

LUMEN®

2023 ESG Report

Unleashing the World's
Digital Potential,
Responsibly.



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Our approach

We are pleased to present Lumen's 2023 Environmental, Social, and Governance (ESG) Report, highlighting our commitment to advancing the world's digital potential and sustainability.

As illustrated throughout the report, we are focused on our North Star strategy, which 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. Our people are actively transforming Lumen to infuse clarity, customer obsession, courage, a growth mindset, and allyship at work, while enhancing efforts in key sustainability areas, including network reliability and resilience, cybersecurity and data privacy, and ethical conduct.

We remain dedicated to creating lasting value for all our stakeholders through our continued commitment to sustainability.

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About this report

Lumen has a longstanding commitment to responsible corporate citizenship, a value deeply ingrained in its operations. This commitment is demonstrated by a history, spanning over a decade, of publishing corporate responsibility reports both by Lumen and its predecessor companies. Our 2023 ESG Report describes our year-round sustainability efforts, highlights our achievements in key areas, and provides transparency into how we are implementing our ESG strategy across the business. Reported data and progress refer to the calendar year 2023 unless otherwise noted.

We have aligned this report with the Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD) frameworks. We also disclose our climate mitigation activities annually through the CDP Climate Change Questionnaire.

We continually refine our ESG program and reporting, informed by valuable stakeholder engagement and materiality assessments. We conducted a double materiality assessment in 2023, which allowed us to identify, assess and prioritize our current, near-term and emerging ESG matters and contributed to the refinement of our ESG strategy.

We believe this alignment with recognized standards, combined with other financial and voluntary disclosures, offers stakeholders a comprehensive understanding of Lumen's ESG priority matters.

Lumen's reporting

[2023 ESG Report \(this report\)](#)
[2024 Proxy Statement](#)
[2023 Form 10-K](#)
[CDP Climate Change Questionnaire](#)

ESG-related policies

[Anti-Corruption Policy](#)
[Code of Conduct](#)
[Human Rights Policy](#)
[Integrity Line](#)
[Supplier Code of Conduct](#)
[Whistleblower Policy](#)

Corporate social responsibility

[Additional information can be found on our website.](#)

A message from our President and CEO

At Lumen, we are committed to supporting our employees and customers as we become the trusted network for AI. Our 2023 ESG Report showcases our dedication to innovation, sustainability, community engagement, and ethical governance.

AI needs data, data needs data centers, and data centers need connectivity – that is what we do at Lumen. The growth of AI presents a significant opportunity for Lumen, making our ESG efforts even more crucial. This year, we announced strategic partnerships with Microsoft, Corning, AWS, and others, marking key milestones in our work to build the backbone for the AI economy. Our collaborations with leading tech companies highlight our commitment to empowering customers in the digital age.

Reliable internet connectivity is essential for modern life. We have focused on digital inclusion, bringing high-speed broadband to more communities, enhancing participation in education, the digital economy, and healthcare. In 2024, New Mexico selected Lumen to provide high-speed fiber connectivity to its Statewide Education Network, benefiting K-12 public school students across the state.

We have also invested in sustainability, achieving our 2025 greenhouse gas reduction targets ahead of schedule. CDP (formerly the Carbon Disclosure Project) recognized our efforts, ranking us in the Leadership category with an A- score for our 2023 climate change disclosures.

Our progress at Lumen is driven by our strong, inclusive culture. Newsweek named us one of America's Greatest Workplaces for Diversity for 2024, and FlexJobs listed us among the Top 100 companies for remote jobs. Lumen ranked #1 in the Communication & Telecom sector in the 2023 and 2024 [American Opportunity Index](#). Our employee volunteer program has strong participation, and we are now a certifying organization for the President's Volunteer Service Award Program.

Governance is a cornerstone of our operations. We established an AI Advisory Board to ensure ethical AI implementation, considering privacy and security implications. We aim to leverage AI opportunities with proper governance in place.

These stories are just a few examples of the work being done across our organization. They reflect our core values and commitment to making a positive impact on the world by building a brighter, more sustainable, and connected future.

Kate Johnson
President and CEO



“These stories... reflect our core values and commitment to making a positive impact on the world by building a brighter, more sustainable, and connected future.”

About Lumen

Who we are

We are a facilities-based technology and communications company that provides a broad array of integrated products and services to our domestic and global business customers and our domestic mass markets customers. Our platform empowers our customers to swiftly adjust digital programs to meet immediate demands, create efficiencies, accelerate market access, and reduce costs—allowing customers to rapidly evolve their IT programs to address dynamic changes.

Our business strategy

In 2023, we solidified our transformational journey by introducing the North Star strategy, a guiding framework for our growth. This strategy provides clarity to both our team and stakeholders, outlining our identity, our target audience, and how we empower customers to thrive.

We have recently updated our North Star cultural framework to include Allyship as our eighth cultural behavior. Adding Allyship to our cultural behaviors represents our commitment to fostering a culture of belonging, empowerment, and positive change.

Financial strength: 2023 results¹

\$14.5 billion

Revenue



\$4.6 billion

Adj. EBITDA

\$1.8 billion

EMEA Business Divestiture

\$10 billion

Of Debt Maturities Through 2027 Addressed

Our customers²

\$4.6 billion

Large Enterprise

\$3.1 billion

Wholesale

\$3.0 billion

Mass Markets

\$2.0 billion

Mid-Market Enterprise

\$1.8 billion

Public Sector

Our employees

28,000

Employees Worldwide

Our brands and assets

LUMEN®

170,000

On-Net Buildings

350,000

Fiber Route Miles

Quantum FIBER

3.7

Million Fiber Broadband-Enabled Locations

CenturyLink®

18.1

Million Other Broadband-Enabled Locations

¹ For additional information about Lumen, please see our periodic reports and proxy statements filed with the U.S. Securities Exchange Commission, including our proxy statement dated April 5, 2024, Appendix A of which includes a definition of certain non-GAAP metrics used herein and a reconciliation of such metrics to comparable GAAP figures.

² All amounts are revenue.

Our North Star

North Star

Look for the **North Star** icon throughout the report to see how our North Star strategy is integrated into our actions and initiatives.

Mission

Igniting business growth by connecting **people, data, and apps** — quickly, securely, and effortlessly

Purpose

Unleashing the world's **digital potential**

Customer challenges



Reliable, flexible, & cost-effective core operations



More productive, engaged employees



Secure data & applications



Enable business process improvement, innovation



Participate in the digital economy and culture

Product houses



Network

Compelling asset across our Fiber Density and Orchestration



Security

Compelling asset within our Black Lotus Labs cybersecurity center



Fabric

Compelling asset around the ways we can enable Software



Services

Compelling asset in our proficiency as a Scale Operator

Partner ecosystem

A digital ecosystem of Trusted Partners to help us innovate and grow

Success

Ease of doing business for employees & customers across all segments

Profitable revenue growth

Culture

We operate with Teamwork, Trust, and Transparency

We infuse Clarity, Customer Obsession, Courage, Growth Mindset, and Allyship in everything we do

Our North Star cultural framework

“Our 2023 success stems from a vibrant work culture driven by our people, who believe in our North Star. Our people are the force behind what we do and how we show up for our customers and in our communities. It’s an exciting time to be a part of Lumen - the trusted network for AI.”

Ana White
Chief People Officer



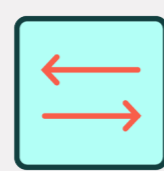
Transparency

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



Teamwork

Understanding, respecting, and collaborating with others toward a common goal. Showing up for each other every day, supporting a no-hero culture, and committing to the team’s collective success.



Trust

Doing what you say you will do, owning your mistakes, and only sharing information that is yours to share. Being vulnerable, promoting authenticity, and empowering others to fully demonstrate trust.



Clarity

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



Growth mindset

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



Customer obsession

Listening to our customers from a place of empathy to understand their needs. Taking ownership to determine priorities and advocating 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 when it creates a sense of vulnerability. Leaning in and being willing to rumble respectfully for the benefit of the conversation or desired result. Living into your values, asking for help, and supporting others to do the same.



Allyship

Allyship is making an active effort to learn about, support, and advocate for those whose experiences differ from your own.

ESG strategy

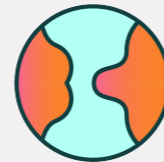
North Star

For us, sustainable growth is a key component of our **North Star** transformation. We are committed to reshaping the carbon footprint and social impact of our operations to generate long-term value for our customers and stakeholders.



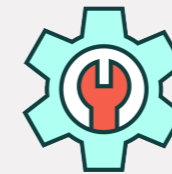
Building strong governance and transparency

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



Protecting our planet

We are committed to environmental stewardship, which we believe promotes the health of our planet and our business, and creates value for our employees, communities, customers, and investors.



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.



Empowering our 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.

Double materiality assessment

North Star

Our double materiality³ assessment approach aligns with our North Star culture, helping us identify, assess and prioritize our current, near-term and emerging ESG issues. This industry-leading methodology transcends traditional financial analysis, providing a comprehensive understanding of our sustainability impacts and opportunities.

³ 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 dynamic assessment process

To get a comprehensive picture of our ESG priorities, we partnered with external experts to conduct in-depth research and engage with key stakeholders, e.g., employees, customers, and investors, through surveys, interviews, and a collaborative workshop. We dove into our own ESG strategy and documentation, along with sustainability trends among our peers and evaluators. This multi-faceted approach allowed us to investigate a range of ESG topics, with three topics ranked highest as highlighted below.

While these three topics are our top priority, we recognize the interconnected nature of ESG and the importance of a comprehensive approach.

Top sustainability issues



Cybersecurity and data privacy

Protecting our organization, our customers, and their data is paramount, and we prioritize cybersecurity, risk management, and data privacy as fundamental pillars of our business. Please refer to the [Cybersecurity and privacy](#) section of this report for more information.



Ethical conduct (including tax)

Lumen is committed to maintaining the highest standards of ethics and compliance in all our business operations. Our comprehensive program, guided by our [Code of Conduct](#) and reinforced through training and communication, ensures that our employees and partners act with integrity and adhere to all applicable laws and regulations. Please refer to the [Ethics and compliance](#) section of this report for more information.



Network resilience and reliability

Lumen’s network is engineered for unparalleled resilience, leveraging diverse routes and redundant infrastructure to ensure continuous connectivity. Our proactive monitoring and rapid response capabilities minimize downtime and maintain the highest levels of reliability, even in the face of unexpected disruptions. Please refer to the [Business continuity management](#) and [Supply chain management and resiliency](#) sections of this report for more information.

Stakeholder engagement

We value the feedback from our diverse stakeholders, including employees, investors, and customers, which helps us refine and enhance our sustainability initiatives. This ongoing engagement, combined with ESG materiality assessments (see [Double materiality assessment](#)), allows us to align our actions with industry and business priorities, driving meaningful and purposeful change.

How we engaged in 2023

Customers

Customer-centric approach: Actively seek and value customer feedback through surveys and partnerships to understand and meet evolving needs.

Collaborative partnerships: Work with partners on sustainable technology to align with customer expectations and industry trends.

Transparent communication: Maintain open communication channels to address inquiries about climate initiatives and goals, fostering trust and understanding.

Investors and stockholders

Direct engagement: Cultivate personal connections with shareholders through one-on-one conversations and/or email exchanges via targeted outreach or upon request.

Collaborative dialogue: Group meetings facilitate open discussions and address investor concerns.

Transparent reporting: Quarterly earnings calls and the annual meeting provide shareholders with comprehensive insights into the company's financial performance and strategic direction.

Industry visibility: Active participation in major industry conferences and Analyst Days showcases the company's expertise and commitment to shareholder value.

Suppliers

Structured onboarding: Vendor onboarding forms streamline the process, helping to ensure compliance and alignment with company standards.

Risk mitigation: Supplier risk and ESG assessments proactively identify and address potential vulnerabilities.

Data collection: Supplier questionnaires gather essential information for informed decision-making.

Educational outreach: Educational discussions around key ESG topics foster understanding and collaboration on sustainability initiatives.

Collaborative partnerships: Program partnership conversations explore opportunities for mutual benefit and shared value creation.

Personalized engagement: Individual conversations build strong relationships and facilitate open communication with suppliers.

At Lumen, we prioritize strong stakeholder engagement and recognize the passion our employees and partners have for various causes. We empower them to make a meaningful impact through volunteerism and donation-matching programs, while strategically investing in initiatives that create lasting benefits for the communities we serve.

We actively seek and value feedback from our customers through surveys and direct partnerships, ensuring a customer-centric approach. This, coupled with our collaboration with partners on sustainable technology, helps us understand and meet their evolving needs. Additionally, we maintain transparent communication to address inquiries about our climate initiatives and goals.

Communities

Workforce engagement: Lumen values its employees' insights into community needs, empowering them to contribute through volunteering and donation-matching programs aligned with their passions.

Positive impact: In the communities where Lumen operates, the company aims to be a trusted partner, investing in local needs and addressing essential community requirements.

Company purpose: The commitment to social impact aligns with Lumen's purpose of unleashing the world's digital potential and is a source of pride for employees.

Employees

Voice of the employee: Regular surveys gather feedback, while employee resource groups empower diverse communities.

Giving back: Employee volunteering programs foster community impact.

Open communication channels: Emails, newsletters, and Viva Engage, an employee social networking tool, ensure information flows freely, while listening sessions with leaders encourage direct dialogue.

Collaborative learning: Team meetings and trainings promote knowledge sharing and skill development.



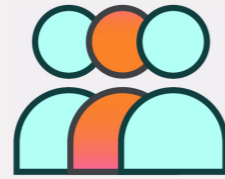
Lumen employees at an HR Leadership Development Program

2023 highlights



Our investment in customers and innovation

- Achieved ISO **27001/27701** certification for information security and privacy.
- **Disrupted 150** command and control servers monthly through Black Lotus Labs' takedowns and notifications.
- Awarded a **\$400 million** contract from the State of California to support digital inclusion efforts.



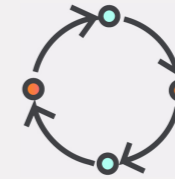
Our responsibility to people and communities

- Supported nearly **4,000 nonprofits** via the Lumen Cares Portal.
- Partnered with Syndio for **Pay equity**.
- Became a certifying organization for the **President's Volunteer Service Award Program**.



Our commitment to governance and integrity

- Developed an **AI Advisory Board**.
- Fostered a positive shift in **Lumen's speak-up culture** from North Star strategy.
- Attained a **99% completion** rate for our Code of Conduct training.



Our efforts on sustainability

- Scored an **A-** on 2023 CDP response.
- **Achieved 2025 science-based targets** ahead of schedule.
- Implemented a **sustainable packaging** initiative.

From 2018 through 2023, we reduced our Scope 1 and 2 (market-based) emissions by 28%, exceeding our 18% target and reduced our Scope 3 (upstream) emissions by 17%, exceeding our 10% target.

Awards highlights



Frost and Sullivan award Lumen for delighting its MPLS VPN customers



Frost and Sullivan Competitive Strategy Leadership Award



RippleMatch awards Campus Forward to Lumen for valuing Generation Z, early-career employees



Lumen recognized by FlexJobs as one of the Top 100 Companies to Watch for Remote Jobs in 2023



Lumen ranked by Disability Equality Index (DEI) as one of the 2023 Best Places to Work for Disability Inclusion



Lumen ranks #12 in 2023 American Opportunity Index and 1st among companies in the Comm & Telecom sector



Lumen named one of the best employers for LGBTQ+ workplace inclusion for 5th consecutive year by Human Rights Campaign

Our investment in customers and innovation

Lumen strives to deliver innovative products and services that are efficient, secure, and user-friendly. To achieve this, we are fostering a company-wide culture of pursuing customer insight. We actively seek and respond to customers' feedback with understanding and empathy, aiming to help them overcome their challenges.

We value the trust our customers place in us and take it seriously. This drives us to continually enhance our cybersecurity and privacy measures, helping to ensure the resilience of our network and business. Lumen's products play a crucial role in supporting the smart industries of the future. By prioritizing security, privacy, unity, access, inclusion, and speed, we remain at the forefront of the rapidly evolving digital landscape and drive positive change.

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Our customer-centric approach

North Star

At Lumen, our passion for delivering innovative, secure, and user-friendly products and services is at the heart of everything we do. Our **North Star** approach guides us as we actively seek and respond to our customers' requirements, allowing us to develop solutions that address their challenges and drive our mutual success.

Customer challenges

Enhance reliable, flexible, & cost-effective core operations

Improve productivity and engagement of employees

Secure data & applications

Enable business process improvement, innovation

Participate in the digital economy and culture

Our commitment to staying abreast of our customers' needs is evident in our Customer Advisory Board, a forum where twenty-five of our largest customers gather twice a year to discuss emerging technology trends. In addition, the Lumen Customer Community is an interactive online platform designed exclusively for Lumen customers. It serves as a central hub where customers can connect with each other, exchange knowledge, and access valuable resources. The community offers a wealth of content, including tips, best practices, and updates on the latest Lumen solutions. Members can participate in engaging challenges, earn rewards, and connect directly with Lumen experts for support and guidance.

