pronged: We develop programs to equip our leaders to lead inclusively, and we also seek to evolve our talent practices. We gauge the progress and capabilities of our people by tracking and analyzing data from various sources, including annual talent reviews and hiring and promotion trends.

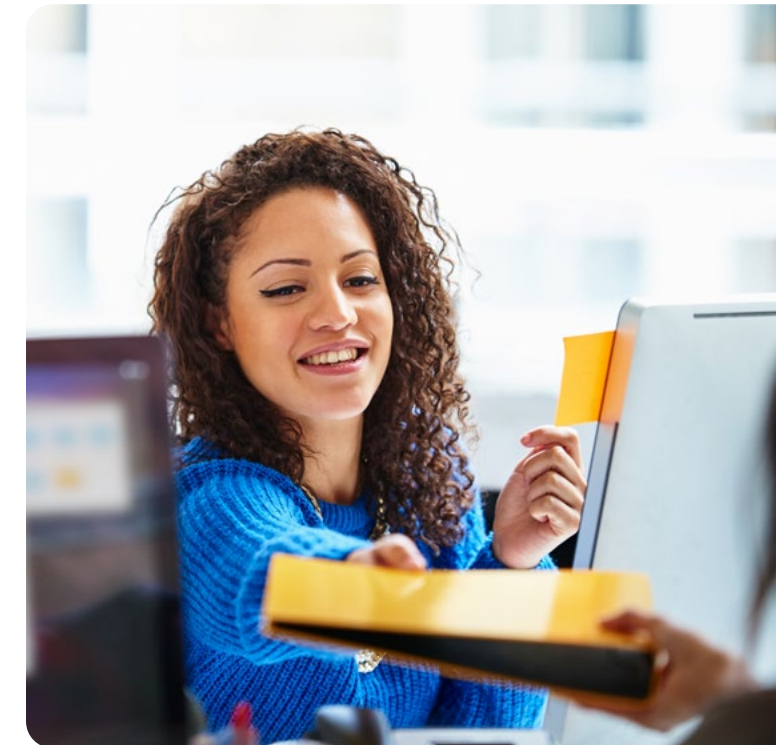
We are committed to providing equal opportunities for all employees. Our human resources policies strive for the highest standards of fairness and equal opportunity regarding recruitment, hiring, promotions, job assignments, and all other aspects of employment. We gauge progress, identify opportunities for change, and pursue solutions by analyzing data from sources such as annual talent reviews.

Recruitment

Every day we work hard to bring more diverse talent to Lumen and to provide outstanding opportunities for advancement to all employees—starting with a fair and unbiased application process.

Our recruitment strategies, technologies, and talent attraction initiatives connect people from all walks of life to our purpose and career opportunities. We have an extraordinary vision for our forthcoming internal talent marketplace, and we leverage:

- Leading candidate-assessment technologies to reduce the impact of bias on talent selection
- Advanced technology for candidate lead generation and superior candidate experiences
- External diverse talent attraction strategies and toolkits
- A spirit of transparency and inclusion throughout our recruitment processes
- Emerging partners and technologies in the University Relations space to maximize our reach across hundreds of colleges and universities, including many diverse institutions
- Sponsorships and other opportunities for diversity recruitment advertisements, events, forums, and trainings
- Data-driven approaches to decision-making and prioritization





We have implemented diverse interview panels, which include at least one woman or person of color, to address unconscious bias in our recruitment process. We have also developed a nonbiased pre-hire assessment process.

To increase the number of diverse candidates applying to Lumen, we partner with organizations and publications such as DiversityComm, Fairygodboss, and AfroTech to place advertisements highlighting our employee resource groups and career opportunities at Lumen. To further ensure we act for social good, during 2022, we launched a dedicated recruitment process to assist those seeking work in Poland after relocating from Ukraine.

We have continued to develop our award-winning internship program, which has been internationally recognized for valuing Generation Z employees and helping them take the first steps in their careers. We value the fresh perspectives they bring, and in return, offer a rewarding, welcoming, and fully immersive internship experience. We made job offers to around 80 percent of the 2022 cohort. We are proud to have received a 2023 Campus Forward Award from RippleMatch, recognizing our investment in the next generation of talent and determination to make Lumen a great place to work for young people.

Training and leadership development

At Lumen, a person's career aspirations are our inspirations. Our equitable and inclusive talent practices aim to bring together the best mix of talent for the brightest ideas, the greatest achievements, and the shared passion to transform industries across the globe.

The continuous integration of the unique qualities of each employee with the different perspectives of newly hired talent accelerates our innovation and cutting-edge technologies—all with the shared passion for unleashing the world's digital potential.

We have established a framework of competency-based success profiles and regular career development and trainings to empower our employees to pursue their professional goals and improve employee engagement and retention. We invest in broad-based development for all of our employees, including through skills-building programs, on-demand learning options, tuition reimbursement, tailored mentoring programs, and a suite of leadership development courses.

In an effort to create more development opportunities for all employees, we are currently enhancing our intern, mentoring, and leadership development programs, with added focus on development for diverse employees.

Developing strong leaders who can move our company forward is a priority for Lumen. As we look to the future, we continue to build opportunities to enable and build our diverse talent pipeline. Our Mentoring Circles offer a collection of mentoring relationships that build the competencies of our future leaders. Our leadership development programs are also designed to provide our people with tools, training, and resources to engage, influence, coach, drive change, and increase a growth mindset across our employee base.

We have implemented inclusive leadership training for our global leader workforce and maintain a dedicated internal channel on our learning platform that offers relevant videos, books, and courses. These resources address a wide range of topics, including emotional and mental health, multicultural lessons in leadership, and today's racial landscape.

Employee engagement survey

We understand the importance of listening to our employees to make Lumen a great place to work. Our semiannual employee engagement survey is a vital part of this, which is why we continually improve it. From Spring 2022 to Fall 2022, we saw an increase in our company's overall engagement from 69 percent to 71 percent. For this voluntary survey, we also added new items to provide us with insight into topics such as employee well-being or how it aligns with the Lumen purpose to unleash the world's digital potential.

Well-being, along with diversity, inclusion, and belonging, are important aspects of the employee experience. We recorded a score of 79 percent for overall well-being as an organization, with 87 percent of our employees feeling that they had trusting relationships at work and 81 percent feeling positive about themselves at work. We found that 90 percent of employees felt that they are able to be themselves at work, while 88 percent said they felt like part of a team, and 87 percent felt comfortable voicing their opinions.



Employee well-being and benefits

We believe a healthy, engaged, and high-performing workforce is part of our competitive advantage. Our approach to engagement and rewards is designed to help our employees live a healthy life, manage their finances, and support the people in their lives.

Our approach

We invest in the physical, mental, and emotional well-being of our people through a broad range of benefits. We want our people to thrive, feel valued, and be satisfied at work, and we regularly reevaluate how to best meet their needs.

Our employee wellness programs are designed to support people to adopt and maintain a healthy lifestyle and to look at the whole person. We consider work-life integration as well as our employees' families. Our employees' places of work vary depending on their roles and circumstances.

In response, we have adopted a hybrid approach to well-being and provide consistent education to ensure our people know about our full range of benefits so they are able to access the right services when they need them.



Wellness programs

The health, safety, and well-being of our employees, business partners, and global communities is our top priority. We are committed to better-than-industry-average safety performance and continuing our investments in programs and training to support health and safety.

In the U.S., we offer consumer-driven health insurance plans, as well as dental and vision plans, health savings accounts, and flexible spending accounts. We provide on-site medical clinics at three of our major locations. We also encourage all our employees and their covered spouses to take part in our Well Connected rewards program, which enables them to earn monetary awards for completing health actions, including preventive care, weight and condition management, mental wellness, and healthy behaviors.

We launched an Employee Relief Fund in 2022, which is able to provide immediate assistance to employees following events such as natural disasters or house fires. In addition to funds provided by Lumen, we support our employees to contribute to the fund by matching all of their donations.

Outside the U.S., our health promotion benefits vary by country. All employees globally have access to our Employee Assistance Program, which provides information and support to help improve wellness and well-being.

Our other health promotion programs include private medical, disability, and travel accident insurance, dental and vision care, fitness reimbursement to encourage regular physical activity, and nutritional support programs like Weight Watchers.

Benefits

We offer progressive employee benefits⁶ and enhancements that recognize the diverse needs of our people and their families. These include:

- Our comprehensive core medical, prescription drug, dental, and vision benefits
- Access to 2nd.MD, telemedicine, on-site clinics, chronic conditions management programs, and weight management programs
- Our Employee Assistance Program and Well Connected employee wellness program, fertility benefits, extended maternity and parental leave, adoption assistance, short- and longer-term disability, flexible and paid time off for employees, 401(k), and tuition reimbursement
- Health savings accounts, gender affirming and same-sex or domestic partner healthcare, disability accommodations, mental wellness, and financial wellness

In North America, our Early Intervention Program (formerly Workplace Possibilities) helps to identify employees who are experiencing occupational (e.g., ergonomic), medical, or mental health challenges that may be impacting their work. The program aims to:

- Remove barriers to allow employees to keep working safely and productively or to return to work as soon as medically able
- Ensure employees feel valued and maintain positive connections with the workplace
- Reduce turnover and lower the impact and cost of disability

In collaboration with employees and their managers, the program explores how modified or alternate tasks, hours, or adaptive equipment could improve employee engagement and workplace experiences. The service is available to all U.S. employees and is advertised on our company intranet. Training for managers is also available to help them identify employees who could benefit and support their team members to either stay in or return to work.

See our [full list of benefits](#).



⁶ Benefits vary based on location, role, job status, and/or the terms of any applicable collective bargaining agreement.

We want our people to get well, stay well, manage well, and save well because that enables them to live their best lives.

 **Get well**

- Core health benefits: Medical, prescription drug, dental, and vision. For the fifth year in a row, healthcare premiums have not increased for employees or their covered dependents if they live a smoke-free or tobacco-free lifestyle. This is due in part to employees adopting healthy lifestyles and/or managing chronic illnesses well.
- 2nd.MD: Connect with leading health experts for a second opinion on all healthcare conditions.
- Telemedicine: When going to a doctor’s office isn’t an option, connect virtually.
- On-site clinics: Wellness visits, walk-ins, counselors, lab work, and more (in select locations).
- McDougall immersion program: Our eligible people experience a week-long health and nutrition educational program.
- Virtual physical therapy: Fully remote, on-demand programs and personal coaching to reduce common forms of musculoskeletal pain.
- Short-term disability: Disability benefits that help our people get back to living their best lives.

 **Stay well**

- Well Connected wellness program: Physical, mental, and financial wellness resources and activities to support employee health and performance.
- Preventive care: Annual physical exam, mammography, colorectal screening, biometric screening, flu shot, and more.
- Rally platform: Wellness coaching, challenges, daily goals, and other healthy activities. Employees and their covered spouses/domestic partners can each earn up to \$600 per year in preventative wellness rewards.
- Fitness reimbursement: Monthly reimbursement for a portion of employee fitness expenses. In addition, Active&Fit Direct gym and One Pass gym discounts.
- Weight management: On-site fitness centers, Real Appeal virtual weight loss program, Wondr Health skills-based digital weight loss program, and access to Weight Watchers.
- 24/7/365 mental health assistance: Includes resources through Sanvello and Talkspace to manage stress and practice self-care. Further support through the Employee Assistance Program, RethinkCare, and more.
- Healthy Pregnancy programs: Help employees and their babies be as healthy as possible.

 **Manage well**

- Chronic conditions management: Coaching and programs for employees with certain chronic or complex health conditions.
- Bright Horizons Family Solutions: Company-paid membership and subsidies for certain types of back-up.
- Voluntary lifestyle benefits: Full-time employees can enroll in additional coverages such as Critical Illness Care, Accident and Cancer Insurance, Pet Insurance, and more.
- Adoption assistance: Assistance to give a child a permanent home. Available for any legally adopted child under the age of 18.
- Parental leaves: Paid, approved leave for eligible employees when a new child arrives.
- Survivor benefits: Six months of continuous pay and health coverage for eligible survivors in the event of an employee’s death.
- Long-term disability: Disability benefits to help employees in the event of an injury or illness that continues for an extended period.
- PTO/FTO: Paid and flexible time off for employees.

 **Save well**

- 401(k): Contribute and receive a company match.
- Life/AD&D insurance: Gives families financial peace of mind for the future in the event of death or serious loss.
- Tuition reimbursement program: Helps offset the rising cost of continuing your education.
- 529 college savings plan/college coach: Resources for saving for college.
- PerkSpot/Purchasing Power: Access to money-saving products and services.
- InfoArmor: Protect your identity against fraud and identity theft.
- Health savings account: Use for health-related expenses and see triple the tax benefits of other savings accounts.
- SmartPath financial coaching: Unbiased financial advice for your money decisions along your financial journey.
- CommonBond: Student loan refinancing service.
- Legal services: Affordable legal representation.

Diversity, inclusion, and belonging

Lumen employs thousands of individuals globally. One of our strengths is the diversity of our people, and we are committed to fostering a diverse and inclusive culture. The mix of viewpoints, talents, experiences, backgrounds, abilities, and beliefs found at Lumen are respected and valued. Our human resources policies aim for the highest standards of fairness and equal opportunity regarding recruitment, hiring, promotions, job assignments, and all other aspects of employment. We are committed to providing equal opportunities for all employees.

Our approach

We know diversity stimulates creativity, spurs innovation, and drives profitability, which is why we are committed to creating inclusive, welcoming workplaces where everyone can feel at home and be their authentic selves. Our ambitious diversity, inclusion, and belonging (DIB) vision includes KPIs and actions that embed DIB considerations into all aspects of our work and business priorities.

Realizing greater ethnic, racial, and gender diversity at all levels is an ongoing process that requires trust, transparency, and teamwork. We must understand our prejudices and biases and commit to evolve—as individuals, as teams, and as a company. We do this by regularly evaluating our progress.

To enable this, we conduct frequent staff trainings aimed at eliminating unconscious bias, organize periodic roundtables to discuss DIB concerns, bring our leaders into discussions through listening circles, and engage our 11 employee resource groups (ERGs) to provide targeted support. In 2022, we launched a new quarterly training program on inclusive leadership. Mandatory for our people managers, the first topic was “Inclusive Communication.” We also launched “Uncomfortable-ish,” an internal series hosting challenging conversations on DIB topics between our Chief Diversity and Inclusion Officer and Lumen employees and leaders.

We use multiple internal and external channels to communicate information about initiatives, training, support, and events. For example, our Diversity and Inclusion learning channel—accessed through our learning management system—hosts resources including training courses, books, and other resources for all Lumen employees.

Commitment to pay equity

We are deeply committed to providing our people with “equal pay for equal work.” It is not only the right thing to do—it creates a healthy working environment and ensures we can attract and retain diverse talent now and in the future. As a follow-on to our previous pay equity studies focused on gender (2019) and race (2020), in 2022, we conducted a peer review of pay equity for our U.S. and EMEA locations. Following each review, we made compensation adjustments. To further reinforce our commitment to pay equity, in 2023, we partnered with Syndio, a workplace equity analytics platform. We will continue to review pay across all races and gender on a periodic basis.

The Diversity and Inclusion Steering Committee

We believe that creating and maintaining a diverse workforce takes all of us, and that we will make more progress with a leadership team driving this agenda.

To that end, we have formed a Diversity and Inclusion Steering Committee (DISC), comprising senior leaders from across the company who oversee and champion our overall DIB strategy. The DISC is guided by data that informs our diversity initiatives, which focus on training and education, hiring and retention, compensation, talent development, company culture, employee engagement, and community impact.