We are also sponsors of a national networking organization for technology leaders. By engaging directly with these high-level executives through chapter sponsorships and events, we gain valuable insights into the evolving challenges they face. Lumen leverages these connections to create a safe space for technology leaders to discuss current events, trends, and challenges among their peers. This collaborative approach strengthens our relationships and ensures we remain responsive to the ever-changing technological landscape.

Customer advocacy

At Lumen, customer obsession is one of our North Star guiding principles. Accordingly, we have specialized teams like our Customer Advocacy Group that are dedicated to resolving customer complaints immediately and efficiently. We strive to provide customers with easily accessible options to contact Lumen via online platforms, telephone, or written communications. Our goal is that every complaint, whether it comes directly from customers, through regulatory agencies, or even from Lumen's top executives, is met with a thorough and prompt response, thanks to our well-defined and stringent process. Lumen's Customer Advocacy Group takes these matters seriously, performs an extensive review of the issue, and has established service-level agreements in place to ensure performance targets are clear. This meticulous process is not just about addressing individual concerns; it's a driving force for continuous enhancement of our people, processes, and technology, all aimed at elevating the customer experience.





Data protected. Downtime prevented.

SELCO Community Credit Union, one of Oregon's largest credit unions, partnered with Lumen and ThreatX to enhance their cybersecurity strategy. SELCO faced challenges in delivering uninterrupted member services while ensuring robust data security without overburdening their IT resources. By implementing Lumen's Web Application Firewall and Application Delivery Solutions in conjunction with ThreatX's expertise, SELCO addressed these challenges. The combined solution effectively blocked suspicious activity without impacting legitimate traffic, providing enhanced protection for member data while minimizing strain on IT personnel. Read more [here](#).



A healthy customer experience

Accolade, a provider of personalized health and benefits solutions, faced challenges in routing real-time data to their remotely located advisors who assist customers with healthcare-related inquiries. Their previous MPLS architecture proved costly and inflexible as they scaled. To address this, Accolade adopted an SD-WAN solution with Lumen Dedicated Internet Access and Lumen SD-WAN with Versa Networks. This new architecture optimizes real-time data routing, including voice/video calls, appointment scheduling, and AI-driven benefit recommendations, while seeking to ensure data security and cost-effectiveness. Read more [here](#).



Serving up AI-ordering

SYNQ3, a virtual restaurant contact center, empowers restaurants to streamline their ordering and fulfillment processes. By implementing various Lumen products including Lumen's Dedicated Internet Access, MPLS/IP VPN network and Contact Center Solutions, SYNQ3 has been able to significantly enhance customer experiences through network scaling and expanded AI capabilities. This collaboration has allowed SYNQ3 to effectively manage a threefold increase in call volume, processing over 100,000 orders while maintaining reliability and convenience. Read more [here](#).



Smooth sailing to rapid growth

Freight and logistics company Satsaco partnered with Lumen to successfully migrate their workloads to the cloud. Through deploying the Lumen Cloud Application Manager (CAM), complemented by Lumen Managed Services Anywhere and a dedicated Technical Account Manager, Satsaco was given the ability to scale up and down according to their needs while reducing their IT burden. Satsaco reports that this strategic move empowered them to achieve an increase in their customer base while simultaneously realizing cost savings of up to 40%. Read more [here](#).



Keeping fans connected and entertained

The Seattle Seahawks, a professional American Football team, faced challenges with rising data demand at their stadium, Lumen Field. Through partnership with Lumen, the stadium was upgraded with two 10 Gbps circuits, hardware to extend Wi-Fi connection, MPLS backbone, and Lumen Vyvs solutions. The implementation of these solutions supports the increase in bandwidth demands while also providing a faster and more reliable connection for livestream games and events. Read more [here](#).



Calgon Carbon transforms global network with Lumen

Calgon Carbon, a global company specializing in water and air purification, overcame network infrastructure challenges by partnering with Lumen. The partnership resulted in improved connectivity, enhanced security, and a robust IT foundation for future growth, enabling Calgon Carbon to strengthen collaboration and customer relationships. Lumen's support and guidance have been instrumental in Calgon Carbon's success, empowering them to continue their mission for a cleaner world. Read more [here](#).



Pima County public safety

Pima County, Arizona, sought to modernize their emergency response systems by upgrading nine outdated public safety answering points (PSAPs). Lumen implemented a fully managed, comprehensive Next Generation 9-1-1 solution, bringing the county's safety response services up to date. Read more [here](#).

Lumen's Employee Resource Groups (ERGs) play a vital role in enhancing our connection with a diverse customer base. By fostering understanding and empathy within the company, ERGs help us develop products, services, and marketing initiatives that resonate with specific customer demographics.

Our SOMOS ERG has been instrumental in community outreach, forging stronger ties with Hispanic and Latinx communities. This connection has translated into increased brand loyalty and sales, demonstrating the tangible impact of ERG-driven initiatives on our bottom line.

Cybersecurity and privacy

North Star

Lumen's cybersecurity, privacy, and AI strategies have evolved rapidly to address the changing digital landscape. We have invested in infrastructure, privacy-by-design principles, and AI-powered solutions to help safeguard customers, employees, and partners. Recent advances in endpoint and network protection, asset management, and a proactive attack surface management program further demonstrate our commitment to cybersecurity leadership, aligning with our North Star strategy to connect data and applications securely.

Lumen delivers enhanced security to our global network, ensuring that every customer benefits from the same high-quality security standards. Our Trust Center simplifies access to information about our approach to privacy, security, transparency, and other crucial matters. It houses policies, notices, documentation, reports, and self-service options, including access to the Lumen Privacy Notice and our Vulnerability Disclosure Program.

We have launched an ongoing security control refresh, retiring legacy controls and implementing advanced capabilities that leverage automation and integration. Additionally, we have updated incident response processes, as well as policy documentation, to support key business functions, compliance, and procurement. These initiatives ensure a preemptive and comprehensive approach to cybersecurity and privacy.

We not only secure our network but also rigorously protect the data and information we collect, store, use, and share. Employee and customer data is encrypted according to industry standards and legal requirements, both at rest and in transit.

Lumen performs multiple external audits/assessments annually to meet industry and regulatory requirements, including PCI-DSS, SOC 1, SOC 2, and HIPAA.

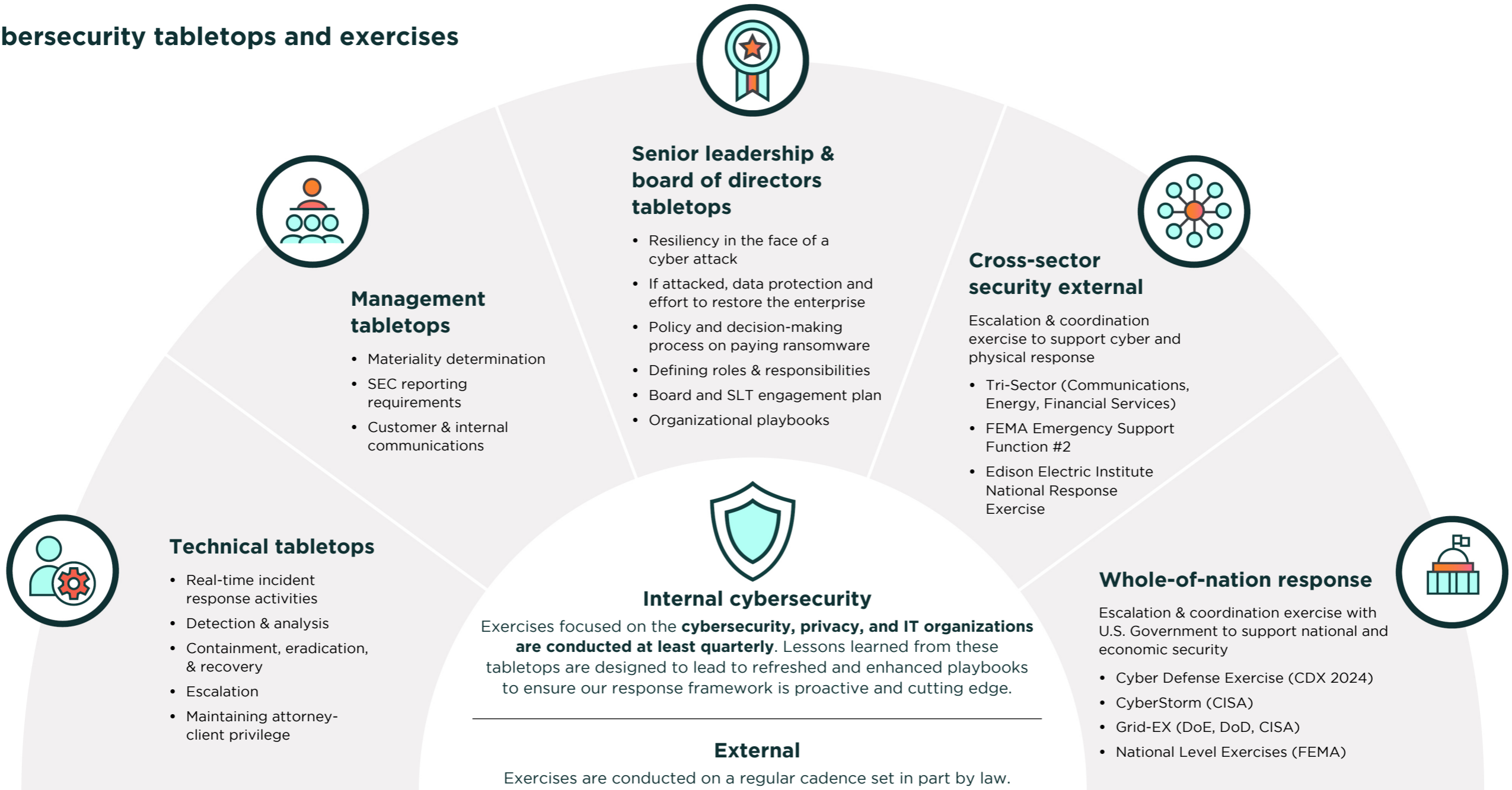
Lumen's ISO 27001 certification is an internationally recognized standard that demonstrates compliance with an Information Security Management System (ISMS) and ISO 27002 Annex A controls. The certification for Lumen Technologies Group covers global managed services, global colocation services, IP VPN services, Edge Compute, and managed security services, including DDOS and SLM services.

Lumen's ISO 27701 certification is an extension of the ISO 27001 certification, focusing on privacy information management system (PIMS) as a PII processor. It aligns with the requirements and control implementation guidance of ISO 27701:2019.

Where applicable, Lumen offers public-facing reports, certifications, and attestations through self-help or formal request.



Cybersecurity tabletops and exercises



Cybersecurity

As a leading telecommunications and technology company, we are acutely aware of the persistent cyber threats targeting our assets and information systems. Protecting our organization and our customers is paramount, and we prioritize cybersecurity and risk management at every level.

We view cybersecurity as an enterprise-wide responsibility, requiring controls and continuous monitoring throughout the company. We regularly assess our program, including the adequacy and effectiveness of our internal controls, reporting of emerging threats, response plans, and program enhancements and provide quarterly updates to the Board's Risk and Security Committee (RSEC).

Lumen collaborates with the U.S. government, primarily through the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA), to share threat information and participate in initiatives aimed at ensuring infrastructure security and resilience.

We have developed a comprehensive plan to strengthen our cyber and resilience strategy, aligning with the National Institute of Standards and Technology (NIST) Cybersecurity Framework. Accelerating our multi-year roadmap, we continue investing in our people, processes, and technology to further enhance our capabilities and protect our organization. Key areas of investment include:

- Educating the Board and senior leadership on cybersecurity and providing additional training to end users
- Fostering stronger relationships between the security organization and other business functions to cultivate a security-first/security-by-design mindset
- Utilizing a layered security architecture
- Establishing a dedicated analytics and innovation team
- Building robust vendor relationships and partnerships
- Transitioning to cloud and hybrid hosting models
- Implementing comprehensive security compliance programs
- Continuously updating security controls

The Red Team

Lumen's dedicated Red Team, within the Product and Platform Security organization, routinely performs penetration tests and adversarial emulation exercises across various critical Lumen assets, including crown jewels and essential products/infrastructure. An annual penetration test is also conducted on the Lumen corporate enterprise, prioritizing applications and systems based on business risk, internet exposure, and other relevant factors.

The Red Team adheres to industry-standard methodologies (PTES, MITRE ATT&CK, Lockheed Martin Cyber Kill Chain) and maintains comprehensive documentation outlining program processes, functions, roles, and responsibilities.

Team members possess multiple advanced cybersecurity certifications and engage in continuous technical training to enhance their expertise. Their diverse backgrounds encompass hacking, exploit development, software development, SOC operations, incident response, forensics, SIEM management, firewall administration, static code analysis, cryptography, auditing, and security team leadership.

Each year, the Red Team uncovers hundreds of findings through their testing activities, collaborating closely with Business Owners and Security Architecture to ensure thorough remediation.

Lumen's third-party risk management program

Lumen employs a comprehensive third-party risk management program designed to identify, assess, and mitigate cybersecurity risks stemming from external suppliers. The multi-faceted approach includes:

- Due diligence: Thorough due diligence is conducted through Standardized Information Gathering (SIG) reviews, contract reviews, and security assessments.
- Continuous monitoring: Vendors are continuously monitored based on their criticality tier, with regular reviews for security incidents.
- Compliance verification: Lumen verifies the compliance of suppliers' security postures by reviewing their security policies and contractual obligations through periodic audits, reports, and reviews.

Protecting the nation's critical infrastructure

We actively contribute to the nation's resilience in communications through strategic partnerships. As an Alliance partner in CISA's Joint Cyber Defense Collaborative (JCDC) and a resident member in CISA's National Coordinating Center for Communications (NCC), we are proud to be a part of safeguarding critical infrastructure.

Artificial intelligence

Artificial intelligence (AI) presents a vast landscape of possibilities and benefits. However, it also necessitates enhanced security expertise to ensure businesses approach the operational benefits, risks, and potential security threats of AI with caution and foresight.

At Lumen, this means prioritizing investments in commercial AI capabilities over immediate adoption of generative AI models. This approach provides us with commercial, contractual, data, and legal protections that offer a higher level of security assurance compared to open systems.

We acknowledge the growing concern of threat actors utilizing advanced AI capabilities. To counteract this, we are actively implementing a roadmap to deploy more sophisticated detection and monitoring capabilities that can identify malware from both human and AI sources.

Black Lotus Labs

Black Lotus Labs, the threat intelligence arm of Lumen Technologies, leverages our interconnected global network to protect our customers and maintain a clean internet. We have developed a custom-built system, powered by AI and machine learning, to discover and respond to threats rapidly and automatically.

The work of Black Lotus Labs results in high-fidelity intelligence that feeds the Lumen Connected Security portfolio and is shared with the broader information security community. In the past year, Black Lotus Labs research has shed light on the capabilities and techniques of both cybercriminals and nation-state actors. We have published extensively on malware targeting small office/home office routers, exceeding any other threat intelligence organization in this area over the past two years.

But we go beyond identifying and tracking malicious activity. Whenever we discover a malicious node on the internet, we take swift action to disrupt it, ensuring a safer and more secure online experience for everyone.



200 billion

NetFlow sessions
monitored daily

1 billion

DNS queries
monitored daily

150

command and
control servers
disrupted
monthly through
takedowns and
notifications

Lumen disrupts cybercriminals targeting home and office routers

In 2024, Lumen announced that its Black Lotus Labs discovered a new cybercriminal campaign targeting outdated small office / home office (SOHO) routers and IoT devices. This campaign uses updated TheMoon malware to fuel an anonymity service called Faceless, enabling cybercriminals to anonymously send malicious traffic through compromised devices.

Lumen has blocked all traffic associated with TheMoon and Faceless across its global network. Black Lotus Labs believes TheMoon is the main source of bots for Faceless, which allows users to impersonate legitimate users and conduct malicious activities anonymously.

Additionally, Lumen is developing a proactive defense solution to detect and isolate threats before they reach networks and applications.

For further details and technical analysis, please refer to the Black Lotus Labs blog post, "[The Darkside of TheMoon.](#)"

Lumen finds and disrupts malicious botnet targeting critical networks in U.S. and Asia

Lumen's Black Lotus Labs successfully neutralized a malicious botnet, KV-botnet, utilized by Chinese nation-state cyber actors in support of Volt Typhoon operations. The botnet targeted critical infrastructure providers and governments in Guam and other regions, posing a significant threat to U.S. interests.

The KV-botnet exploited vulnerabilities in SOHO routers and firewalls to create hidden channels for covert data transmission. Black Lotus Labs detected and traced this activity to control servers operated by the threat actors, subsequently blocking their access and halting further attacks.