Hosting events and initiatives

We use national and international events such as Pride Month, Black History Month, and Veterans Day—as well as our own DIB Champion Diversity Week—to educate our employees and encourage them to get involved in this work. For example:

- In March 2022, we celebrated International Women’s Day and Women’s History Month with meaningful events focused on career development, such as the “Know Your Worth” panel hosted by our Women Empowered (WE) ERG. With senior speakers from Lumen, the event included a range of progression-related discussions and a Q&A session to explore the speakers’ career journeys and how they overcame challenges they have faced.
- In June 2022, we hosted Pride Month and Juneteenth to promote LGBTQ+ and Black/African American inclusiveness in our global workforce. For example, our Alliance of Black Technology Professionals (ABTP) ERG hosted a panel event with the Greater Urban League of Arizona to discuss the history of Juneteenth and the Urban League’s role in advancing inclusion for Black professionals throughout history. In July, we celebrated Disability Pride Month with our Friends Respecting Inspiring Everyone Needing Disability Support (FRIENDS) ERG, marking the anniversary of the Americans with Disabilities Act.
- In October 2022, we held Diversity, Inclusion, and Belonging Month with the theme “Educate, Elevate, and Empower.” It included Lumen CX Day with a keynote speaker and ERG 101 course that promoted our ERGs. We also hosted storytelling sessions including “The Stories Behind Our Names” and “Stories of Inclusion & Belonging,” which featured Lumen employees sharing their personal experiences.

Awards and recognition

We are proud of the host of awards we receive that acknowledge our achievements in fostering an equitable environment that promotes diversity, inclusion, and belonging—they are a testament to our amazing culture.



Employee resource groups

Our employee resource groups (ERGs) have an important role in advancing DIB within our company. They assist with employee career development, increase employee engagement, and help us connect with our increasingly diverse customer base.

The 11 global ERGs are employee communities that give our people an avenue to contribute ideas for enhancing our inclusion efforts, as well as:

- Offering employee development and training via professional and technical forums



- Creating opportunities for social and professional networking
- Participating in community outreach through social, cultural, and educational events and sponsorships
- Celebrating Black History Month, Women’s History Month and International Women’s Day, Pride Month, Asian American and Pacific Islander Heritage Month, Military Appreciation Month and Veterans Day, National Hispanic Heritage Month, Native American and Indigenous Heritage Month, and Disability Pride Month
- Connecting members with opportunities to support 501(c)(3) organizations

Our ERGs also host events throughout the year, including those focused on well-being such as Mental Health Awareness, Employment Awareness, Stress Awareness, and Family Month. In 2022, programming included “Money Moves to Help You Bridge the Wealth Gap,” which discussed budgeting best practices; “Mom Burnout: The Struggle is Real,” designed to support mothers at Lumen; and the Pacific Asian Ancestry Network’s (PAAN) annual Dragon Boat Race—a family-friendly festival celebrating Asian heritage and culture.

During the year, we also celebrated the first anniversary of our WELL-BEING ERG, which focuses on all aspects of wellness, including financial, physical, and mental health, and promotes our inclusive benefits to all employees.

Our employee resource groups:

- Alliance of Black Technology Professionals (ABTP)
- Friends Respecting Inspiring Everyone Needing Disability Support (FRIENDS)
- Global Community
- NextGEN
- Pacific Asian Ancestry Network (PAAN)
- PRIDE Association of LGBTQ+ & Allies
- Somos
- Veterans, Active Military & Allies (VETS)
- Voice of Many Feathers
- Well-being
- Women Empowered (WE)



Supplier diversity

Diverse suppliers are critically important to us. We work hard to remove barriers and open doors, to expand the number of diverse suppliers competing for a wide range of business opportunities. It is also increasingly important to our customers—from 2021 to 2022, we experienced a significant increase in customer requests for information or reporting about our performance in this area.

We have integrated supplier diversity into our strategic sourcing process through measurable goals and objectives across federal, state, commercial customer, public utility, and social responsibility categories. The last helps us to create a lower barrier for entry and increase our spending with diverse suppliers in our communities. In the future, we plan to create an international category to expand our approach beyond the U.S.

In 2022, we launched a new Supplier Diversity Champions team. One of this group’s aims is to further integrate our supplier diversity objectives across the business, as well as to connect procurement teams with diverse suppliers capable of meeting the needs of specific projects.

By attending conferences—such as the National Minority Supplier Development Council Annual Conference & Exchange—and participating in other activities, we are able to build relationships with diverse suppliers. We now engage hundreds of companies directly in this way each year, encouraging them to use our [Supplier Diversity Registration Portal](#). We also actively participate in industry associations and initiatives. For example, we are members of the Mountain Plans Minority Supplier Development Council, the National Veteran-Owned Business Association, the Minority Business Development Agency, and Chambers of Commerce across the U.S. that serve diverse communities.

We are continually learning and seeking ways to advance this agenda. For example, we request diversity information from our largest suppliers and benchmark ourselves against their performance. We also regularly engage with these suppliers to share best practices and understand which aspects of their approach we can learn from. In addition, we continue to expand the Lumen Tier 2 program, which aims to drive our standards deeper into our supply chain by requiring our suppliers to report to us about the diversity of their own suppliers.

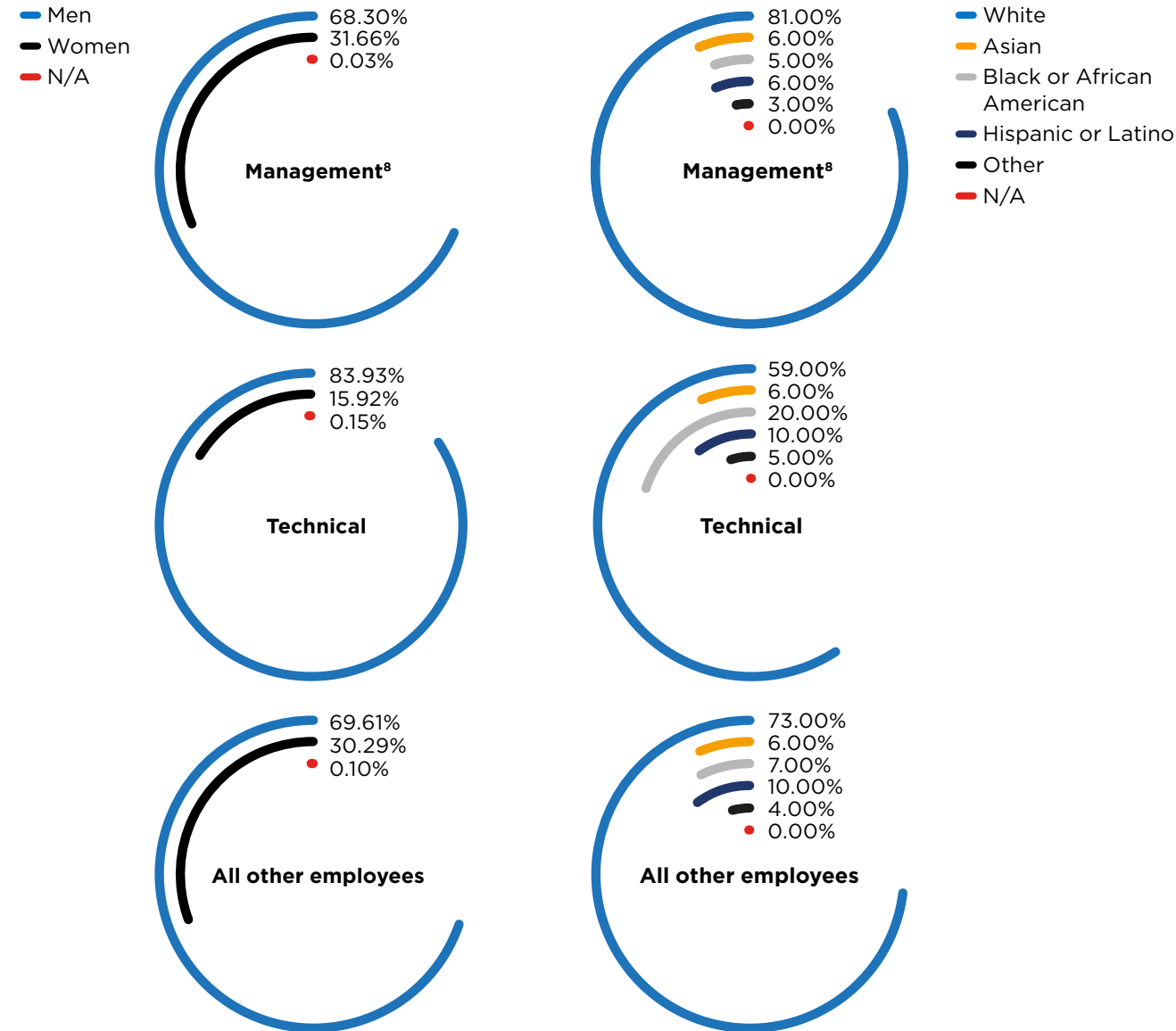


Our progress

We have historically published our gender representation and racial and ethnic groups of employees. To be more transparent about where we are and where we are headed, in March 2022, we published our EEO-1 data for the first time, with a commitment to publish it annually going forward. EEO-1 represents diversity data collected by the U.S. Equal Employment Opportunity Commission.