This discovery highlights an escalation in the abuse of network devices for clandestine operations against vital networks. Black Lotus Labs shared their findings with the security community to help others defend against similar threats.



Data privacy

Lumen’s data privacy approach prioritizes compliance with applicable laws, and robust protection when sharing information with third parties. Our policies and processes are designed to uphold these standards, with regular reports to the RSEC as part of our Enterprise Risk Management (ERM).

We believe in a layered defense approach to privacy. Every Lumen employee forms the first line of defense against privacy and security risks, followed by the Global Privacy Office and Chief Privacy Officer as the second line of defense.

Our Privacy Program is built on the American Institute of Certified Public Accountants Privacy Management Framework. This framework encompasses nine key components:



Lumen delivers enhanced security and data protection solutions

Lumen Technologies has launched two new Network-as-a-Service (NaaS) solutions with private connections: Lumen Ethernet On-Demand and Lumen IP-VPN On-Demand. These solutions address customer needs for secure data transmission and protection of distributed business locations.

Private Ethernet and IP-VPN connections offer several benefits, including enhanced security, compliance with data protection regulations, cost efficiency, scalability, and reliable connections to various cloud service providers.

Lumen plans to further enhance security by adding DDoS protection to its Lumen Internet On-Demand solution, providing an affordable way to defend against common attacks using threat intelligence from Lumen’s Black Lotus Labs.

Customer privacy

Like many companies, we access customer information to support our products and services, sharing it appropriately to achieve business goals or fulfill legal obligations. Necessary and reasonable measures are taken to protect this information and expect we our partners to do the same. Our [Lumen Privacy Notice](#) details how we manage customer data and the privacy options available to them.

In certain U.S. states, as well as many countries outside of the U.S., customers can ask Lumen for their personal information and may request that Lumen correct, delete, or restrict use of their information.

Lumen’s Global Privacy Office offers various data privacy resources, notably the data subject request portal. This portal enables customers, former customers, job applicants, former employees, and other individuals to exercise their privacy and data protection rights as well as any privacy concerns regarding their personal information. Lumen’s Global Privacy Office is responsible for managing all data subject requests.

Lumen closely monitors evolving U.S. and international data and privacy laws. This enables us to provide informed guidance to customers on our handling and sharing of personal information, both internally and with third parties.

Customer inquiries

Our customers can contact Lumen’s Global Privacy Office at Privacy@lumen.com. Our team members review these inquiries and respond within five business days.

Privacy governance

Lumen employs a robust governance structure to address compliance, technology, privacy, security, and risk. Multiple committees collaborate to provide oversight and reporting, ensuring comprehensive risk management. The Technology Security Privacy Council (TSPC) plays a key role in assessing and communicating risk decisions to the Risk Oversight Committee. The Risk Oversight Committee, in turn, reports to the RSEC, which holds ultimate responsibility for overseeing all aspects of ethics, compliance, privacy, security, technology, and both operational and business risk.

In the event of data/privacy/security incidents, the Cyber Defense team employs well-established incident response procedures. Critical incidents trigger a CSWAT response, a comprehensive,

prioritized approach that focuses on immediate threat isolation and containment, followed by forensic analysis and a complete rebuild of affected systems.

Throughout the process, chain of custody best practices are strictly followed. If necessary, a retained third-party forensics firm is consulted for additional support.

The CSWAT process involves various work streams, including legal, privacy, corporate communications, and executive teams. Weekly after-action review meetings assess the incident’s handling, identify potential process improvements, and evaluate the need for additional technical controls.

Frequency of privacy governance meetings

| | | |
|--|----------------|--|
| Risk and Security Committee | Quarterly | Subset of Board members, Security, Privacy |
| Technology, Security, Privacy Council | Every 2 months | VP & above across Operations, IT, Legal (including Privacy), HR, Engineering |

Law enforcement and government data requests

While legally obligated to respond to lawful government requests for customer information, we are committed to safeguarding customer privacy. We meticulously review each inquiry, ensuring it is appropriately limited, and tailor our response accordingly.

Lumen’s dedicated Law Enforcement Support team handles subpoenas, court orders, and CALEA requests received via email, fax, or hand delivery. Should the validity of an order be questioned, the team has established escalation procedures within the legal department to address the issue.

We publish [Transparency Reports](#) twice a year, detailing the number and category of legal demands received from U.S. federal, state, and local governments, including national security and FISA requests.

Employee and contractor training

Recognizing the vital role our employees and contractors play in safeguarding Lumen information, assets, and data, we develop and maintain robust policies and standards, supplemented by comprehensive training. We offer diverse security training options, including scenario-based new hire and annual awareness training, phishing simulations, monthly articles on relevant security topics, and an online Security community for knowledge sharing and Q&A. Additionally, Lumen hosts various cybersecurity events to increase awareness and provide opportunities for skills practice. During Cybersecurity Awareness Month, a guest insider threat specialist shared insights into social engineering tactics used to gather and exploit personal information. These programs extend to our Board of Directors and cover essential topics such as data security, hacking, malware, personal information handling, and phishing.

Lumen is actively assessing the necessity of and developing specialized role-based training programs tailored for specific roles, such as help desk personnel, senior leadership, and members of the Board of Directors.

2023 cybersecurity training completion

Security awareness training completion

97%

Privacy awareness training completion

99%

CPNI training completion

99%

Vendor and supplier risk management process

Lumen employs a vendor risk management process that evaluates potential vendors and suppliers prior to contract or agreement establishment. This assessment, conducted in collaboration with Lumen stakeholders, considers various factors:

- **Security posture:** The vendor/supplier's security policies, standards, practices, and controls are evaluated for alignment with Lumen's security expectations and requirements.
- **Certifications:** Security certifications, accreditations, or attestations (e.g., ISO 27001, SOC 2, NIST CSF, PCI DSS) are considered to gauge the vendor/supplier's security maturity and capability.
- **Holistic risk assessment:** Legal, privacy, procurement, and global insider threat intelligence are integrated to assess potential supply chain risks, including those associated with high-risk countries or suspicious insider activity.
- **Privacy and legal review:** A dedicated privacy review assesses risks tied to data sharing and the vendor's data security practices, while a legal review ensures contract terms align with the procured services.

Vendors are reassessed on a set schedule according to our business needs.

The Global Intelligence & Insider Risk team further bolsters vendor risk management and supply chain security through various activities:

- **Geopolitical risk monitoring:** Continuous monitoring and analysis of geopolitical risks that could impact Lumen operations, security, and supply chain.
- **Country risk assessments:** Periodic assessments to identify and categorize high-risk countries.
- **Due diligence:** Thorough research into high-risk country vendors/suppliers/partners to uncover potential counterintelligence concerns.
- **Government collaboration:** Coordination with the FBI and other U.S. government stakeholders on classified and unclassified investigations and assessments of high-risk vendors, partners, and third parties.
- **Insider threat detection:** Detection and investigation of suspicious insider activity by vendor/contractor employees with access to Lumen's network.
- **Vendor background checks:** Management of the Vendor Background Check policy and exception requests.

Business Continuity Management

Our Business Continuity Management (BCM) program acts as a shield aimed to safeguard our people, assets, stakeholders, and reputation against unforeseen disruptions.

By adhering to the ISO 22301:2012 international standard and engaging internal and external auditors, we seek to ensure our BCM program is not only effective but also meets the stringent requirements of our valued customers.

Lumen's Business Continuity Planning team is dedicated to developing, implementing, and maintaining a comprehensive risk management framework to ensure operational resilience. This continuous, multi-disciplinary process involves evaluating the criticality of processes at various locations and assets, conducting Business Impact Analyses, and establishing recovery time objectives for critical processes and systems.

For our risk management efforts related to climate change, see [Response to the climate section](#) of the report.

Our BCM process involves these components:



Annual deep dive

We assess every business unit, identifying potential threats and impacts to critical priorities.



Plans for unexpected events

We develop mitigation, continuity, and recovery strategies to keep the business running smoothly.



Uninterrupted service

We strive to maintain uninterrupted service and, if disruptions occur, ensure a swift, secure, and safe recovery.



Continuous improvement

We annually review our business continuity strategy, critical processes, and performance to stay ahead of emerging risks.



Transparency

We communicate our business continuity strategy and results to executive leadership and employees.

Digital inclusion/equity

North Star

Lumen's **North Star** strategy prioritizes bridging the digital divide through collaboration with policymakers and leverages its extensive network to promote digital equity through a comprehensive, four-pillar approach. Our website now features a dedicated **Digital Inclusion** section, providing comprehensive details on our strategy and achievements in promoting digital equity and accessibility.

Advocacy

We advocate for the efficient utilization of government funding to expand broadband networks and enhance affordability, particularly in underserved areas.

Access

We strive to bring reliable, high-speed connectivity to underserved and remote communities.

Affordability

We work to ensure that quality internet service and devices are accessible to all, regardless of economic constraints.

Adoption

We empower individuals and communities with the skills and resources to utilize technology effectively and access meaningful digital services.



Advocacy

Lumen is a member of the **Global Enabling Sustainability Initiative** (GeSI), which aims to leverage digital technology to benefit society and advance human rights. GeSI's Innovators' Network is a collaborative effort between industry leaders, human rights organizations, policymakers, academics, and social innovators.

By participating in GeSI's Innovators' Network, Lumen is contributing to a global effort to harness the power of technology for positive social impact. The Network's initiatives include:

- Fostering a global community of human rights technology innovators through a secure online platform.
- Establishing multi-sector stakeholder planning councils to drive technology solutions for pressing human rights challenges.
- Developing robust business cases for these solutions.
- Supporting the information and communications technology industry's efforts to build trust through responsible behavior.

Access

Lumen is leveraging its network to bridge the digital divide and promote digital equity through expanded access. A key strategy involves providing middle-mile connectivity, achieved through strategic partnerships.

Collaborating with others is crucial for bringing fiber to communities, offering significant advantages in cost reduction and speed enhancement. This partnership model minimizes upfront expenses by utilizing existing infrastructure and strategically building only where necessary. Furthermore, it extends beyond initial capital to operational savings, reducing financial risks, and optimizing project outcomes.

Although partnerships may require additional time for negotiation, we believe they can speed up connecting communities by years. By swiftly deploying fiber infrastructure, partners streamline permitting, right-of-way negotiations, and other logistical challenges, ensuring faster project completion. Additionally, they bring valuable expertise and cutting-edge technology to deliver faster internet speeds.

Embracing innovative approaches to partnership structures unlocks smarter solutions for bridging the digital divide, leading to more efficient and impactful outcomes.



AustinGIS, Sky Packets, and Lumen to employ smart city, connected experiences

Lumen Technologies, in collaboration with AustinGIS and Sky Packets, is developing new ways to enhance the quality of life for city residents through smart city technology. The concept of a smart city is around improving quality of life by bringing next-generation technology to residents.

This partnership aims to address the current delays in smart city deployments caused by inefficient technology, lack of expertise, and high upfront investment costs.

California Department of Technology and Lumen partner for massive fiber expansion

The State of California and Lumen are partnering to bring high-speed fiber broadband to Californians. The state awarded Lumen a \$400 million contract to build open-access middle-mile infrastructure, crucial for connecting last-mile providers and ensuring reliable internet access for remote communities. This initiative aims to bridge the digital divide and promote digital equity across California by 2026. Lumen views this as a model for future public-private partnerships nationwide, emphasizing the importance of digital inclusion for economic growth and innovation.

Affordability

Lumen is dedicated to making broadband more affordable and accessible. Through our active participation in the Affordable Connectivity Program (ACP), a \$14.2 billion initiative from the 2021 Infrastructure Investment and Jobs Act, we provide eligible households with discounts of up to \$30 per month (or up to \$75 on qualifying tribal lands) on broadband service.

We promote the ACP through various channels, including local newspapers, telephone directories, social media, and our website. We also inform existing customers about the program's benefits through our annual Customer Rights Letters and dedicated [ACP website](#).

As of the end of 2023, over 35,000 Lumen customers have enrolled in the ACP; however, Congress did not approve additional funding for ACP so the program has ended as of 2024.

We further champion digital inclusion with our PCs for People program to donate used computers and equipment to low-income individuals and nonprofits in our communities. All donated devices undergo a rigorous data wiping process to ensure privacy and security.

Lumen actively participates in key Federal Communications Commission (FCC) programs designed to bridge the digital divide:

Lifeline

Offers discounts on voice or broadband services for low-income households, along with additional support for tribal lands residents.

E-rate

Funds broadband services for schools and libraries, ensuring affordable access for educational purposes.

Rural health care program

Provides discounted rates for broadband services to healthcare providers in rural areas, improving access to critical healthcare resources.

Through our involvement in these programs, Lumen is dedicated to making essential online resources accessible to all.

Adoption

We are working toward a better digital future for all. Reliable internet connectivity is vital to every aspect of modern life. Yet millions of Americans face barriers to access because of geography or economic disparities, contributing to a widening socioeconomic gap.

We are proud to bring high-speed broadband to unserved and underserved locations—accelerating greater and more diverse participation in our digital economy. The ongoing digitization of society has transformed internet from a luxury nice-to-have into a necessity for participation in today's economic and social communities.

Expanding access to more areas will provide our citizens the ability to adopt technology and have many positive outcomes in our communities, some of which include:

- **Healthcare:** The increased use of telehealth and virtual visits has made internet access an essential part of patient care.
- **Education:** To be successful today and in the future, students - whether in kindergarten or graduate school - need the ability to do their schoolwork online.
- **Rural development:** Supporting remote workers as they move away from large cities and enabling companies to expand their access to talent regardless of geographic location with modern, reliable broadband is essential to our shared economic future.

Building donated to University of Louisiana Monroe

In line with our unwavering commitment to higher education, Lumen is proud to have donated our local campus, encompassing over 800,000 square feet, to the University of Louisiana Monroe (ULM). This landmark donation, the largest in ULM's history, signifies our belief in the transformative power of education and our dedication to fostering innovation and growth in the region.

The former Lumen campus, soon to be known as the Clarke M. Williams Innovation Campus, will be revitalized as a dynamic hub for businesses and healthcare. While we embrace a hybrid work model for employee flexibility and well-being, we will maintain a presence on campus through a lease-back arrangement, ensuring continued engagement with the local community.

This initiative exemplifies our commitment to repurposing underutilized spaces for the greater good. By supporting ULM's vision for the future, we are not only investing in the next generation of leaders but also strengthening the fabric of the Monroe community for years to come.

Sustainable products and services

We champion collaboration, partnering with stakeholders across our value chain to fuel innovation and empower the next wave of digital experiences.

North Star

Pioneering innovation

Our software-defined platform empowers businesses, governments, and communities to harness the power of their digital innovations, tailoring solutions to their unique development pipelines. This aligns with our **North Star** mission of fueling business growth by forging connections between people and data.

With a team of Lumen-certified experts, proven methodologies, and innovative products and services, we bring decades of experience across Adaptive Networking, Connected Security, Edge Cloud, applications, and data to the table. Our solutions empower our customers to thrive in the digital age, delivering the agility, security, and performance they need to succeed.

Our teams are pushing the boundaries of innovation, tackling transformative projects such as:

- **Platform enablement tools:** Continuously evolving a suite of tools, including open-source APIs, which enable real-time optimization of energy and water usage in industrial applications.
- **Cloud monitoring & analytics:** Harnessing the power of data to drive actionable insights, automation, and risk reduction in manufacturing.
- **Private wireless solutions:** Leveraging the latest cellular technology to simplify deployment and management of large-scale wireless networks.
- **Cutting-edge network technologies:** Utilizing open-source SD-WAN and data access acceleration to optimize reporting tools and reduce IT resource consumption.
- **AI-powered Internet of Things (IoT) management:** Applying AI and machine learning to proactively manage next-generation IoT devices in critical applications like healthcare and disaster relief.
- **Self-optimizing systems:** Developing polymorphic networks and embedded systems that leverage AI-driven automation to enhance performance and adapt to changing conditions in real time.





Composable infrastructure

Lumen's composable infrastructure initiative helps or meaningfully reduces environmental impact by optimizing resource utilization. This flexible approach allows for dynamic provisioning of resources, reducing power and water consumption, and minimizing waste. By extending the lifespan of existing assets and tailoring server configurations to specific workloads, composable infrastructure lowers costs and contributes to a more sustainable model.

Sustainable packaging Initiative

Lumen strives to address the growing global needs of a sustainable world. Investing the time and resources to re-think Mass Markets CPE logistics has led Lumen to develop trend-setting packaging designs that will enable us to transition to eco-friendly products that are engineered and built from the ground up. For the first time, Lumen has shifted to bio-degradable materials. Lumen has innovated to increase CPE shipping capacities and reduce packaging waste. Lumen welcomes others to adopt our learnings and to join us in thinking outside the box.

Empowering others to do good

Our products support our customers' goals to reduce their environmental footprint and achieve greater sustainability by:

- **Empowering sustainable decisions with Edge Computing:** Our Edge Computing services drive sustainability across industries, from optimizing fleet maintenance and enabling autonomous vehicles to minimizing waste and resource consumption in manufacturing and agriculture. By processing data at the source, we empower real-time decision-making and action.
- **IoT connectivity for enhanced insights:** We connect IoT devices and sensors to the internet, providing valuable data insights that enable real-time adjustments and decisions, improving operational efficiency and reducing environmental impact.
- **Remote energy management for efficiency:** Our smart home technology offers remote energy management, allowing customers to control thermostat settings and pre-program energy-saving actions like timed lighting adjustments, promoting energy conservation and reducing consumption.
- **Technology-driven emissions reduction:** Lumen solutions like Voice over Internet Protocol (VoIP) support remote and hybrid workforces, minimizing the need for business travel and contributing to lower carbon emissions.
- **Sustainable IT architecture:** We help customers transition to cost-effective and eco-friendly IT infrastructures through digital transformation and cloud migration, reducing both financial expenditures and carbon footprints.

Our responsibility to people and communities

North Star

At Lumen, we are committed to fostering a workplace culture where our employees feel valued, inspired, and empowered to contribute their best. Our **North Star** guides us in cultivating an environment defined by teamwork, trust, and transparency. We prioritize clarity, customer focus, courage, a growth mindset, and allyship in all aspects of our work, believing that these values are essential for driving innovation and achieving sustainable success.

We are committed to providing exceptional employee relations, competitive compensation and benefits, an inclusive environment, and opportunities for talent development. We recognize that our success is rooted in a workforce that feels happy, healthy, safe, and valued.

To achieve this, we foster a sense of belonging and offer a comprehensive range of benefits that enrich the lives of our employees and their families. We actively encourage individuals to pursue careers in technology, empower our employees to thrive and feel included, and support community volunteerism, particularly for the most vulnerable and traditionally excluded. Our community efforts are guided by the passion and dedication of our employees who volunteer their time to make a positive impact.

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Talent recruitment and retention

North Star

Our success is intrinsically linked to our people and we see talent as a key indicator of business performance. Recognizing this, we are committed to attracting, nurturing, and retaining a diverse and motivated team. We foster an environment where employees are inspired by leadership, engaged in impactful work, and presented with opportunities for career growth. This aligns with our **North Star** culture, which emphasizes teamwork, trust, and transparency as fundamental pillars of our success.

Equal opportunity for all

We champion diversity and inclusion, ensuring fair and equal opportunities for all employees across recruitment, hiring, promotions, job assignments, and every aspect of employment. We leverage data analysis to track progress, identify areas for improvement, and implement effective solutions.

A talent-driven recruitment process

Our recruitment process is fair, unbiased, and designed to connect people from all levels of society to our purpose-driven opportunities. We utilize cutting-edge technologies and initiatives to enhance candidate experiences, reduce bias in selection, and amplify our reach across a wide range of diverse institutions.

Our dedication to nurturing early in career talent was further affirmed by the [2023 Campus Forward Award](#) from RippleMatch, highlighting our efforts to make Lumen a place for early in career professionals to thrive, and WayUp's Top 100 Intern Program rankings for the past four years.

Key elements of our recruitment strategy

- **Leading-edge assessment tools:** Minimizing bias in talent selection.
- **Advanced technology:** Streamlining lead generation and enhancing candidate experiences.
- **Diverse talent attraction:** Engaging with a wide range of talent pools.
- **Transparency & inclusion:** Ensuring fair and open recruitment processes.
- **University relations:** Maximizing reach across hundreds of diverse colleges and universities.
- **Sponsorships & events:** Promoting diversity through recruitment advertisements, forums, and training.
- **Data-driven decisions:** Optimizing prioritization and decision-making.

We are actively fostering an inclusive recruitment process. To mitigate unconscious bias, we have implemented diverse interview panels, ensuring representation from women and people of color, and developed a bias-free pre-hire assessment. To attract a wider range of talent, we partner with organizations like DiversityComm, Fairygodboss, and AfroTech, and showcase our employee resource groups and career opportunities through targeted advertising.

We also take pride in our award-winning internship program, which has gained international recognition for empowering early in career employees and providing a valuable launchpad for their careers. Lumen's internship program is highly sought-after. It offers a 10-week immersive experience where interns work on challenging projects and gain valuable skills. Our internship program is designed to provide valuable experiences that often lead to long-term career opportunities with us. We prioritize the development and integration of our interns into full-time positions, reflecting our commitment to invest in the future of our talent. Lumen also engages with early in career talent through various avenues, including on-campus events, virtual events, and social media. Our internship program is a key component of our talent strategy, enabling Lumen to continue building a diverse pipeline, supporting career development, fostering inclusion, and helping prepare future leaders.

Employee engagement

North Star

Lumen's **North Star** strategy recognizes that engaged employees are the cornerstone of a thriving company culture and a key driver of long-term success. When employees feel valued, heard, and connected to our purpose, they are more likely to be productive, innovative, and committed to our company's goals.

Our multi-faceted approach to employee engagement is deeply rooted in our company culture. By fostering open communication channels, creating opportunities for growth and development, recognizing achievements, and nurturing a sense of community and belonging, we seek to ensure that every employee feels valued and empowered. Lumen is committed to creating a culture that supports its mission in igniting business growth by connecting people, data and apps - quickly, securely and effortlessly. In partnership with Brené Brown, PhD, Lumen launched the Dare to Lead™ skill building program in 2024 to employees company wide. Dare to Lead™ teaches the skillsets of courage and aims to empower employees to embrace uncertainty, risk, and to lead with courage in a complex and rapidly changing world. This program has provided Lumen employees the skills and tools to support how they work together more effectively, communicate more openly, and innovate more creatively to ensure alignment and progress towards our mission. As continued evidence of our focus on employee engagement, our 2023 employee engagement survey showed a strong participation level of 69% and an overall well-being score of 80%. Additionally, the survey showed year-over-year increases in several key areas, including an increase in employees feeling they can be themselves at work.



Learning and development

At Lumen, our equitable and inclusive talent practices foster an environment where the brightest minds converge. By integrating the unique strengths of our current employees with the fresh perspectives of new talent, we accelerate innovation.

We have implemented a comprehensive career development framework, incorporating ongoing training programs and resources, to empower our employees to achieve their full potential and reach their professional goals. Our commitment to our employees' growth is reflected in our investment in comprehensive development opportunities for all employees, including skills-building programs, on-demand learning, tuition reimbursement, personalized mentoring, and a suite of leadership development courses.

In 2023, our commitment to employee development was evident in the 775,367 hours our employees invested in learning and development activities. This equates to an average of approximately 27 hours per employee, showcasing our dedication to continuous learning across our 28,000-strong workforce. We support this culture of growth through a robust learning

ecosystem, offering approximately 8,900 courses within our learning management system and a vast library of over 150,000 resources on our Percipio platform. These figures underscore our belief in empowering employees with the knowledge and skills needed to excel in their roles and contribute to our collective success.

Cultivating strong leaders

Developing strong leaders who can propel our company forward is a top priority. We are continuously building opportunities to nurture and expand our diverse talent pipeline, ensuring a vibrant future for Lumen. We encourage employees to get involved in mentoring to create a network of supportive relationships that help build essential leadership competencies, while our leadership development programs equip our people with the tools, training, and resources needed to inspire, influence, coach, drive change, and cultivate a growth mindset.

We also have implemented inclusive leadership training for our global leaders and maintain a dedicated internal learning channel with a wealth of resources on emotional and mental health, multicultural leadership, and today's racial landscape.

Lumen deploys Microsoft 365 Copilot

We are excited to be at the forefront of technological innovation in the telecommunications industry by collaborating with Microsoft to use Microsoft 365 Copilot across our workforce. As an adopter of the Early Access Program, we have already witnessed productivity gains and enhanced customer experiences. This cutting-edge AI tool is empowering our employees with real-time intelligent assistance, and is automating tasks, streamlining workflows, and enabling us to focus on delivering even greater value to our customers. By embracing the power of AI, Lumen is redefining how we work and solidifying our position as an industry leader.

ERGs: empowering employees and driving growth

Lumen's ERGs are catalysts for professional growth and development. They offer a wealth of opportunities, including leadership roles within the ERGs themselves and participation in broader company initiatives. ERGs create valuable networking and mentorship connections, fostering relationships between employees and leaders across the organization.

Our Women Empowered (WE) ERG offers mentorship programs that pair members with senior leaders, facilitating career growth and development. This model of empowerment extends to all ERGs, creating a network of support and opportunity that benefits both individual employees and the company.

Employee well-being and benefits

At Lumen, we have crafted a comprehensive approach to benefits and rewards that empowers our employees to live healthier lives, manage their finances wisely, and support their loved ones.

We invest in the physical, mental, and emotional well-being of our people through a comprehensive suite of benefits. We are committed to our employees' overall well-being, both in and outside of work, regularly evaluating and enhancing our offerings to best serve their needs.

Wellness programs that embrace the whole

Our wellness programs are designed to support our employees in achieving and maintaining a healthy lifestyle, considering their unique needs, work-life integration, and family life. We recognize that workplace and circumstances vary, so we have adopted a flexible, hybrid approach to well-being and offer ongoing education to ensure our employees are aware of and can easily access the resources they need.



Benefits that meet diverse needs

We offer comprehensive benefits that cater to the diverse needs of our employees and their families. This includes comprehensive medical and financial benefits, family support resources, mental and physical wellness programs, and resources for disability accommodations and gender affirmation.



Get well

- **Core health benefits:** Medical, prescription drug, dental, and vision. For the sixth 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.
- **Lifestyle reimbursement:** Monthly reimbursement for a portion of employee expenses for activities, and equipment that promote and support physical, mental, financial, and occupational well-being. 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.

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



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 moneysaving 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.

Inclusion, Diversity, Equity, Allyship, and Social Impact

Lumen values the diverse talents and perspectives of its global workforce and is committed to cultivating a culture of inclusion, where everyone feels valued and empowered to be their authentic selves. As part of our transition to an even more inclusive and impactful workplace, we launched a new Inclusion, Diversity, Equity, Allyship, and Social Impact (IDEAS) initiative in 2024 to replace our previous Diversity, Inclusion, & Belonging (DIB) program. This evolution signifies a deeper commitment to not only creating a diverse workforce but also fostering a sense of belonging, promoting equity, and actively engaging in social responsibility.

Lumen’s Allyship at Work training program, in partnership with Lean In, emphasizes the importance of collaboration and support in building a truly inclusive workplace. Through ERG-led initiatives, volunteer opportunities, and a focus on accessibility, Lumen is fostering a culture where teamwork, trust, and transparency drive both individual and collective success, benefiting both employees and the wider community. In 2023, we successfully provided this training to our Senior Leadership Team members. Building on this momentum, we were excited to expand the program’s reach and roll it out to all remaining employees throughout 2024.

The IDEAS team is also launching a social impact ambassador program to further our commitment to social responsibility, which empowers employees to contribute to meaningful causes and create positive change. While our Diversity and Inclusion Steering Committee under DIB has concluded its formal operations, our dedication to fostering a diverse, inclusive, and equitable workplace remains steadfast. Our ERGs will continue to benefit from the support and guidance of our Senior Leadership Team (SLT) and executive sponsors, ensuring alignment with our company’s broader goals and values.

IDEAS: key pillars for social change



Lumen

IDEAS

Inclusion, Diversity, Equity, Allyship, & Social Impact



Fostering an inclusive environment

To foster a truly inclusive environment, we offer frequent training to address unconscious bias, host regular roundtables to discuss IDEAS concerns, engage our leaders in listening circles, and provide targeted support through our ERGs.

We also foster open dialogue on IDEAS through “Uncomfortable-ish,” an internal series led by our Chief Diversity and Inclusion Officer. This podcast features interviews with Lumen executives, offering valuable perspectives on IDEAS topics. Additionally, our quarterly inclusive leadership training program continued in 2023, addressing timely issues such as corporate responses to social justice movements, managing diverse perspectives, and fostering inclusive communication in the workplace.

Commitment to pay equity

Equal pay for equal work is a fundamental principle at Lumen. It’s not only ethical but also essential for elevating our Lumen culture and attracting and retaining top talent. In 2023, we initiated a strategic partnership with Syndio, a third party pay equity vendor and team of subject matter experts, to evaluate pay equity at an intersectional level across gender and race. Our initial analysis was dedicated to testing assumptions and crafting a proactive approach to pay equity for implementation in 2024.

Events and initiatives

We amplify our commitment to diversity through a vibrant calendar of events and initiatives. By embracing national and international celebrations like Pride Month, Black History Month, and Veterans Day, as well as our own IDEAS Champion Diversity Week, we spark conversations, educate our employees, and empower them to actively participate in our diversity journey.

In 2023, Lumen launched the ERG Table Talk series, a monthly virtual event where senior leaders engaged in open conversations with ERG leaders and members. These discussions covered various topics, such as race, gender, disability, and allyship, fostering a culture of inclusion and belonging. The series featured ten conversations with different ERGs, providing valuable insights into their experiences and aspirations.

“The table talks have been a powerful and meaningful way to connect with our employees and to amplify their voices. These conversations are not always easy, but they are necessary and impactful. They help us to understand each other better, to celebrate our differences, and to work together for a more inclusive and equitable workplace and society.”

India Sylvester
Diversity and Inclusion Officer



Employee resource groups

Our ERGs are catalysts for change, driving our IDEAS initiatives forward. They play a vital role in fostering employee career growth, enhancing engagement, and connecting us with our increasingly diverse customer base.

With nine global ERGs, our employees have a powerful platform to share ideas and contribute to our inclusion efforts. They go beyond that by:

- **Empowering growth:** Offering professional and technical development opportunities.
- **Building community:** Fostering social and professional networks.
- **Giving back:** Engaging in community outreach through impactful events and sponsorships.
- **Celebrating diversity:** Recognizing and celebrating a wide range of cultural observances.
- **Supporting causes:** Connecting members with opportunities to support nonprofit organizations.

Throughout the year, our ERGs host a variety of events, including those focused on mental, physical, and financial well-being.



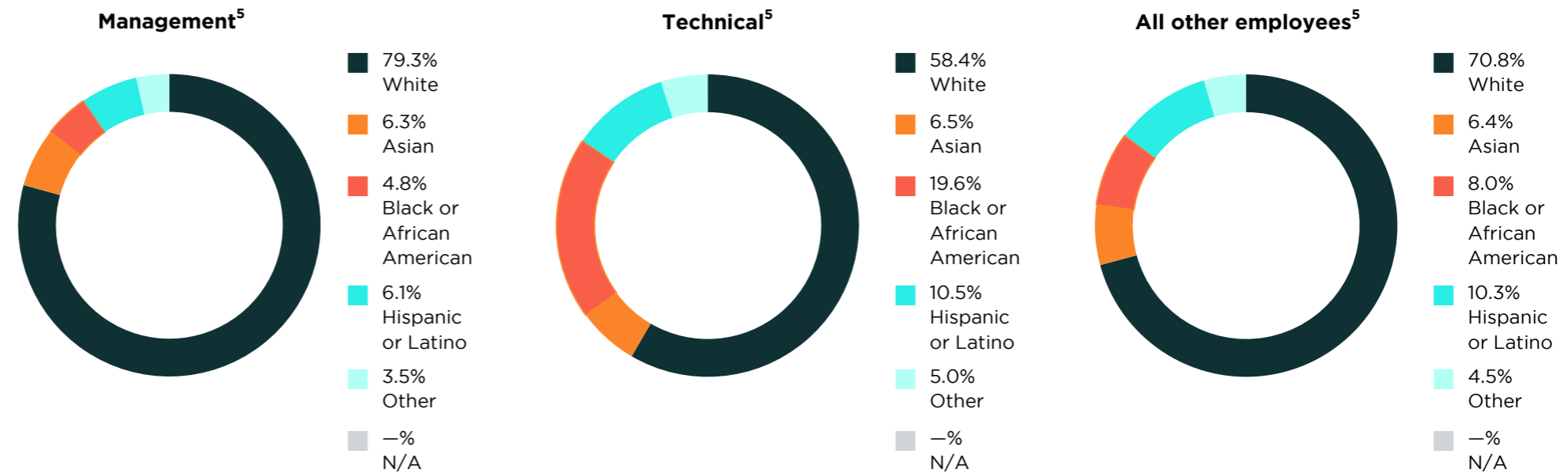
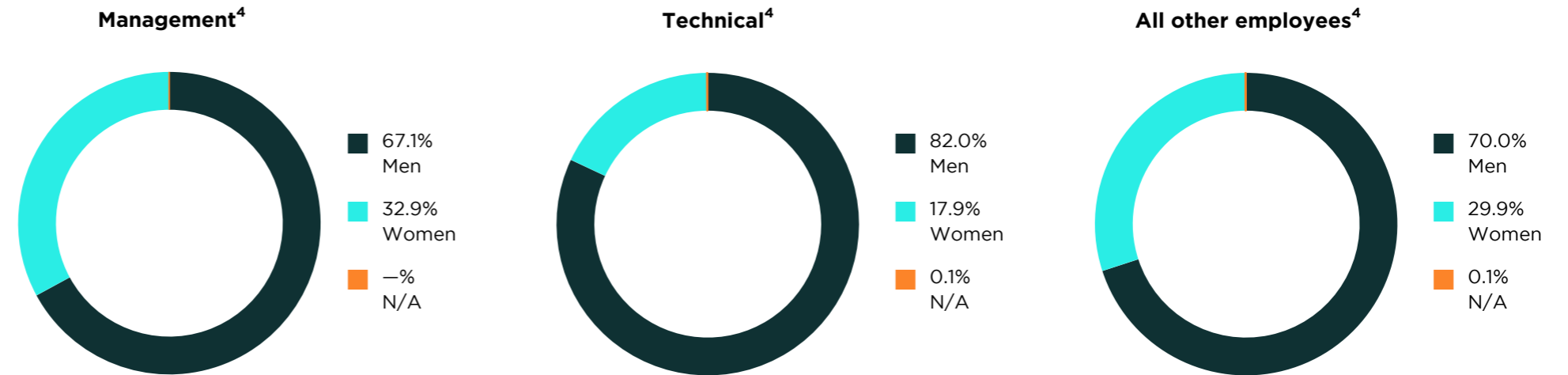
Our progress

We are committed to transparency when it comes to diversity and inclusion. Historically, we have shared our gender and racial/ethnic representation data publicly. Demonstrating our commitment to transparency, we initiated the annual publication of our EEO-1 survey data in 2023, providing stakeholders with deeper insights into our workforce demographics and diversity initiatives.