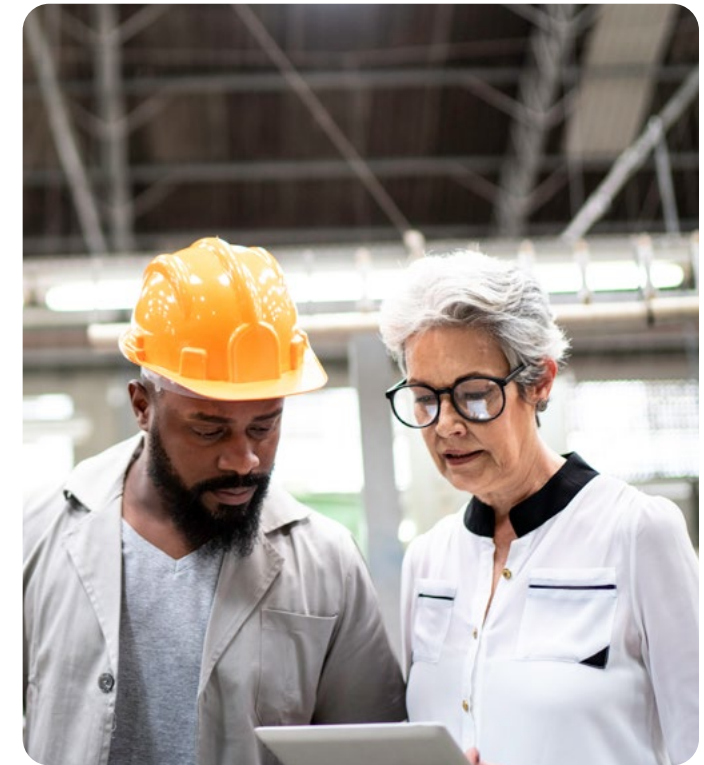
Board diversity continues to be a focus. We work to ensure our Board is identifying, maintaining, and evolving the complementary skills, experiences, and perspectives necessary to make meaningful contributions to shaping and implementing Lumen business strategies. In 2022, three of our 11 nominees were ethnically diverse and two were women. [Learn more about our Board.](#)

Gender, race, and ethnic representation of global employees⁷



⁷ Mapped to global job titles that correlated to U.S. job titles/OFCCP Code where applicable to determine gender representation globally. Data was calculated to align with the SASB framework.

⁸ Job classifications based on EEO-1 codes. EEO-1 codes only apply to the U.S. Data was calculated to align with the SASB framework.



Community engagement

For us, working with our communities is about having a positive influence on the world. Our employees’ passions are as diverse as they are, so we encourage and enable volunteering and giving to causes that are important to them and match their charitable donations.

Our vision

To support our communities while building a sense of community.

Our mission

To multiply our impact by supporting people’s passions, empowering the next generation of innovators, and providing for the basic needs of communities.

Our approach

We make strategic investments that create lasting positive results in the communities we serve. Our goal is to be a trusted community partner around the globe. We direct our charitable giving to three focus areas:

- The interests and passions of our employees
- Young people, who are the next generation of innovators
- The basic needs of our local communities

More and more employees want to work for companies that actively support their communities. The chart to the right shows the strategic support provided through the Lumen Foundation—each of these programs being core to our company purpose of unleashing the world’s digital potential.

Our new Lumen Cares Portal—launched in February 2022 in the U.S. and March 2023 in EMEA and Asia-Pacific regions—allows us to partner with our employees to increase our collective impact in our communities. Through the portal, employees can support the nonprofit organizations they are passionate about, find opportunities to volunteer with peers, and earn rewards for their volunteer time. During its first year, our employees used the portal to support nearly 3,500 nonprofit organizations.

Lumen Clarke M. Williams Foundation

Volunteer Rewards Program

We encourage employees and teams to actively volunteer for causes that are important to them. Through our Volunteer Rewards Program, employees can earn monetary donations for causes of their choice.

Employee Giving Program

Employees can easily donate to charities of their choice at any point in the year through payroll deduction with a potential corporate match.

Campaign to Fight Hunger

Employees can make monetary donations through an annual campaign to support food relief organizations around the globe.



Lumen Cares Program

We encourage volunteerism year-round and are proud to record thousands of volunteer-service hours every year.

To amplify our employees' impact, we provide Volunteer Rewards for every volunteer hour tracked. These rewards of up to \$1,000 per employee per year are provided as donation credits that employees can then donate to the nonprofit organizations of their choice.

In 2022, Lumen employees logged more than 18,000 volunteer hours and, with matching and volunteer rewards from the Lumen Clarke M. Williams Foundation, donated \$1.7M to more than 3,000 nonprofits in our communities.

Employee Giving Program

Through our Employee Giving Program, employees in the U.S. can make one-time or recurring donations to eligible nonprofit organizations through multiple payment methods. These donations are matched 100 percent up to \$1,000 per year for standard giving. Additional match options are offered during the year for special campaigns such as Giving Tuesday and our Campaign to Fight Hunger. In 2022, we offered a special triple match for Giving Tuesday and partnered with our ERGs, asking them to select organizations to be promoted through our Volunteer and Giving portal as featured giving opportunities.

During the year, our employees contributed \$781,837 in individual donations to 3,448 nonprofit agencies. The Lumen Clarke M. Williams Foundation added over \$960,000 in match funding to increase the impact of our employees' donations.

Education and STEM programs

We want to provide future generations with the technology, education, and skills they need to succeed in an increasingly digital and connected world. We are committed to doing that by supporting youth education and technology-focused initiatives. Lumen strives to engage with students early to garner interest in the science, technology, engineering, and mathematics (STEM) curriculum and careers.

In 2022, we partnered with Destination Imagination® to launch a global STEM outreach initiative, designed to help students living in underserved communities build vital skills for the digital economy. The program introduced STEM concepts and aptitudes, such as creative thinking, to participants in the U.S., Canada, Nigeria, Pakistan, South Africa, Botswana, and Zanzibar.

More than 100 Lumen employees volunteered to mentor more than 50 teams, comprising 365 students across three continents, and to help evaluate student projects. The pilot program showed a positive impact on the participants' confidence in expressing their ideas and collaborating in a group and developed their computer science skills and knowledge of artificial intelligence and robots.

Key metrics

71%

overall engagement in the semiannual employee engagement survey

50

states received charitable donations



P-TECH

An innovative school partnership that supports talented students from under-resourced, diverse communities who want to pursue a career in technology

PCs for People

Donating our used computers and equipment to low-income individuals and nonprofits in our communities. We ensure all used computers and equipment are securely wiped of Lumen and customer data before donation

Tech Tours

Creating job-shadowing, campus tours, and learning opportunities for our employees to connect with the next generation of creative minds



Pathways in Technology Early College High School

Through P-TECH (Pathways in Technology Early High School) program, volunteers from Lumen work with schools to develop essential workplace competencies and technical skills. We assist the design of high school and college courses that will be taught to underrepresented or low-income students. Our goal is to provide subject matter expertise and unique opportunities for these students to imagine a future in technology—and potentially with Lumen.

Students that apply to P-TECH commit to obtaining an associate degree in Applied Science in Technology through a partnered community college within six years. In 2022, we continued to offer virtual “Lumen Learning Labs” in the areas of artificial intelligence, big data, cybersecurity, and professional skills. Professionals from Lumen designed content material and participated in panel sessions with students. We also provided recruiting information and a virtual operations academy.

We are proud of our P-TECH cohorts, who represent first-generation college seekers, English language learners, women, and students who are considered underrepresented or low-income. These students are important to our future, and we are honored to support them.