Board diversity also remains a key focus for us. We actively seek out and value diverse perspectives, experiences, and skills to ensure our Board is well-equipped to shape and guide Lumen’s business strategies effectively. In 2024, we were proud to have three ethnically diverse nominees and four women among our 11 Board members.

To learn more about our Board and its commitment to diversity, you can visit our dedicated [Board information page](#).

Gender, race, and ethnic representation of global employees



⁴ Mapped 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.

⁵ Job classification based on EEO-1 codes. EEO-1 codes only apply to the U.S. Data was calculated to align with the SASB framework.

Supplier diversity

North Star

Having an ecosystem of trusted partners is a cornerstone of our **North Star** strategy. We are committed to breaking down barriers and creating opportunities for diverse suppliers to thrive. This is not just a priority for us; it is increasingly important to our customers, with a surge in demand for transparency and reporting on our supplier diversity performance.

Our proactive approach

We have embedded supplier diversity into our strategic sourcing process, setting measurable goals and objectives across federal, state, commercial, public utility, and social responsibility categories. Our focus on social responsibility enables us to reduce barriers and increase spending with diverse suppliers in our local communities.

Lumen has a dynamic Supplier Diversity team, dedicated to further integrating our diversity objectives and connecting procurement teams with diverse suppliers who can deliver on specific project needs.

Building stronger connections

We actively participate in conferences like the National Minority Supplier Development Council Annual Conference & Exchange, fostering relationships with hundreds of diverse suppliers each year. We encourage these businesses to join our [Supplier Diversity Registration Portal](#), creating a seamless pathway for collaboration.

We are also deeply involved in industry associations and initiatives, including the Mountain Plans Minority Supplier Development Council, the National Veteran-Owned Business Association, and various Chambers of Commerce across the U.S. that champion diverse communities.

Continuous improvement & collaboration

We are always learning and seeking ways to elevate our supplier diversity program. We gather diversity data from our largest suppliers, benchmark ourselves against their performance, and engage in best practice sharing to continuously improve our approach. Additionally, we are expanding our Lumen Tier 2 program, which extends our diversity standards deeper into the supply chain by requiring our suppliers to report on their own supplier diversity efforts.

We believe in the power of collaboration and continuous improvement to create a more inclusive and dynamic supplier network.



Occupational health and safety

At Lumen, the safety and well-being of our people, partners, and visitors is a top priority. We are dedicated to creating workplaces that are not only free of recognized hazards but also constantly evolving to be even safer.

Our safety management systems are designed to foster continuous improvement in performance by integrating “risk-based thinking” into our core objectives and goals. Our Environment, Health, and Safety (EHS), Risk Management, and Operations teams collaboratively monitor safety performance, identifying trends and actively seeking opportunities to eliminate or reduce workplace hazards.

We empower our employees through innovative safety culture improvement campaigns that encourage engagement and provide a platform for expressing safety needs, knowledge, and concerns. These campaigns utilize surveys and interactive tools to gather valuable participant feedback, with designated responders reviewing comments and engaging directly with participants. In some cases, immediate corrective actions are taken to address safety issues promptly.

All participant feedback and conversations are analyzed using AI to identify key themes and areas for improvement. Our management team then develops and implements targeted action plans to address these opportunities.

- **Expanded safety training:** In 2023, our campaigns identified a desire in our field operations teams for expanded safety training for our people leaders. This contributed to the development of a new Field Operations Supervisor Safety Training program expected to be deployed in 2025.

- **Innovative technology:** Our campaigns also identified an interest in utilizing more technology-oriented elements in our field operations safety ecosystem. As a result, we pilot tested in-cab forward and rear facing camera/GPS systems in Lumen vehicles to help reduce collisions and improve fleet efficiencies. These systems are being broadly deployed in 2024 and 2025. Lumen also piloted wearable sensors to help identify and alert our technicians to potential ergonomic risks that may result in injuries.

Last year was significant for safety education, with over 8,289 employees completing over 58,000 hours of in-depth safety training. Training was delivered via online platforms and in-person workshops across the company. The safety training program is essential for minimizing the risk of employee injury, illness, and property damage.

Our approach ensures that we are constantly evolving and refining our safety practices to protect our employees and maintain a safe and secure work environment.

Proactive occupational health and safety practices

Our EHS team takes a proactive approach to safeguarding our employees' well-being. We conduct comprehensive risk assessments, analyze safety incident data, and stay abreast of evolving health and safety legislation to develop robust policies and procedures that mitigate workplace hazards and ensure compliance with all applicable laws and regulations.

In the United States, our Mutual Occupational Safety and Health (MOSH) committees empower represented employees to actively participate in shaping our safety management systems. Through these committees, we collaborate to identify, evaluate, and implement practical solutions that address workplace health and safety concerns, fostering a culture of shared responsibility for a safe and healthy work environment.

Returning injured employees to improved health

Lumen is dedicated to minimizing workplace injuries and prioritizing the well-being of our employees. In the event of a work-related injury, our workers' compensation approach focuses on providing comprehensive care and support, seeking to enable a swift and complete return to work and family life.

We have recently enhanced our approach by adopting an advocacy-centric model, incorporating dedicated resources for worker advocacy, and leveraging predictive analytics to identify claims that may require additional attention. This strategy has led to improved outcomes for our employees, including faster recovery times and smoother transitions back to work.

Incident and hazard reporting

Lumen employees are empowered to play an active role in ensuring workplace safety. We require immediate reporting of all work-related incidents, including injuries, illnesses, accidents, and property damage, to both their manager and our 24/7 reporting system. This enables prompt investigation and the implementation of preventive measures to avoid similar occurrences in the future.

Furthermore, we mandate the swift reporting of unsafe conditions, hazards, or suspected legal violations to managers, who are then responsible for implementing appropriate safeguards and reporting the issue through our 24/7 system. Alleged violations of our Code of Conduct or legal obligations can be confidentially reported through our [Integrity Line](#).

By fostering a culture of transparency and accountability, we ensure that potential risks are promptly identified and addressed, contributing to a safer and healthier work environment for all.

Safety performance

In 2023, Lumen demonstrated a strong commitment to employee safety, achieving an Occupational Safety and Health Administration (OSHA) recordable occupational injury and illness rate of 1.17 per 100 employees in the United States. This rate is well below the industry average of 2.5⁶ for wired telecommunications companies, highlighting our dedication to maintaining a safe and healthy work environment. Lumen also strives to comply with all applicable OSHA standards. However, we received 2 OSHA citations in 2023. These citations resulted in \$16,000 in penalties. In both cases, Lumen took prompt action to prevent recurrences of these violations.



6 Reported by the U.S. Bureau of Labor Statistics for the year 2022

Community engagement

At Lumen, we recognize that our employees are enthusiastic about diverse causes, so we empower them to give back in ways that resonate with them. We do this by encouraging and enabling them to volunteer and by matching charitable donations to causes they care about.

Our approach to community investment

Our strategic investments are designed to create lasting change in the communities we serve. We strive to be a trusted partner and aim to help address some of the essential needs of the communities we call home.

Working with our communities is about having a positive influence on the world. We often organize community initiatives such as packing boxes at food banks or organizing supplies to donate to local schools. Our employees' passions are as diverse as they are, so we also encourage and enable volunteering and giving to causes that are important to our employees through the Lumen Cares Portal. Accordingly, our philanthropic efforts and community impacts are wide-ranging.

Our commitment to social impact is a source of pride for our employees and a driving force behind our company's purpose of unleashing the world's digital potential.

President's Volunteer Service Award Program

Lumen is proud to be a newly designated Certifying Organization for the President's Volunteer Service Award Program, recognizing the exceptional contributions of our employees who dedicate their time and energy to serving their communities. In 2023, 37 Lumen employees across eighteen states were honored with this prestigious award, each having contributed over one hundred hours of volunteer service. Their selfless dedication to a wide range of causes, from youth organizations to the arts and animal welfare, exemplifies Lumen's core values and commitment to social impact. We celebrate their achievements and are inspired by their unwavering commitment to making a difference.

First recipients of Lumen's 2023 Presidential Volunteer Service Awards



Natalie Vande Vuss
Michael Murrell



- | | | |
|-------------------------|------------------------------|------------------------|
| Brandon Di Maria | Pam Dechert | Jose Magallanes |
| Aaron Minyard | Kristy LaCroix | Liz Mykietyn |
| David Espinoza | Kelly Hoffman | Margaret Roosma |
| Janet Lewis | Jennifer Hass | Bo Mendez |
| Jennifer Dailey | Katherine Aanestad | Chola Saralya |
| Nicki Martinez | Lisa Ranstrom | Eric Mciver |
| Tara Acton | Michael Garavaglia | Jennifer Moore |
| Gerald Mauger | Kelly Burns Gallagher | Rosetta Greek |
| Wesley Bridwell | Michelle Baumgardner | Willie Mays |
| Brian Roberts | Brian Oliver | Marcus Seehaver |
| Clinton Mccaleb | Lisa Devine | Susan Caya |
| Jeffrey Jackson | Sylvia Work | |

Lumen Cares Portal: empowering employees to make a difference

We champion volunteerism year-round, celebrating the thousands of volunteer hours our employees contribute annually. To amplify their impact, we offer Volunteer Rewards for every hour tracked, providing up to \$1,000 per employee per year in donation credits to support the charities they care about most.

In 2023, Lumen employees dedicated nearly 20,000 volunteer hours, and donated \$2.25 million to nonprofits. These impacts were increased thanks to matching contributions and volunteer rewards from the Lumen Clarke M. Williams Foundation.

Expanded globally in 2023, our Lumen Cares Portal empowers employees to make a greater impact. It connects them with over 2 million nonprofit organizations around the world, facilitates collaborative volunteering, and rewards their valuable contributions. In 2023, our employees used the portal to support nearly 4,000 nonprofits, demonstrating the incredible power of a united workforce.

Fueling generosity with our Employee Giving Program and Employee Relief Fund

Our Employee Giving Program empowers employees to make one-time or recurring donations to eligible nonprofits. We match 100% of donations up to \$1,000 per year per employee, with additional matching opportunities during special campaigns like Giving Tuesday and our Campaign to Fight Hunger.

Our commitment to support our communities is further represented by our Employee Relief Fund program. Employees impacted by house fires or natural disasters can apply for grants to provide immediate financial relief when they need it most. Lumen has provided a total of 41 grants to employees in need since the inception of this program in 2022.

Lumen's Giving Tuesday partnership with Be My Eyes, a free app that connects blind and low-vision individuals with sighted volunteers through live video calls, was a resounding success. Employees embraced the opportunity to give back by providing virtual assistance for tasks such as reading labels, navigating unfamiliar environments, or identifying objects. The simplicity of the app and the meaningful impact of each interaction made it a truly rewarding experience for all involved, solidifying its position as our most impactful employee engagement event to date.



Our commitment to governance and integrity

North Star

Our governance approach is guided by fairness, transparency, trust, integrity, and a commitment to excellence. Our commitment to transparency is a core element of our **North Star** culture, reflecting our belief that open communication and ethical practices are essential for building strong and lasting relationships with our customers, shareholders, communities, and all who are involved with Lumen.

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and resiliency



Corporate governance












Board of directors

Our Board members possess diverse expertise across various industries, including technology, innovation, ESG, regulatory, and legal domains. Their collective knowledge and experience guide our growth and progress. The Board is supported by specialized committees, each overseeing specific risk areas.


All Board members participate in our director orientation program and have access to continuous learning opportunities on relevant topics such as cybersecurity, ethical business practices, regulatory landscapes, and ESG issues.

Diversity is a key priority for our Board membership. We believe diverse perspectives foster a growth mindset. Our director selection guidelines embrace a broad definition of diversity, encompassing gender, race, ethnicity, age, geographic, cultural, and professional backgrounds.

Board composition⁷

| | | | | | |
|---|--|--|---|--|---|
|  <p>Kate Johnson President and Chief Executive Officer Director Since: 2022 Committee Membership: None</p> |  <p>T. Michael Glenn Chairman of the Board Director Since: 2017 Committee Membership: HRCC</p> |  <p>Quincy L. Allen Director Since: 2021 Committee Membership: AC HRCC</p> |  <p>Martha Helena Bejar Director Since: 2016 Committee Membership: HRCC NCGC</p> |  <p>Peter C. Brown Director Since: 2009 Committee Membership: AC RSC</p> | |
|  <p>Kevin P. Chilton Director Since: 2017 Committee Membership: AC RSC</p> |  <p>Steven T. "Terry" Clontz Director Since: 2017 Committee Membership: HRCC NCGC</p> |  <p>Jim Fowler Director Since: 2023 Committee Membership: AC RSC</p> |  <p>Hal Stanley Jones Director Since: 2020 Committee Membership: AC RSC</p> |  <p>Diankha Linear Director Since: 2024 Committee Membership: NCGC RSC</p> |  <p>Laurie Siegel Director Since: 2009 Committee Membership: HRCC NCGC</p> |

Legends

 - Independent

 - Chair

NCGC - Nominating and Corporate Governance Committee

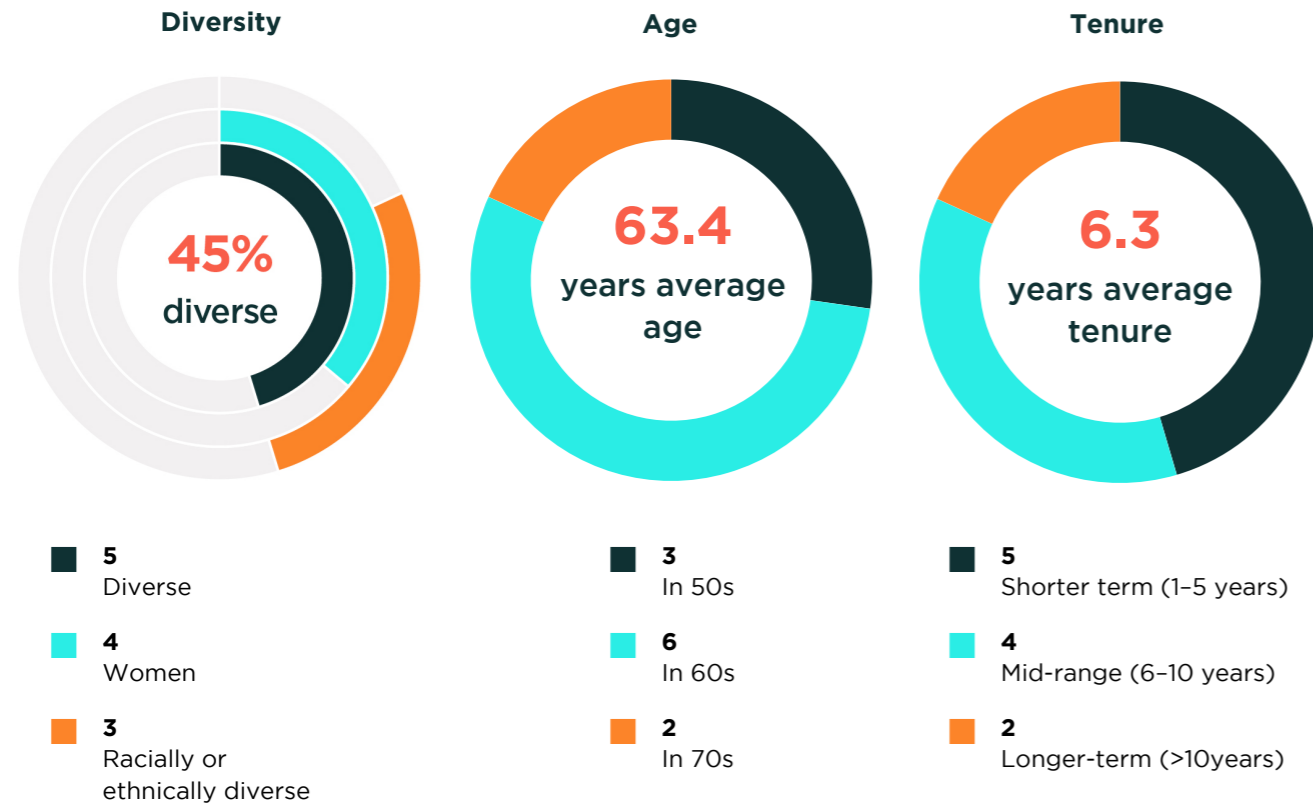
AC - Audit Committee

RSC - Risk and Security Committee

HRCC - Human Resources and Compensation Committee

⁷ Board composition is represented in accordance with our proxy statement dated April 5, 2024.