Campaign to Fight Hunger

We know that to unlock a person’s potential, their basic needs must be met. Since 2009, we have worked to do that through our annual Campaign to Fight Hunger.

Through the campaign, we encourage our people to donate to food banks around the world and help raise awareness of food insecurity. In 2022, the donations of our people and a corporate match enabled us to provide over 472,599 meals for those in need, in partnership with around 109 organizations. Since its inception, we have provided more than 83 million meals in our communities.

Driving digital equity through connectivity

We are a major participant in Federal Communications Commission (FCC) programs that are designed to help families and communities access essential resources online:

- The Affordable Connectivity Program (see case study) provides monthly discounts on broadband service to eligible residential subscribers. Residents of tribal lands may qualify for additional benefits.
- Lifeline helps low-income households stay connected by providing discounts on qualifying voice or broadband services to eligible residential subscribers. Residents of tribal lands may qualify for an additional discount, as well as support for initial installation costs for new service.
- E-rate provides funding to make broadband services more affordable for schools and libraries.
- The Rural Health Care Program provides reduced rates to help healthcare providers with broadband services.

Affordable connectivity for low-income households

In November 2021, the Infrastructure Investment and Jobs Act provided a historic \$65 billion for broadband deployment and affordability—including \$14.2 billion for the Affordable Connectivity Program (ACP), launched in April 2022 to ensure that households can afford the broadband they need for work, school, healthcare, and more. The program provides eligible households a discount of up to \$30 per month (up to \$75 on qualifying tribal lands) for broadband service.

Lumen is committed to playing an active role in bridging the digital divide and promoting digital equity. We actively participated in the ACP’s predecessor, the Emergency Broadband Benefit Program. To help ensure ACP reaches the people who need it, we advertise the program in local newspapers in the states where we offer the service, as well as in telephone directories, on social media, and on our website. We also communicate about the program to existing customers, including how it can benefit approved low-income customers in our annual Customer Rights Letters and on our [ACP Website](#). By the end of 2022, Lumen had over 25,000 customers enrolled in the ACP.

Powering the energy sciences network

Lumen has been a long-time collaborator and partner with the U.S. Department of Energy’s Energy Sciences Network (ESnet), which operates an international network dedicated to scientific research. ESnet has an inspiring vision that research should not be constrained by the physical location of researchers, instruments, or computational resources. Brilliant minds should be able to collaborate across borders and disciplines.

The latest version, ESnet6, brings the bandwidth, speed, scalability, and security that thousands of researchers and scientists around the world need to explore our world and help create a better future. Lumen is proud to support those aspirations with our high-speed fiber-optic cable and colocation space in the U.S.

Lumen provides the backbone fiber network for ESnet within the continental U.S. with a network footprint of more than 15,000 miles of fiber-optic cable. Our connectivity is adding new capabilities for ESnet to manage the immense data flows involved in cutting-edge research.

Occupational health and safety

Providing a safe and healthy working environment for our people, partners, and visitors is of paramount importance. We are committed to workplaces that are free of recognized hazards.



Our approach

We design our safety management systems to drive continuous improvement in performance by incorporating “risk-based thinking” into our organizational objectives and goals. Our Environment, Health, and Safety (EHS); Risk Management; and Operations teams continuously monitor safety performance to identify trends and evaluate opportunities to eliminate or reduce the risks of workplace hazards.

We conduct safety culture improvement campaigns using innovative tools that engage with employees to better understand their safety needs, knowledge base, and concerns. These campaigns ask participants to rate statements related to workplace safety and comment on related questions. Designated responders review comments and engage with participants regarding their safety program input. In some instances, immediate corrective actions are taken. All participant feedback and participant-responder conversations are reviewed using AI to identify primary themes. Our management team then develops and implements an action plan to address safety improvement opportunities. In 2022, we conducted three campaigns that resulted in action plans that included increasing opportunities for instructor-led training, clarifying procedures around obtaining safety supplies and equipment, and refreshing our fleet of company vehicles.

Occupational health and safety practices

Our EHS team conducts risk assessments, reviews safety incident data, and monitors health and safety legislation to develop policies and procedures that eliminate or control safety hazards and help us comply with laws and regulations.

In the United States, our Mutual Occupational Safety and Health (MOSH) committees give represented employees opportunities to participate in the

development and implementation of our safety management systems. The committees identify, evaluate, and help to implement practical and sustainable solutions to workplace health and safety issues.

In 2022, we were able to revive in-person attendance at Lumen “Safety Rodeos.” These events include demonstrations of critical safety practices; inspections of tools, vehicles, and equipment; driver safety evaluations; and other activities intended to promote a culture of safety.





Returning injured employees to improved health

We are committed to reducing the risks of employee injuries. When work-related injuries do occur, our workers' compensation claims management approach is designed to provide the best care to injured workers so they can return to their families and their jobs as quickly and as fully as possible. This philosophy has evolved recently with the adoption of an advocacy-centric approach. Adding dedicated worker-advocacy resources and creating predictive models that use our historical data to identify claims that may need extra care has resulted in an improved experience and more rapid return to work for our employees.

Our approach to returning employees to improved health and well-being earned Lumen a 2022 Workers' Comp Risk Management Award for Excellence.



Incident and hazard reporting

Our employees are responsible for reporting work-related incidents immediately to their manager and to the company's 24/7 reporting system. This includes on-the-job injuries and illnesses, motor vehicle collisions, and property or equipment damage. We investigate reported safety incidents so we can identify ways to prevent similar events in the future. We also report safety incidents to government agencies when legally required.

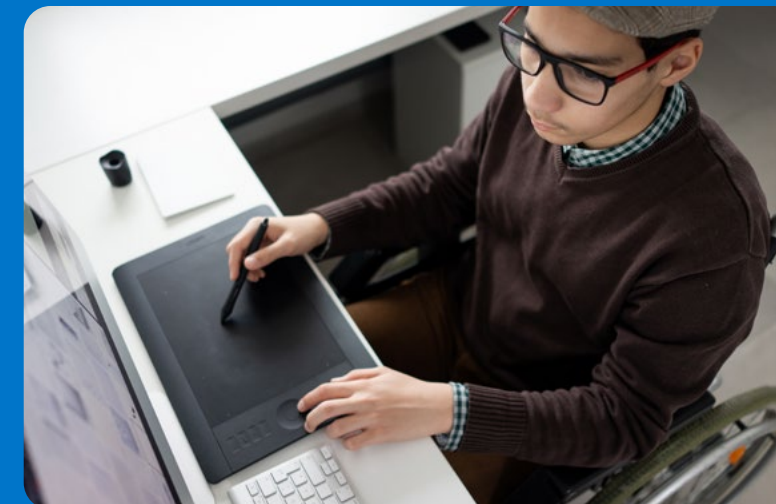
We require our people to quickly report unsafe or hazardous conditions or suspected violations of the law to their managers. Managers must then provide the necessary notices, warnings, or controls to keep people safe and report the condition to our 24/7 incident reporting system. Suspected violations of our Code of Conduct or legal obligations are reported to our [Integrity Line](#).

Safety performance

In 2022, our Occupational Safety and Health Administration (OSHA) recordable occupational injury and illness rate in the United States was 1.2, well below the industry average of 2.2 per 100 employees for wired telecommunications companies.⁹ In 2022, there were no OSHA citations issued to Lumen for instances of noncompliance with health and safety laws and regulations.

⁹ As of year-end 2021, the most recent available data reported by the Bureau of Labor Statistics (BLS).

ESG appendix



In this section

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Responsible corporate citizenship has long been a part of the way we do business. Our 2022 ESG Report summarizes our efforts in 2022 and gives an overview of our plans for 2023 and beyond for our integrated, cohesive sustainability strategy. Reported data and progress refer to calendar year 2022, unless otherwise noted.

We develop our ESG reporting and align with the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). We also use the insights we gain through our stakeholder engagement and materiality assessment processes (see [Double materiality assessment](#)) to guide enhancements to our ESG program, including reporting.

Assessing applicability and responsibly implementing reporting is an iterative process. We believe that aligning with these standards, in addition to other financial and voluntary reporting, provides stakeholders relevant and targeted context about Lumen business strategy for a rapidly changing world.