Board demographics



For more information about our directors, please visit our [website](#).

Our commitment to strong governance

We have implemented robust corporate governance practices that safeguard the interests of our customers, shareholders, communities, and all who are invested in our success.

Lumen's governance documents

- [Audit Committee Charter](#)
- [Corporate Governance Guidelines](#)
- [Human Resources and Compensation Committee Charter](#)
- [Nominating and Corporate Governance Committee Charter](#)
- [Risk and Security Committee Charter](#)

Comprehensive Enterprise Risk Management

Our Board of Directors, along with its committees, maintains a vigilant eye on our risk management processes, receiving regular updates on our ERM program. Through ERM, we systematically identify, assess, and address risks and opportunities that could significantly impact our financial or strategic position, including climate-related risks. The program includes a comprehensive annual enterprise risk assessment, facilitated by Internal Audit in collaboration with the Ethics & Compliance team. This assessment involves interviews with executives across various business functions and considers external factors and historical data.

The assessment results are presented to senior leadership, the Audit Committee, and the RSEC, highlighting six to eight critical risks requiring detailed monitoring throughout the year. Internal Audit uses these findings to shape the annual audit plan and conducts quarterly updates to track any changes.

Each critical risk is assigned an executive owner who is responsible for defining key risk indicators, metrics, and targets. These owners present in-depth annual assessments to the Risk & Security Committee, outlining their quantitative measures, goals, and plans for the upcoming year. Quarterly updates on these indicators are provided to Internal Audit, highlighting any deviations from goals and actions taken or planned. The resulting dashboard and detailed information are presented to the Risk & Security Committee, which regularly reports to the full Board.

The annual assessment results are compared to risk factors disclosed in our 2023 10-K and the charters and agendas of Board Committees, ensuring alignment between the assessment, external disclosures, and Board oversight. This comprehensive review process, along with the Board's ability to consult with risk owners, ensures effective risk oversight for Lumen.

Risk oversight

BOARD OF DIRECTORS



Audit Committee

- Internal controls over financial reporting (quarterly)
- Risk factors included in periodic reports (annual with quarterly reviews)
- Investment risk related to treasury activities (as Needed)
- Debt covenant compliance risk (annually)

Nominating and Corporate Governance Committee

- ESG (quarterly)
- Political contributions (annually)
- Independence of directors and board committees (annually)

Human Resources and Compensation Committee

- Executive compensation (quarterly)
- Human capital strategy (quarterly)
- Workforce related risks (quarterly)

Risk and Security Committee

- Enterprise risk management (quarterly)
- Cybersecurity (quarterly)
- Ethics and compliance (quarterly)
- Data privacy (biannually)



MANAGEMENT

- Under our ERM program, management develops a response plan for prioritized risks, including our cyber incident response playbook. Management also develops plans for monitoring and mitigating identified key risks.
- Management provides regular reports on our key risks and risk mitigation strategies to the Risk and Security Committee, and assists other committees in monitoring the risks for which they are responsible.
- Committees report each quarter on risk issues to the full Board.



ENTERPRISE RISK MANAGEMENT (ERM) PROGRAM

Assess

- The ERM process involves an annual enterprise risk assessment based around 40 key financial, compliance, operational, and strategic risks facing the company. This assessment process is facilitated by Internal Audit in collaboration with the Ethics & Compliance team within the legal department and involves interviews with executives across business functions, and consideration of other factors such as the external environmental and the history of previous issues that could indicate a relatively higher or lower risk in a particular area.
- The results of the assessment are presented by Internal Audit to the senior leaders, the Audit Committee, and the Risk and Security Committee in order to define the most critical risks (typically six to eight) that the Board and management believe warrant more detailed and frequent monitoring throughout the year.
- Internal Audit also uses the results of this Enterprise Risk Assessment to determine key focus areas within the Internal Audit plan for the upcoming year and performs a quarterly update to the risk assessment to identify any changes potentially requiring a Board or Internal Audit response.

Monitor

- For each of the six to eight critical ERM risks, we identify executive risk owners who are responsible for defining key risk indicators, metrics, and targets to indicate how effectively the respective risk is being managed.
- On an annual basis each risk owner presents a deep-dive assessment to the Risk & Security Committee explaining their quantitative measures, goals, and plans for the upcoming year.
- On a quarterly basis, Internal Audit works with each executive risk owner to update these indicators, identify any divergence from goals, and note actions taken and planned. The risk owners assign specific performance scores to indicate their overall assessment of their management of that risk. The resulting dashboard and detail for these ERM risks is presented to the Risk & Security Committee at each quarterly meeting.
- Each committee regularly reports to the full Board regarding its risk oversight functions.

Align

- The results of the Annual Enterprise Risk Assessment are compared to both the risk factors disclosed in the company's annual report (10-K) and against the charters and agendas for the Board Committees to ensure alignment between the company's assessment, external disclosures, and coverage by the Board of the respective key risks. We believe this combination of annual and quarterly review by the Board Committees, along with the ability of the Board to call upon risk owners at any time as required, allows the Board to effectively exercise its oversight function over key risks to Lumen.

ESG oversight & integration

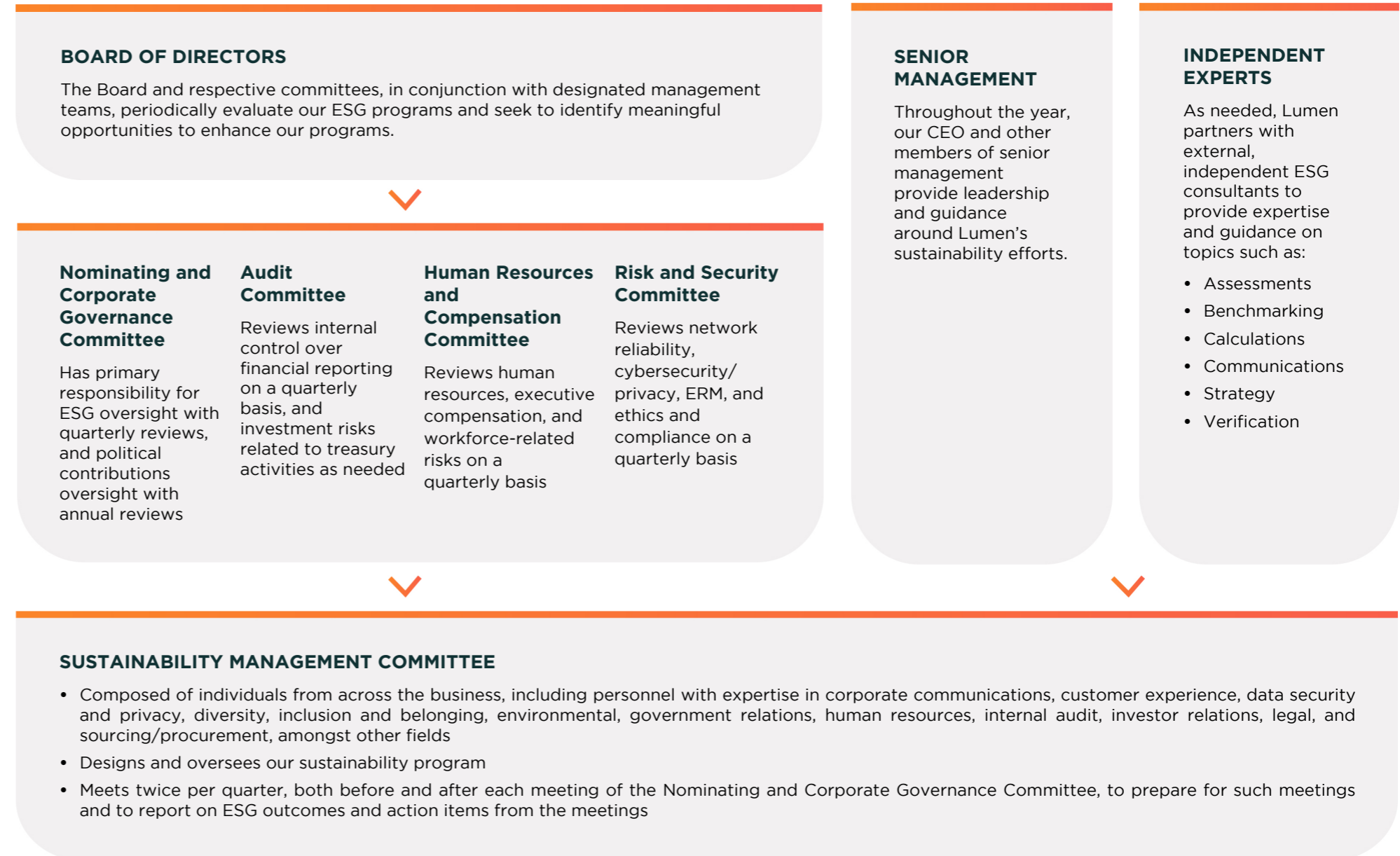
Our Nominating and Corporate Governance Committee takes a leading role in ESG oversight, conducting quarterly reviews, identifying key ESG and financial factors, and ensuring that our disclosure and communication plans are effective and transparent. Their quarterly reviews cover topics such as cybersecurity, data privacy, political contributions, philanthropy, and environmental sustainability.

The full Board of Directors reviews our ESG program annually, while other committees like RSEC, Human Resources and Compensation, and Audit regularly evaluate specific ESG topics.

Sustainability Management Committee

Lumen’s sustainability efforts are integral to our business strategy and enhancing value for our stakeholders. Our Sustainability Management Committee (SMC), comprising members from across the organization, spearheads the design and oversight of our comprehensive sustainability program. The committee operates under the guidance and oversight of the Lumen Board and senior leadership, driving our sustainability agenda forward.

ESG sustainability leadership



The Sustainability Management Committee's three pillars



Environmental

Executive sponsor:

Senior Vice President—Treasurer

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
- 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
- Monitors emerging climate change issues, including the evolving regulatory landscape, and oversees data collection and environmental and sustainability reporting



Social

Executive sponsor:

Chief Diversity and Inclusion Officer

The Social Team

- Oversees our hiring practices striving to recruit and retain the best and diverse talent
- Is involved with the engagement of our 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



Governance

Executive sponsor:

Vice President—Deputy General Counsel—Corporate Governance and Transactions

The Governance Team

- Is responsible for helping Lumen adopt and maintain best practices when it comes to corporate governance and ethics and compliance
- Supports senior management and the Board through shareholder engagement and outreach, transparent disclosures in public filings, and robust risk management and mitigation efforts

Ethics and compliance

Ethics and compliance

- [Lumen Code of Conduct](#)
- [Lumen Anti Corruption Policy](#)
- [Lumen Supplier Code of Conduct](#)
- [Lumen Human Rights Policy](#)
- [Lumen Whistleblower Policy](#)
- [Lumen Integrity Line](#)

Ethics and Compliance program

Our Lumen Code of Conduct, the cornerstone of our compliance program, is a living document, continuously evolving and communicated to all individuals associated with Lumen—our officers and directors, and full and part-time employees. We maintain a comprehensive compliance program, requiring compliance with all applicable laws and regulations. Quarterly reviews of contact and investigation data provide valuable insights, which allow us to proactively identify and mitigate potential risks, focusing our efforts where they have the greatest impact.

Our comprehensive Ethics and Compliance program is overseen by the Risk and Security Committee of the Board. The program is continually reviewed and enhanced, with periodic audits on key elements of the program. In 2023, we focused on auditing our whistleblower program, the Integrity Line, compliance training assignments, third-party screenings, and the insider trading program, with all audit results and actions transparently reported to the Audit Committee.

We employ a data-driven, risk-based approach to actively monitor and audit compliance with the law, our [Code of Conduct](#), and other policies, fostering ethical conduct throughout our organization. By aligning with other risk owners and leveraging data insights, we identify key areas for improvement and focus our resources on mitigating the most significant risks. To further enhance our proactive risk management, Lumen conducts company-wide compliance risk assessments every three to five years, including a risk assessment launched in 2024. These assessments inform our ongoing efforts to identify, mitigate, and remediate risks, including targeted policy development and training initiatives.

We partner with our employees and third-party partners to ensure ethical and legal standards are understood and upheld.

Training

100%
of employees* are
assigned training annually

+99%
of our employees
completed our Code of
Conduct training and
+99% completed our
anti-corruption training
in 2023

* Including FTEs, PTEs, and interns

Our Code of Conduct training is comprehensive, encompassing information on sustainable supply chains and ethical procurement practices to ensure we partner with responsible third parties. We also develop targeted training programs, including international trade compliance for our non-U.S. sales teams and anti-corruption training, to address the evolving business landscape. This ensures that all employees are equipped to uphold our high ethical standards and maintain compliance in all business operations.

We invest in annual Code training to reinforce expectations regarding workplace conduct standards and our commitment to ethical business practices. The training covers a range of critical topics, including harassment and discrimination, anti-corruption, speak-up culture, insider trading, data privacy, and conflicts of interest. It is updated annually to reflect current risks and changes in law. In 2023, we revamped our anti-corruption training with a role-based model and interactive video modules. In 2024, we implemented gamified code training developed by our learning and development team, enhancing engagement through a video-game-like experience.

Ethics and compliance survey

North Star

Our Ethics and compliance survey helps us gauge the accessibility and trustworthiness of our processes, employee comfort in reporting concerns, and areas for improvement. In 2023, we updated the survey questions to better reflect our North Star values of teamwork, trust, and transparency. Around 11,251 of our employees, or 38% of our workforce, participated. We achieved an average positive score of 89% and are tracking multiple areas for improvement.

2023 marked a positive shift in Lumen's speak-up culture. We saw a 6% increase in employee participation in our Ethics and Compliance survey, with strong feedback on employee comfort reporting concerns. We also saw an increase in meaningful contacts to the Integrity Line - both in reporting concerns and seeking guidance.

Global Integrity Line

We encourage all individuals associated with Lumen—employees, officers, partners, and suppliers—to speak up without fear of retaliation if they encounter ethical concerns. The [Lumen Integrity Line](#) is a confidential, third-party, 24/7 global hotline with dedicated country lines in local languages. It allows individuals to seek guidance or report concerns via telephone, [email](#), or [online form](#).

Allegations are promptly investigated by Human Resources or Corporate Investigations, using a triage process to ensure appropriate handling based on legal risk and severity. We maintain a zero-tolerance policy for retaliation. Our [Whistleblower Policy](#) outlines the protections offered by our Code of Conduct and the law, detailing the ways employees can safely report concerns.

To review the effectiveness of the Integrity Line, we conduct quarterly evaluations of Integrity Line data and analytics, including the types of issues reported and substantiation rate. We use this feedback to continuously improve the program and report these findings to the Risk and Security Committee of the Board of Directors on a quarterly basis.

What to expect when I contact the Integrity Line

- 1 Call the Integrity Line to report a concern or seek guidance on an ethics issue. Individuals may also email concerns to integrityline@lumen.com or submit a web report at www.lumenintegrityline.com. There is no retaliation for reporting concerns.
- 2 For telephone reports, an independent third-party Integrity Line representative will answer the call. The representative will take the report and ask for details about the concern or question. Subject to local law, individuals may choose to remain anonymous, or may provide their name. A case number will be assigned to check on the status of the report or provide additional information.
- 3 All reports will be routed to Lumen's Integrity Line team, who will review and may follow up for more information. The team will then assign to the appropriate group in accordance with Integrity Line processes for further investigation or handling. If the person is not anonymous, they will be contacted within a reasonable time by the Integrity Line team or the team assigned to investigate the claims or provide guidance.
- 4 Lumen will take appropriate action, which may include conducting an investigation or providing advice. In the case of an investigation, the reporting party will be notified when the investigation is complete, but should not expect to be informed of the findings or any actions taken, as these are considered confidential employment actions.

Commitment to human rights

Lumen is committed to proactively addressing human rights issues within our business and relationships with third parties. Our [Code of Conduct](#), [Supplier Code of Conduct](#), and [Human Rights Policy](#) outline our expectations, and we train employees to recognize and report concerns in these areas. Lumen maintains a zero-tolerance policy for forced or child labor and human rights abuses.

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

Our [Anti-Corruption Policy](#) and [Supplier Code of Conduct](#) mandate that all employees and third-party partners adhere to all applicable anti-bribery, anti-corruption, and anti-money laundering laws, including the Foreign Corrupt Practices Act and the U.K. Bribery Act. Lumen maintains a zero-tolerance policy for bribery, corruption, money laundering, and engagement with prohibited entities or sanctioned countries. In February 2024, we revised our code to explicitly include anti-money laundering provisions. This commitment is reinforced through annual training for all employees on these laws and policies, supplemented with targeted training and communications. In 2023, we achieved a 99% completion rate for our Anti-Corruption Training course.

Our stringent Anti-Corruption Policy clearly defines appropriate interactions with government officials, government customers, and non-government third parties. The program is regularly audited to ensure ongoing compliance. We also strictly prohibit financial crimes such as money laundering, facilitation of tax evasion, terrorist financing, securities fraud, and market manipulation. Our Insider Trading Policy educates employees about insider trading and our unwavering zero-tolerance stance.

Lumen employs a robust system of checks and balances to ensure the integrity of our financial transactions. This includes regular reviews of flagged gifts, entertainment, and travel expenses. Our procurement team has implemented AI-powered controls to proactively identify potential issues related to corporate card spending. Additionally, Lumen has a mandatory pre-approval process for any courtesy exceeding \$150 USD. These measures collectively reinforce our commitment to ethical and transparent financial practices.

Lumen maintains a robust anti-corruption framework, incorporating periodic compliance risk assessments, enterprise risk management reviews, and risk-based audits of internal processes and business partners. These measures seek to ensure compliance with relevant laws and regulations, including those pertaining to anti-corruption.

We leverage data analytics as a core component of our compliance program. By analyzing large datasets and benchmarking against industry peers, we strategically allocate anti-corruption resources to the most critical issues and locations. This data-driven approach allows us to guide business operations effectively while ensuring lawful and efficient practices. Our data-backed insights strengthen our position as trusted advisors, fostering stronger relationships with our clients.

Anti-competitive behavior

Lumen supports fair competition and opposes anti-competitive practices. Our policies require compliance with all antitrust and fair competition laws, reinforced through training, communication initiatives, and scenario-based examples.

Supplier management

Delivering our services and ensuring a resilient network requires collaboration with a global ecosystem of suppliers. We are committed to partnering with suppliers who not only possess the necessary capabilities but also share our dedication to upholding the highest standards of quality and ethical conduct.

Our [Supplier Code of Conduct](#), updated in July 2023, outlines expectations for ethical conduct, including human rights, labor practices, health and safety, environmental responsibility, and privacy.

Our supplier due diligence process is comprehensive and rigorous. Supplier agreements mandate certification of compliance with anti-bribery laws and international trade requirements and include audit rights to ensure adherence to our [Supplier Code of Conduct](#) and all applicable legal and ethical standards.

In 2024, we released a gamified procurement training to a targeted set of employees on procurement processes and the importance of working with ethical third parties.

We conduct targeted assessments of higher-risk suppliers, evaluating their ethical practices, security measures, privacy protocols, environmental impact, and sustainability efforts. Our vendor diligence tool streamlines risk ranking, audits, and ongoing monitoring of suppliers. This tool has enabled us to conduct thorough reviews of higher-risk suppliers, issuing questionnaires and other diligence requests based on their risk profiles.

AI Advisory Board

Lumen's Artificial Intelligence (AI) Advisory Board, composed of representatives from diverse groups within the company, plays a crucial role in evaluating AI use cases. The board's goal is to ensure the ethical implementation of AI technologies and thoroughly considers all associated privacy and security implications.



Public policy

Our approach to civic engagement

At Lumen, we empower our colleagues to actively participate in the political process. We encourage them to support the candidates and initiatives that resonate with their values. To facilitate this, we have established political action committees that accept voluntary contributions to support political candidates. Lumen's political initiatives and lobbying activities are overseen by our Board and Nominating and Corporate Governance Committee, who conduct annual reviews and budget assessments. We are committed to advocating for public policies that benefit our stakeholders.

Our semi-annual Political Contributions Reports reflect our dedication to transparency and ethical corporate governance. These reports disclose corporate political contributions, political action committee donations, and contributions to trade associations and 501(c)(4) organizations, all in compliance with applicable federal and state campaign finance laws.

By providing this transparent overview, we aim to foster trust in the democratic process and demonstrate our commitment to responsible corporate engagement in political affairs.

[Public Policy & Government Affairs](#)

[Political Contribution Reports](#)

- [January 1 - June 30, 2023](#)
- [July 1 - December 31, 2023](#)

Supply chain management and resiliency

Lumen's supply chain management

In a competitive marketplace, suppliers play a crucial role in Lumen's operations. We depend on reliable suppliers who ensure on-time delivery and provide high-quality products at an affordable price. Our Procurement organization strives to support the company's business strategy by developing and managing a global supply base that enhances competitiveness and success.

Lumen is committed to managing ESG risks throughout the supply chain, including human rights, labor, and environmental issues. Our [Supplier Code of Conduct](#) outlines expectations and helps form the basis for supply chain management. Suppliers are also expected to comply with Business Continuity Management standards and maintain a Business Continuity Management plan to help ensure a resilient supply chain.

Conflict minerals

Lumen does not directly sell products containing conflict minerals, and we require our suppliers to take reasonable steps to ensure that any tantalum, tin, tungsten, or gold in their products do not benefit armed groups in conflict-affected regions.



Our efforts on environmental sustainability

At Lumen, environmental sustainability is a core commitment, benefiting our planet, business, and stakeholders. It is intertwined with our purpose of unleashing the world's digital potential. We recognize that building a sustainable future requires strategic collaboration, and we actively partner with customers and partners to explore technology-driven solutions for a greener world.

North Star

Embedded in our **North Star** are values of teamwork, trust, transparency, and customer focus. We understand our customers' desire for both sustainability and productivity, and we empower them to achieve both through digital automation, smart network solutions, and innovative technologies.

We consistently assess our environmental impact, seeking innovative ways to reduce greenhouse gas (GHG) emissions, eliminate waste, and manage water consumption, further reinforcing our dedication to a sustainable future.

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Our vision

Lumen exceeded our 2018–2025 science-based GHG emissions reduction targets ahead of schedule in 2022. Verified data shows a 28% reduction in Scope 1 and Scope 2 emissions and a 17% reduction in Scope 3 emissions from 2018 to 2023, surpassing our original targets of 18% and 10%, respectively.

This accomplishment was achieved through a collaborative, company-wide effort encompassing energy efficiency initiatives, renewable energy procurement, and real estate consolidation.

We are committed to mitigating the effects of climate change and are currently evaluating new targets and developing a low-carbon transition plan outlining our future strategies. We will continue to explore innovative ways to reduce emissions, contributing to the United Nations Sustainable Development Goals.

Employee engagement in sustainability

Lumen employees contributed to our sustainability initiatives in various ways:

- **Volunteering:** Participating in community clean-ups and collaborating with nonprofits to minimize environmental impact.
- **“Going Green” mailbox:** Submitting ideas for sustainable practices within the company, fostering a culture of continuous improvement.
- **EV charging stations:** Utilizing charging stations at our Broomfield office, encouraging the use of electric vehicles and reducing emissions.
- **E-waste drop-off events:** Conveniently and responsibly disposing of old electronics at periodic events held at our Broomfield office.



Environmental compliance and management

Our Environmental Management System (EMS) is a driving force behind our EHS and sustainability goals. It empowers us to not only minimize our environmental footprint and meet regulatory obligations but also continually raise the bar on our environmental performance.

Environmental practices

We take a comprehensive approach to environmental management. We assess the most impactful environmental issues, both within our operations and in the broader world, alongside legal requirements, to identify areas where we can make a real difference. Our Environmental Compliance Governance Panel, composed of EHS team subject matter experts, collectively works to optimize our environmental compliance function by regularly assessing and effectively managing our programs, facilities, and designated suppliers, and tracking regulatory changes that impact our operations.

To empower our workforce, we collaborate across the company to develop clear, effective environmental practices and procedures, accessible to all employees on our intranet.

Lumen further amplifies its environmental impact through active participation in the Environment, Health & Safety Communications Panel (EHSCP) Environment Committee.

Collaborative platforms provide opportunities to engage with industry leaders and policymakers, share best practices, and stay at the forefront of emerging environmental trends. By actively participating in such organizations, Lumen reinforces its commitment to environmental stewardship on a global scale and contributes to the development of sustainable solutions that benefit both business and the planet.

With respect to lead-sheathed cable, we have thoughtfully managed the small quantity of lead-sheathed cables in our network and have a positive record of safeguarding the health and well-being of our employees and the communities we serve. That has been and remains our priority.

Empowering our people through environmental training

Our dedicated EHS team partners with managers to create targeted training content for specific roles and tasks, ensuring that every employee has the knowledge and skills to contribute to our environmental goals. We deliver training through a blend of instructor-led sessions, online modules, awareness campaigns, and facilitated meetings, fostering a company-wide culture of environmental stewardship.

Certified for environmental excellence

We initiated the process for ISO-14001 certification in India in 2023, and successfully obtained the certificate in 2024, demonstrating our commitment to a robust environmental management system.

Environmental responsibility in our supply chain

We believe environmental responsibility extends beyond our own operations. We expect our suppliers to share our commitment to ethical conduct and comply with environmental laws and regulations. This includes responsible management and disposal of hazardous materials, minimizing environmental contamination, and protecting natural resources.

Our [Supplier Code of Conduct](#) encourages suppliers to proactively address environmental and sustainability issues within their own supply chains. We urge them to implement their own EMSs, continuously monitor performance, prioritize environmentally preferable and energy-efficient services, and seek out solutions that reduce waste and promote the use of recycled materials.





Climate risk management

Extreme events, from floods and drought to hurricanes and wildfires, pose a significant threat to our service delivery. That is why our BCM program is crucial to our long-term success. It focuses on prevention, collaboration, communication, response, and recovery to ensure we can continue serving our customers, shareholders, and employees during disruptive events. For additional details, please refer to our Business Continuity Management section.

Lumen has proactively conducted a physical climate change risk assessment to identify specific threats and mitigation opportunities. This assessment evaluated climate risks to seven critical sites and assets, projecting under a high emissions scenario until 2035 and 2060. It followed the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and focused on the Intergovernmental Panel on Climate Change (IPCC) business-as-usual scenario, which presents the highest physical impacts.

Climate change presents diverse hazards and threats that could potentially impact our operations, suppliers, and customers. These include flooding from rising sea levels and hurricanes, supply chain disruptions, loss of personnel or facilities due to natural disasters or severe weather, and displacement of populations or civil unrest.

We prioritize risk and opportunity assessment based on the potential impact on our operations. Physical risks associated with climate change are prioritized based on potential disruptions to network services. Opportunities are typically prioritized based on a return-on-investment formula considering the current business environment and financial performance.

Our hurricane preparedness efforts exemplify our risk management approach. We focus on prevention and mitigation, with workgroups reviewing checklists, training documents, and site-specific plans to ensure constant readiness. Our network's redundancy, resiliency, and route diversity enable us to maintain service during extreme weather events, both as a preventative measure and during routine maintenance.

TCFD summary

Lumen takes a comprehensive and transparent approach to understanding and managing the risks and opportunities associated with climate change. We align our climate change reporting with the recommendations established by the TCFD, as evidenced by our CDP Climate Change Response, which fulfills all TCFD requirements. This response provides stakeholders with detailed insights into our climate-related governance, strategy, risk management, and metrics and targets, assisting in understanding how climate change impacts our business and how we are addressing it.

Board oversight

Lumen's Board of Directors, both directly and through its committees, maintains oversight of our climate-related risk and opportunity management strategy. Our Board of Directors, as part of its risk and governance oversight, actively monitors environmental management programs, including those related to climate change. In 2023, Lumen's Board of Directors had three members with ESG experience and five members with experience in risk management.

Management responsibility

Lumen's Sustainability Management Committee (SMC) is the driving force behind our comprehensive sustainability program, including vigilant monitoring of climate-related issues. This cross-functional committee, composed of senior and seasoned leaders from diverse areas of the business, is uniquely positioned to effectively design and oversee our sustainability strategy, collaborating with the Board of Directors and senior leadership to ensure its successful implementation.

Risk identification and management

Through regular meetings and collaborative efforts, the SMC effectively identifies, assesses, and mitigates the environmental impact of our operations, setting targets, driving continuous improvement, and ensuring regulatory compliance. This dedicated focus on sustainability underscores our commitment to a responsible and sustainable future.

Strategy

Lumen employs a multi-pronged strategy to mitigate potential climate-related risks and their impact on our business:

- **Energy efficiency and renewable transition:** We maximize energy efficiency across our networks and facilities, continue our real estate consolidation efforts and seek opportunities to transition to renewable energy sources wherever and when feasible.
- **Customer-centric solutions:** We develop innovative solutions that empower our customers to transition to a low-carbon economy, supporting their sustainability goals.
- **Infrastructure resilience:** We continuously upgrade and fortify our infrastructure to withstand the challenges of a changing climate, ensuring the reliability and resilience of our services.

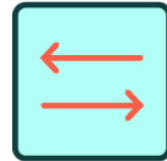


Key findings from Lumen’s climate-related transition assessment



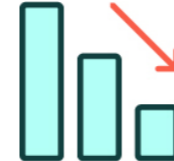
Digitalization as a catalyst

Lumen’s evolving U.S. business model, with an increased focus on digitalization, positions us to benefit from the transition to a low-carbon economy.



Adapting to change

We recognize that rapid carbon policy and market shifts pose both greater risks and opportunities compared to a slower transition, necessitating agile adaptation.



Technology and cost dynamics

While the initial costs of transitioning to low-carbon technologies pose a near-term risk, government investment in research and development could accelerate innovation, lowering costs and increasing accessibility.



Fossil fuel costs

Generally increasing fossil fuel costs, driven by carbon pricing or increased demand, pose a potential financial risk. Continued investment in renewable energy, energy efficiency, and electrification is crucial to mitigate this risk.



Seizing opportunities

Our investments in Quantum Fiber network expansion and energy-efficient retrofits, such as building automation and chiller upgrades, enable us to capitalize on climate-related opportunities.



Customer-centric focus

We believe our greatest transition risk and opportunity lie in the potential shifts in customer behavior and preferences related to climate and sustainability.



Renewable energy landscape

Sourcing renewable energy in the U.S. may be challenging in the short term, but costs and availability are projected to improve over time in both rapid and slower transition scenarios.



Regulatory impact

Lumen has already experienced financial impacts and adapted decision-making due to existing climate-related regulations. A rapid transition scenario would result in increased compliance, assurance, and operating costs due to policy changes.

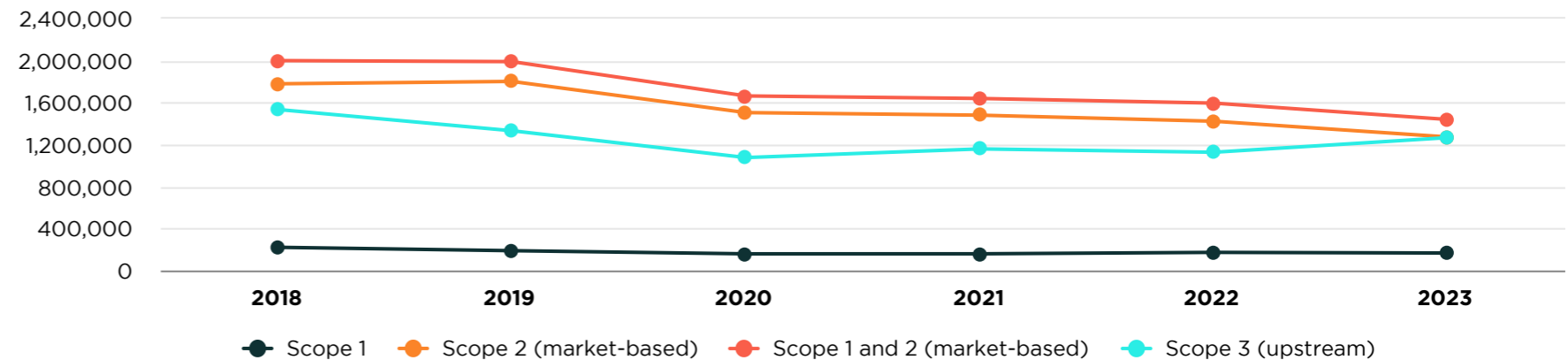
Greenhouse gas emissions

Safeguarding our planet is a shared responsibility. At Lumen, we are committed to minimizing our carbon footprint for the benefit of our environment, stakeholders, and the long-term success of our company. We are proud to have exceeded our Science Based Targets (SBTs) in 2022 ahead of schedule. We achieved a 28% reduction in Scope 1 and Scope 2 GHG emissions and a 17% reduction in Scope 3 emissions between 2018 and 2023.