Task Force on Climate-related Financial Disclosures (TCFD) Index

As noted by WSP, our TCFD alignment is mature, and all the TCFD requirements are met by our 2023 CDP Climate Change Response. We have included a few minor recommendations to further enhance disclosure. We considered the recommendations of the TCFD as we developed this report. For more information on our climate strategy, see our [CDP Response](#).

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
Governance				
Disclose the organization’s governance around climate-related risks and opportunities	a) Describe the board’s oversight of climate-related risks and opportunities	Processes and frequency by which the board and/or board committees are informed about climate-related issues.	2023 CDP Climate Change Response—C1.1, C1.1a, C1.1b	p. 4-8
		Whether the board and/or board committees consider climate-related issues when reviewing and guiding strategy, major plans or action, risk management policies, annual budgets, and business plans as well as setting the organization’s performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures.	2023 Proxy Statement—ESG Sustainability Leadership	p. 47
		How the board monitors and oversees progress against goals and targets for addressing climate-related issues.		
	b) Describe management’s role in assessing and managing climate-related risks and opportunities	Whether the organization has assigned climate-related responsibilities to management-level positions or committees; and, if so, whether such management positions or committees report to the board or a committee of the board and whether those responsibilities include assessing and/or managing climate-related issues,	2023 CDP Climate Change Response—C1.2, C1.2a	p. 8-10
		A description of the associated organizational structure(s),	2023 Proxy Statement—ESG Sustainability Leadership	p. 47
		Processes by which management is informed about climate-related issues, and		
		How management (through specific positions and/or management committees) monitors climate-related issues.		

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
Strategy				
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	<p>A description of what they consider to be the relevant short-, medium-, and long-term horizons, taking into consideration the useful life of the organization's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms;</p> <p>A description of the specific climate-related issues potentially arising in each time horizon (short-, medium-, and long-term) that could have a material financial impact on the organization; and</p> <p>A description of the process(es) used to determine which risks and opportunities could have a material financial impact on the organization.</p> <p>Organizations should consider providing a description of their risks and opportunities by sector and/or geography, as appropriate. In describing climate-related issues, organizations should refer to Tables A1 and A2 (p. 72-73 of TCFD Implementation doc).</p>	2023 CDP Climate Change Response—C2.1, C2.2, C2.2a	p. 12-23
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	<p>Impact on their business and strategy in the following areas:</p> <ul style="list-style-type: none"> • Products and services • Supply chain and/or value chain • Adaptation and mitigation activities • Investment in research and development • Operations (including types of operations and location of facilities) 	2023 CDP Climate Change Response—C2.1b, C2.3, C2.3a, C2.4, C2.4a	p. 12, 23-39

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning (Continued)</p>	<p>b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning (Continued)</p>	<p>Organizations should describe how climate-related issues serve as an input to their financial planning process, the time period(s) used, and how these risks and opportunities are prioritized. Organizations' disclosures should reflect a holistic picture of the interdependencies among the factors that affect their ability to create value over time. Organizations should also consider including in their disclosures the impact on financial planning in the following areas:</p> <ul style="list-style-type: none"> • Operating costs and revenues • Capital expenditures and capital allocation • Acquisitions or divestments • Access to capital <p>If climate-related scenarios were used to inform the organization's strategy and financial planning, such scenarios should be described.</p> <p>Supplemental Guidance for Non-Financial Groups</p> <p>Organizations should consider discussing how climate-related risks and opportunities are integrated into their (1) current decision making and (2) strategy formulation, including planning assumptions and objectives around climate change mitigation, adaptation, or opportunities such as:</p> <ul style="list-style-type: none"> • Research and development (R&D) and adoption of new technology • Existing and committed future activities such as investments, restructuring, write downs, or impairment of assets • Critical planning assumptions around legacy assets; for example, strategies to lower carbon-, energy-, and/or water-intensive operations • How GHG emissions, energy, and water issues, if applicable, are considered in capital planning and allocation; this could include a discussion of major acquisitions and divestments, joint ventures, and investments in technology, innovation, and new business areas in light of changing climate-related risks and opportunities • The organization's flexibility in positioning/repositioning capital to address emerging climate-related risks and opportunities 		

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning (Continued)</p>	<p>c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario</p>	<p>Organizations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks.</p> <p>Organizations should consider discussing:</p> <ul style="list-style-type: none"> • Where they believe their strategies may be affected by climate-related risks and opportunities; • How their strategies might change to address such potential risks and opportunities; and • The climate-related scenarios and associated time horizon(s) considered. <p>Supplemental Guidance for Non-Financial Groups</p> <p>Organizations with more than one billion U.S. dollar equivalent (USDE) in annual revenue should consider conducting a more robust scenario analysis to assess the resilience of their strategies against a range of climate-related scenarios, including a 2°C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks.</p> <p>Organizations should consider discussing the implications of different policy assumptions, macro-economic trends, energy pathways, and technology assumptions used in publicly available climate-related scenarios to assess the resilience of their strategies. For the climate-related scenarios used, organizations should consider providing information on the following factors to allow investors and others to understand how conclusions were drawn from scenario analysis:</p> <ul style="list-style-type: none"> • Critical input parameters, assumptions, and analytical choices for the climate-related scenarios used, particularly as they relate to key areas such as policy assumptions, energy deployment pathways, technology pathways, and related timing assumptions. • Potential qualitative or quantitative financial implications of the climate-related scenarios, if any. 	<p>2023 CDP Climate Change Response—C3.1, C3.2, C3.2a, C3.2b, C3.3, C3.4</p>	<p>p. 39-45</p>

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
Risk Management				
Disclose how the organization identifies, assesses and manages climate-related risks	a) Describe the organization's processes for identifying and assessing climate-related risks	<p>Organizations should describe their risk management processes for identifying and assessing climate-related risks. An important aspect of this description is how organizations determine the relative significance of climate-related risks in relation to other risks.</p> <p>Organizations should describe whether they consider existing and emerging regulatory requirements related to climate change (e.g., limits on emissions) as well as other relevant factors considered.</p> <p>Organizations should also consider disclosing the following: processes for assessing the potential size and scope of identified climate-related risks and definitions of risk terminology used or references to existing risk classification frameworks used.</p>	2023 CDP Climate Change Response—C.2.2	p. 13-19
	b) Describe the organization's processes for managing climate-related risks	<p>Organizations should describe their processes for managing climate-related risks, including how they make decisions to mitigate, transfer, accept, or control those risks. In addition, organizations should describe their processes for prioritizing climate-related risks, including how materiality determinations are made within their organizations.</p> <p>In describing their processes for managing climate-related risks, organizations should address the risks included in Tables A1 and A2 (pp. 72-73 of implementation document), as appropriate.</p>	2023 CDP Climate Change Response—C1.2, C2.2	p. 8-10, 13-19
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	Organizations should describe how their processes for identifying, assessing, and managing climate-related risks are integrated into their overall risk management.	2023 CDP Climate Change Response—C1.1b, C1.2, C2.1b, C2.2	p. 6-10, 12-19

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
Metrics				
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	<p>Organizations should provide the key metrics used to measure and manage climate related risks and opportunities as described in Tables A1 and A2 (pp. 72-73). Organizations should consider including metrics on climate-related risks associated with water, energy, land use, and waste management where relevant and applicable. Where climate-related issues are material, organizations should consider describing whether and how related performance metrics are incorporated into remuneration policies. Where relevant, organizations should provide their internal carbon prices as well as climate related opportunity metrics such as revenue from products and services designed for a lower-carbon economy. Metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate climate-related metrics.</p> <p>Supplemental Guidance for Non-Financial Groups</p> <p>For all relevant metrics, organizations should consider providing historical trends and forward-looking projections (by relevant country and/or jurisdiction, business line, or asset type). Organizations should also consider disclosing metrics that support their scenario analysis and strategic planning process and that are used to monitor the organization’s business environment from a strategic and risk management perspective. Organizations should consider providing key metrics related to GHG emissions, energy, water, land use, and, if relevant, investments in climate adaptation and mitigation that address potential financial aspects of shifting demand, expenditures, asset valuation, and cost of financing. Illustrative examples of metrics for each of the four non-financial groups are provided in the tables listed below.</p>	<p>2023 CDP Climate Change Response—C4.1a, C4.2, C4.3</p> <p>Various environmental sustainability metrics tables in this report contain established resource efficiency and energy source-related metrics. We are in the process of developing additional metrics related to our climate-related risks and opportunities.</p>	p. 46-60

Disclosure focus area	Disclosures	TCFD recommendations	Company response	Location
<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities (Continued)</p>	<p>b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks</p>	<p>Organizations should provide their Scope 1 and Scope 2 GHG emissions and, if appropriate, Scope 3 GHG emissions and the related risks.</p> <p>GHG emissions should be calculated in line with the GHG Protocol methodology to allow for aggregation and comparability across organizations and jurisdictions.</p> <p>As appropriate, organizations should consider providing related, generally accepted industry-specific GHG efficiency ratios.</p> <p>GHG emissions and associated metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate the metrics.</p>	<p>2023 CDP Climate Change Response—C6.1, C6.2, C6.3, C6.4, C6.5, C6.5a, C6.7, and various associated environmental sustainability metrics tables in this report.</p>	<p>p. 77–91</p>
	<p>c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets</p>	<p>Organizations should describe their key climate-related targets such as those related to GHG emissions, water usage, energy usage, etc., in line with anticipated regulatory requirements or market constraints or other goals. Other goals may include efficiency or financial goals, financial loss tolerances, avoided GHG emissions through the entire product lifecycle, or net revenue goals for products and services designed for a lower carbon economy.</p> <p>In describing their targets, organizations should consider including the following:</p> <ul style="list-style-type: none"> • Whether the target is absolute or intensity-based • Time frames over which the target applies • Base year from which progress is measured • Key performance indicators used to assess progress against targets <p>Where not apparent, organizations should provide a description of the methodologies used to calculate targets and measures.</p>		

Sustainability Accounting Standards Board (SASB) Index

The gaps mirror the metrics that were under evaluation for possible future reporting during the 2022 reporting period. This includes the following areas:

- Data Privacy & Freedom of Expression
- Data Security
- Intellectual Property Protection, Competitive Behavior, & Open Internet
- Managing Systemic Risks from Technology Disruptions
- Activity Metrics

Largely the outstanding metrics have a quantitative unit of measure. If any of these metrics remain infeasible, we have included the SASB guidance on omissions to the right.

Omissions and modifications:

The SASB recognizes that standardized disclosures of financially material sustainability information to investors is a relatively new area of practice, and certain accounting metrics may be infeasible to disclose in the near term for some entities. The SASB encourages entities to use the benchmark language in SASB Standards Application Guidance VERSION 2018-10 SASB.ORG 2 SASB STANDARDS APPLICATION GUIDANCE VERSION 2018-10 to guide investor disclosures even in the event that certain disclosure topics and/or associated metrics must be omitted and/or modified.

An entity that omits one or more disclosure topics and/or accounting metrics should disclose the omission(s), as well as the rationale for the omission(s). For example, if a disclosure topic does not apply to an entity's business model, the entity should disclose that the topic and its associated metrics were omitted based on the lack of applicability.

If an entity believes it necessary to modify a metric, the entity shall disclose the fact that the metric was changed, as well as the rationale for the change.

This index responds to the SASB Standards for the Technology and Communications industry, aligning to the Telecommunications and Software & IT Services sectors. Data is as of or for the year ended Dec. 31, 2022, unless otherwise noted.

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Software and IT Services Standard (2018)						
Environmental Footprint of Hardware Infrastructure	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	TC-SI-130a.1	(1) 4,072,066 MWh = 14,659,438 GJ (2022) (2) 95.00% (2022) (3) 5% (2022)	2022 ESG Report p. 39
	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m ³), Percentage (%)	TC-SI-130a.2	(1) 352,970,087 gallons = 1,336,137 m ³ (2022) (2) Not disclosed at this time.	2022 ESG Report p. 41
	Discussion of the integration of environmental considerations into strategic planning for data center needs	Discussion and Analysis	N/A	TC-SI-130a.3	The Lumen Environmental Management System (EMS) helps identify and reduce the environmental impacts of operations, drives continuous improvement in results, and facilitates regulatory compliance. The EHS team assesses and reviews company programs, operational facilities, and waste management vendors while monitoring environmental legislative activity and collaborating with internal groups to develop documented practices and procedures. The Lumen Energy Management team leads an active program to improve efficiency and minimize GHG emissions in facilities across the world, such as developing an energy network operations center (ENOC) to centrally monitor, manage, and reduce facility energy use via energy management and control systems and advanced data analytics. Lumen facilities in Italy, Belgium, Germany, France, the Netherlands, and the United Kingdom are certified in accordance with ISO 50001.	2022 ESG Report p. 29 2022 ESG Report p. 40 2023 CDP Climate Change Response > p. 36-42.

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Data Privacy & Freedom of Expression	Description of policies and practices relating to behavioral advertising and user privacy	Discussion and Analysis	N/A	TC-SI-220a.1	We protect the data and information Lumen collects, stores, uses, and shares. Employee and customer data is encrypted, consistent with industry standards or legal requirements, both at rest and in transmission. The Lumen Privacy Notice details what information is collected; how it is used, protected and shared; and the protocol for its deletion.	2022 ESG Report p. 16 2022 ESG Report p. 21 2022 ESG Report p. 22 2022 Annual Report and Proxy p. 45 Lumen Privacy Notice
	Number of users whose information is used for secondary purposes	Quantitative	Number	TC-SI-220a.2	Not disclosed at this time.	N/A
	Total amount of monetary losses as a result of legal proceedings associated with user privacy	Quantitative	Reporting currency	TC-SI-220a.3	Not disclosed at this time.	N/A
	(1) Number of law enforcement requests for user information, (2) number of users whose information was requested, (3) percentage resulting in disclosure	Quantitative	Number, Percentage (%)	TC-SI-220a.4	Criminal demands by type from July 1–Dec. 31, 2022. Total number of subpoenas as well.	Transparency Report
	List of countries where core products or services are subject to government-required monitoring, blocking, content filtering, or censoring	Discussion and Analysis	N/A	TC-SI-220a.5	Not disclosed at this time.	N/A

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Data Security	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	Quantitative	Number, Percentage (%)	TC-SI-230a.1	Not disclosed at this time.	N/A
	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	Discussion and Analysis	N/A	TC-SI-230a.2	To assess and mitigate cybersecurity risk, we have implemented a global information security management program that includes administrative, technical, and physical safeguards, and we periodically engage both internal and external auditors and consultants to assess and enhance our program, all of which are subject to oversight by and reporting to the Risk and Security Committee. The company engages independent external auditors and consultants who are fully accredited under various information security standards, including ISO 27001, the Payment Card Industry (PCI) Security Standards Council, and the American Institute of Certified Public Accountants (AICPA).	2022 ESG Report p. 20 2022 Annual Report and Proxy p. 45
Recruiting & Managing a Global, Diverse & Skilled Workforce	Percentage of employees that are (1) foreign nationals and (2) located offshore	Quantitative	Percentage (%)	TC-SI-330a.1	We do not break down this data; however at Dec. 31, 2022, we had approximately 29,000 employees worldwide, including approximately 5,000 outside the U.S.	Lumen 10-K 2023 p. 8
	Employee engagement as a percentage	Quantitative	Percentage (%)	TC-SI-330a.2	The Human Resources and Compensation Committee (HRCC) reviews management efforts and metrics to ensure that our culture fosters ethical behavior, promotes high levels of employee engagement, and supports a high-performance work environment. Our strategy strives to inspire employees with purpose as we demonstrate our many connections to unleashing the world's digital potential. At least twice a year, a detailed survey is conducted to measure engagement and is reviewed by the HRCC. Our most recent engagement survey, completed in October 2022, yielded a substantial overall engagement score (71 percent positive) with a strong level of employee participation (67 percent).	Lumen Proxy 2023 > Culture shaping and engagement p. 100
	Percentage of gender representation for (1) management, (2) technical staff, and (3) all other employees	Quantitative	Percentage (%)	TC-SI-330a.3	Gender representation of global employees: (1) Women: 31.66%, Men: 68.30%, N/A: 0.03% (2) Women: 15.92%, Men: 83.93%, N/A: 0.15% (3) Women: 30.29%, Men: 69.61%, N/A: 0.00%	2022 ESG Report p. 53

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Intellectual Property Protection & Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Quantitative	Reporting currency	TC-SI-520a.1	Not disclosed at this time.	N/A
Managing Systemic Risks from Technology Disruptions	Number of (1) performance issues and (2) service disruptions; (3) total customer downtime	Quantitative	Number, Days	TC-SI-550a.1	Not disclosed at this time.	N/A
	Description of business continuity risks related to disruptions of operations	Discussion and Analysis	N/A	TC-SI-550a.2	<p>As part of our risk management strategy, Lumen is committed to ensuring business resilience and survivability during an incident or business disruption. Our Business Continuity Management (BCM) is designed to safeguard Lumen employees, assets, stakeholders, and reputation in the event of a potential or actual critical business disruption. BCM supports an environment of prevention, collaboration, communication, and response, enabling us to recover effectively if a major incident occurs. Our BCM adheres to ISO 22301:2012, the International Standard for BCM, and engages with internal and external auditors to assess the program's efficacy and compliance with customer requirements.</p> <p>By aligning to the company's goals and using a proven standards-based framework, our BCM program supports an environment of prevention, collaboration, communication, and response. This enables us to effectively adapt, respond to, and recover if a major incident occurs. Our BCM adheres to ISO 22301:2012, the International Standard for BCM, and engages internal and external auditors to assess the program's efficacy and compliance with customer requirements.</p>	<p>2022 ESG Report p. 23</p> <p>2022 ESG Report p. 36</p>

Activity Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
(1) Number of licenses or subscriptions (2) percentage cloudbased	Quantitative	Number, Percentage (%)	TC-SI-000.A	Not disclosed at this time.	N/A
(1) Data processing capacity (2) percentage outsourced	Quantitative	See note	TC-SI-000.B	Not disclosed at this time.	N/A
(1) Amount of data storage (2) percentage outsourced	Quantitative	Petabytes, Percentage (%)	TC-SI-000.C	Not disclosed at this time.	N/A

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Telecommunication Services Standard (2018)						
Environmental Footprint of Operations	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	TC-TL-130a.1	(1) 4,072,066 MWh = 14,659,438 GJ (2022) (2) 95.00% (2022) (3) 5% (2022)	2022 ESG Report p. 40
Data Privacy	Description of policies and practices relating to behavioral advertising and customer privacy	Discussion and Analysis	N/A	TC-TL-220a.1	We protect the data and information Lumen collects, stores, uses, and shares. Employee and customer data is encrypted, consistent with industry standards or legal requirements, both at rest and in transmission. See Lumen Privacy Notice.	2022 ESG Report p. 22 2022 Annual Report and Proxy p. 45 Lumen Privacy Notice
	Number of customers whose information is used for secondary purposes	Quantitative	Number	TC-TL-220a.2	Not disclosed at this time.	N/A
	Total amount of monetary losses as a result of legal proceedings associated with customer privacy	Quantitative	Reporting currency	TC-TL-220a.3	Not disclosed at this time.	N/A
	(1) Number of law enforcement requests for customer information, (2) number of customers whose information was requested, (3) percentage resulting in disclosure	Quantitative	Number, Percentage (%)	TC-TL-220a.4	Criminal demands by type from July 1–Dec. 31, 2022. Total number of subpoenas as well.	Transparency Report

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Data Security	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of customers affected	Quantitative	Number, Percentage (%)	TC-TL-230a.1	Not disclosed at this time.	N/A
	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	Discussion and Analysis	N/A	TC-TL-230a.2	<p>To assess and mitigate cybersecurity risk, we have implemented a global information security management program that includes administrative, technical, and physical safeguards, and we periodically engage both internal and external auditors and consultants to assess and enhance our program, all of which are subject to oversight by and reporting to the Risk and Security Committee.</p> <p>The company engages independent external auditors and consultants who are fully accredited under various information security standards, including ISO 270001, the Payment Card industry (PCI) Security Standards Council, and the American Institute of Certified Public Accountants (AICPA).</p>	<p>2022 ESG Report p. 22</p> <p>2022 Annual Report and Proxy p. 45</p>
Product End-of-Life Management	(1) Materials recovered through take-back programs, percentage of recovered materials that were (2) reused, (3) recycled, and (4) landfilled	Quantitative	Metric tons (t), Percentage (%)	TC-TL-440a.1	Our modem/router takeback program allows customers to return their modems/routers, which are then either reused or sent to an R2-certified recycler for disposal.	<p>2022 ESG Report p. 42</p> <p>Lumen 10-K 2023 p. 11</p>

Topic	Accounting Metric	Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Competitive Behavior & Open Internet	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Quantitative	Reporting currency	TC-TL-520a.1	Not disclosed at this time.	N/A
	Average actual sustained download speed of (1) owned and commercially-associated content and (2) non-associated content	Quantitative	Megabits per second (Mbps)	TC-TL-520a.2	Not disclosed at this time.	N/A
	Description of risks and opportunities associated with net neutrality, paid peering, zero rating, and related practices	Discussion and Analysis	N/A	TC-TL-520a.3	Not disclosed at this time.	N/A
Managing Systemic Risks from Technology Disruptions	(1) System average interruption frequency and (2) customer average interruption duration	Quantitative	Disruptions per customer. Hours per customer	TC-TL-550a.1	Not disclosed at this time.	N/A
	Discussion of systems to provide unimpeded service during service interruptions	Discussion and Analysis	N/A	TC-TL-550a.2	BCM maintains uninterrupted service whenever possible and, when necessary, coordinates recovery from business disruptions safely and quickly.	2022 ESG Report p. 23
Activity Metric		Category	Unit of Measure	Code	Lumen Data/Information Source	Reference
Number of wireless subscribers		Quantitative	Number	TC-TI-000.A	Not disclosed at this time.	N/A
Number of wireline subscribers		Quantitative	Number	TC-TI-000.B	Not disclosed at this time.	N/A
Number of broadband subscribers		Quantitative	Number	TC-TI-000.C	At Dec. 31, 2022, we served 3.0 million consumer broadband subscribers. Our methodology for counting consumer broadband subscribers may not be comparable to that of other companies.	Lumen 10-K 2023 p. 39
Network traffic		Quantitative	Petabytes	TC-TI-000.D	Not disclosed at this time.	N/A

Disclaimer

The information in this report is subject to change, and Lumen will not necessarily disclose such changes. The information may be updated, amended, supplemented, or otherwise altered by subsequent reports or filings by Lumen. The contents of this voluntary ESG Report are informed by various frameworks, including standards and recommendations. These various frameworks define significant concepts differently, and we do not attempt to reconcile such differences in our overarching ESG approach. We plan to continue enhancing our ESG-related disclosures and increasing alignment with the referenced frameworks, even as such frameworks continue to rapidly evolve. As disclosure frameworks or reporting requirements change worldwide, the information we share and the way it is shared may change over time. While selected metrics receive limited assurance from an independent third party, this is inherently a less rigorous process than reasonable assurance sought in a typical auditing engagement. References in this ESG Report to certain data points should not be construed as a characterization regarding the “materiality” of such information, as evaluated in the context of U.S. securities laws. Except for historical and factual

information, the matters set forth in this ESG Report identified by words such as “will,” “should,” “expects,” “anticipates,” “believes,” “plans,” “intends,” and similar expressions are forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, many of which are beyond our control. Actual events and results may differ materially from those anticipated by us in those statements for several reasons, including those discussed in this ESG Report and under Item 1A, “Risk Factors,” and elsewhere in our Annual Report on Form 10-K for the year ended Dec. 31, 2022, as updated by Part II, Item 1A, “Risk Factors” in our subsequently filed Quarterly Reports on Form 10-Q and other documents we file from time to time with the U.S. Securities and Exchange Commission. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this ESG Report. Unless legally required, Lumen undertakes no obligation and expressly disclaims any such obligation to update publicly any forward-looking statements, whether as a result of new information, future events, or otherwise.

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