To continue our progress, we are in the process of evaluating new targets. We are also actively developing a comprehensive low-carbon transition plan, outlining a detailed strategy to meet future goals. In 2022, we transitioned to a supplier-specific approach for emissions tracking, enabling us to better capture reductions across our supply chain. We encourage our suppliers to adopt sustainable practices, such as implementing EMSs, monitoring performance, and utilizing energy-efficient products and processes, as detailed in our [Supplier Code of Conduct](#). We are also proactive in responding to customer inquiries about our climate plans and ambitions.

We annually participate in CDP's climate change questionnaire, providing comprehensive data on our energy and emissions reduction initiatives, energy consumption, GHG emissions, renewable energy purchases, and climate-related risks and opportunities. Our 2023 CDP Climate Change Response, covering the 2022 calendar year, was awarded an A- score for our efforts in mitigating climate change.

Our GHG emissions (metric tons CO₂e)⁸



| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Goal | Percent of target achieved |
|---------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|--|----------------------------|
| Scope 1 | 221,075 | 188,882 | 158,873 | 159,166 | 172,766 | 166,652 | N/A | N/A |
| Scope 2 (market-based) | 1,779,671 | 1,802,304 | 1,505,005 | 1,480,550 | 1,422,766 | 1,272,623 | N/A | N/A |
| Scope 1 and 2 (market-based) | 2,000,746 | 1,991,186 | 1,663,878 | 1,639,716 | 1,595,532 | 1,439,275 | SBT-1: 18% reduction (of Scope 1 and 2) by 2025, compared to 2018 | 156 % |
| Scope 3 (upstream)⁹ | 1,534,737 | 1,332,142 | 1,076,521 | 1,158,964 | 1,127,182 | 1,266,634 | SBT-2: 10% reduction (of Scope 3 upstream emissions) by 2025, compared to 2018 | 175 % |

⁸ Historical GHG emissions figures have been adjusted due to improved data quality and the 2023 divestiture of our EMEA business.

⁹ Includes only upstream emissions.

Energy

Our dedicated energy management teams continuously seek innovative ways to enhance energy efficiency across our vast network of nearly 13,672 active sites worldwide. In 2023 alone, we avoided 27,274 metric tons of GHG emissions through a range of strategic initiatives including:

- Developing an Energy Network Operations Center (ENOC) to centrally monitor, manage, and reduce facility energy use through control systems and advanced analytics
- Performing switch grooms and decommissions
- Upgrading HVAC equipment/systems
- Commissioning/upgrading Building Energy Management Systems (BEMS)

Renewable energy

We prioritize renewable energy sources wherever feasible. In 2023, we procured 63,215 megawatt-hours (MWh) of renewable energy, including zero-carbon electricity and biofuels.

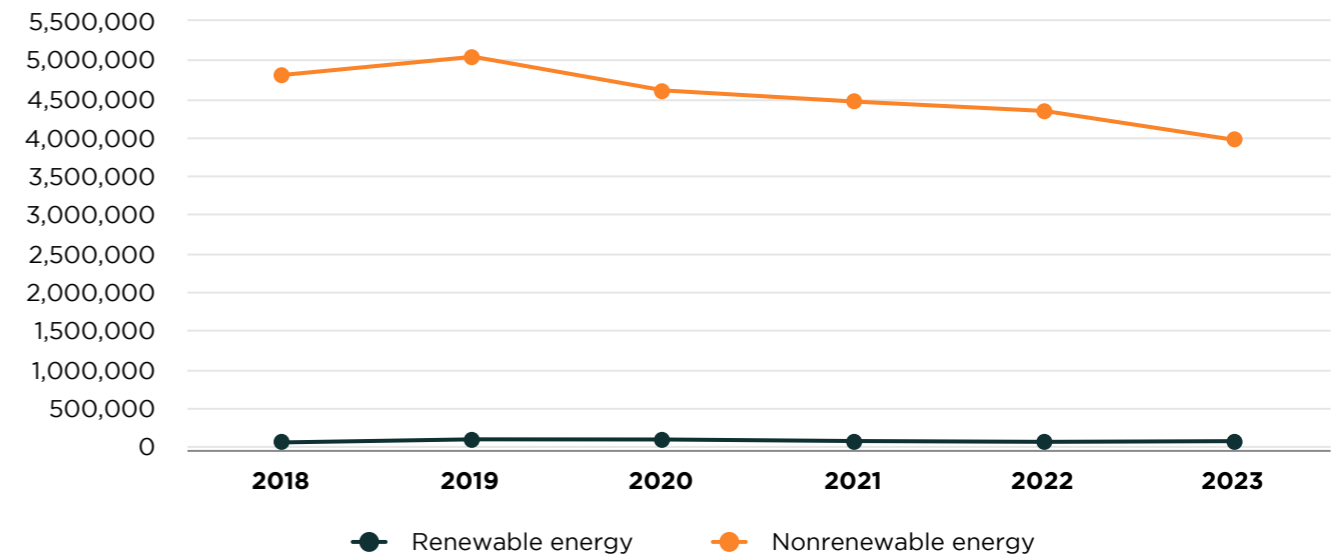
In the U.S., we are actively involved in a Solar Participation agreement in Arizona, where we procure electricity generated by a solar photovoltaic facility. In our APAC region, we use electricity from renewable sources at some of our colocation facilities. This concerted effort demonstrates our dedication to minimizing our carbon footprint and transitioning towards a more sustainable energy future. Additionally, we routinely analyze and evaluate additional ways for Lumen to optimize energy use.

Transportation initiatives

Emissions from our fleet of 7,319 vehicles used by field technicians to support customers contribute significantly to our carbon footprint. We are actively working to reduce these emissions through various measures:

- **Idling reduction:** Implementing sensors across our fleet to monitor and minimize vehicle idling time, leading to reduced emissions and fuel costs.
- **Efficient dispatching:** Installing GPS in all Lumen vehicles for improved dispatching and operational efficiency, resulting in lower fuel consumption and GHG emissions.
- **Flex-fuel vehicles:** Utilizing flex-fuel vehicles, which produce significantly fewer GHG emissions compared to traditional vehicles.

Our energy procurement (MWh)¹⁰



| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Renewable energy | 46,727 | 86,745 | 84,659 | 64,723 | 54,197 | 63,215 |
| Nonrenewable energy | 4,803,315 | 5,039,136 | 4,603,221 | 4,459,014 | 4,336,949 | 3,961,220 |

¹⁰ Historical energy procurement figures have been adjusted due to improved data quality and the 2023 divestiture of our EMEA business.

Product life cycle management

Lumen’s commitment to product life cycle management is evident in our holistic approach to network reliability. We leverage AI to proactively identify and address router issues, extending equipment lifespan and minimizing downtime. Furthermore, our dedication to environmental responsibility drives us to recondition fiber optic cables, maximizing the lifespan of valuable resources, reducing waste, and minimizing the need for new materials.

Water

Water is a vital resource, and we recognize its scarcity. We are committed to minimizing our water consumption, particularly in regions facing water stress. We track our usage, monitor trends, and implement measures to enhance efficiency and reduce discharge.

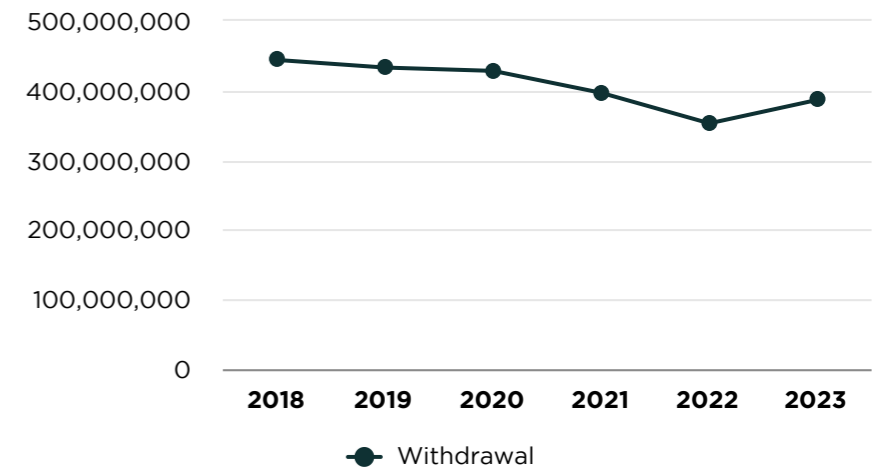
Our primary water usage and discharge impacts stem from drinking water, irrigation, and sewage. In some North American facilities, we also utilize water for cooling systems. We meticulously track consumption and investigate deviations from historical usage patterns to optimize efficiency and minimize unnecessary discharge, especially in drought-prone areas.

Understanding the potential impact of climate change on water availability, we leverage the World Resources Institute’s Aqueduct Water Risk Atlas to assess our operational areas’ vulnerability to future water stress.

In North America, since 2018 we have realized a net reduction of water use through various efforts, including water efficiency projects, real estate consolidation, and the shift towards hybrid or remote working models due to the COVID-19 pandemic.

We remain dedicated to responsible water management and are continuously exploring innovative solutions to further minimize our environmental footprint.

Our water use in North America (gallons)



| | Withdrawal |
|------|-------------|
| 2018 | 443,968,404 |
| 2019 | 433,024,175 |
| 2020 | 428,250,047 |
| 2021 | 396,741,104 |
| 2022 | 352,970,087 |
| 2023 | 386,661,300 |

Waste

Minimizing waste is a crucial step in protecting our environment and conserving precious resources. It also contributes to a less energy-intensive circular economy, which in turn reduces emissions. At Lumen, we are dedicated to reusing and recycling products, as well as minimizing material use throughout our operations.

Our comprehensive waste management programs and initiatives prioritize waste reduction through minimization, reuse, and recycling. We also ensure the proper disposal of hazardous waste. Our EHS team collaborates across business units to implement and optimize waste management practices, policies, and procedures. Additionally, we actively seek partnerships with suppliers who share our commitment to these standards (see Environmental compliance and management).

Waste reduction initiatives

- Recycling and product end-of-life management:** We divert millions of pounds of electronic and communications equipment from landfills annually, recycling items like batteries, wood poles, electronics, copper wire, fluorescent lamps, fleet oil, and solvents. Our U.S. modem and router takeback program provides customers with a

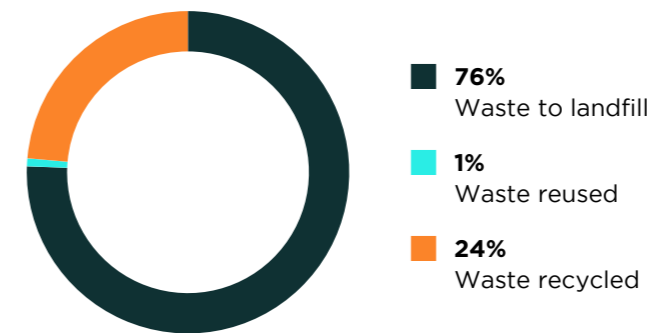
convenient way to dispose of electronic equipment, which we then reuse or send to R2-certified recyclers for secure disposal.

- Paper recycling:** Our increased use of digital processes has significantly reduced paper consumption. We encourage employees to use paper efficiently and offer a secure shred program for safe and responsible recycling of documents and media. In 2023, participating U.S. sites shredded and recycled 586 metric tons of paper. As we continue to digitize, we anticipate further reductions in paper recycling volumes.
- Paperless billing:** We actively promote paperless billing through automatic enrollment, system enhancements, and engagement with sales agents. From January to December 2023, we reduced our printed invoices by over 370,000 invoices.

Our progress

We continue to prioritize waste reduction, reuse, and recycling across our operations. In 2023, we recycled approximately 2,156 metric tons of electronic and communications equipment. Our waste intensity was 1.59 metric tons per million dollars of revenue, demonstrating our commitment to resource efficiency and environmental stewardship.

Our 2023 waste performance in the U.S. (metric tons)¹¹



| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Waste generated | 27,606 | 26,662 | 30,090 | 27,373 | 23,549 | 23,213 |
| Waste to landfill | 20,489 | 19,780 | 22,557 | 20,691 | 17,938 | 17,547 |
| Waste reused | 93 | 147 | 213 | 180 | 105 | 187 |
| Waste recycled | 7,024 | 6,734 | 7,320 | 6,501 | 5,506 | 5,479 |

¹¹ The data above only captures data from sites where Lumen directly manages the waste

Sustainable packaging initiative

Lumen made significant strides in sustainability in 2023, launching an initiative for sustainable packaging and laying the groundwork for customer premise equipment (CPE) made from recyclable materials. This CPE sustainable packaging initiative is expected to bring about substantial benefits:

- **Reduced environmental impact:** Approximately 45 tons of plastic waste and 100 tons of cardboard waste reduction, along with the use of biodegradable and recyclable cardboard materials.
- **Resource efficiency:** 70% non-virgin cardboard and vegetable-based inks further contribute to sustainability goals.
- **Cost savings:** Reduced shipping and waste management costs create financial benefits.
- **Operational improvements:** Increased shipping capacities and a 100% digital customer self-start experience enhance efficiency.
- **Enhanced customer and technician experiences:** A streamlined process benefits both customers and technicians.

Wi-Fi 7: a milestone in sustainable tech

In 2024, Lumen achieved a major milestone as the first company in the industry to achieve a Wi-Fi CERTIFIED 7™* device with its custom-developed solution. The device utilizes 60% non-virgin recyclable plastics. This Lumen solution is a significant achievement in both technological advancement and sustainability. Additionally, the expansive coverage of Wi-Fi 7 equipment helps reduce the number of wireless pods needed in most homes, resulting in less power consumption.

* Wi-Fi CERTIFIED 7™ is a trademark of Wi-Fi Alliance®



Appendix

Corporate responsibility has always been integral to our business. Our 2023 ESG Report highlights our initiatives and progress in 2023 and outlines our future sustainability strategy. Unless otherwise specified, data refers to the 2023 calendar year.

We align our ESG reporting with the Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD). Our reporting is also informed by stakeholder engagement and materiality assessment processes (see double materiality assessment).

By adhering to these standards, in addition to other financial and voluntary reporting, we provide stakeholders with targeted insights into Lumen's strategy in a rapidly evolving landscape.

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Disclaimer



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 2024 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 |
|---|---|---|---|
| Governance | | | |
| Disclose the organization's governance around climate-related risks and opportunities | a) Describe the board's oversight of climate-related risks and opportunities | <p>Processes and frequency by which the board and/or board committees are informed about climate-related issues.</p> <p>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.</p> <p>How the board monitors and oversees progress against goals and targets for addressing climate-related issues.</p> | <p>2024 CDP Climate Change Response—4.1.1, 4.1.2</p> <p>2023 ESG Report - Board oversight p. 64</p> <p>2024 Proxy Statement—ESG Sustainability Leadership p. 45</p> |
| | b) Describe management's role in assessing and managing climate-related risks and opportunities | <p>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,</p> <p>A description of the associated organizational structure(s),</p> <p>Processes by which management is informed about climate-related issues, and</p> <p>How management (through specific positions and/or management committees) monitors climate-related issues.</p> | <p>2024 CDP Climate Change Response—4.3.1</p> <p>2024 Proxy Statement—ESG Sustainability Leadership p. 45</p> <p>2023 ESG Report - Sustainability Management Committee, management responsibility, and risk identification and management p. 53, 64</p> |

| Disclosure focus area | Disclosures | TCFD recommendations | Company response |
|--|--|---|--|
| 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> | <p>2024 CDP Climate Change Response—2.2.1, 2.2.2, 3.1, 3.6</p> <p>2023 ESG Report - Climate risk management p. 63</p> <p>Lumen 10-K 2023 - Climate change risk p. 26</p> |
| | 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) | <p>2024 CDP Climate Change Response—2.4, 3.1, 3.1.1, 3.6, 3.6.1</p> <p>Lumen 10-K 2023 - Climate change risk p. 26</p> |

| Disclosure focus area | Disclosures | TCFD recommendations | Company response |
|--|--|---|------------------|
| Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning (Continued) | b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning (Continued) | <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 |
|---|--|---|--|
| <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>2024 CDP Climate Change Response—5.1, 5.1.1, 5.1.2, 5.2, 5.3.1, 5.3.2</p> |

| Disclosure focus area | Disclosures | TCFD recommendations | Company response |
|--|---|---|--|
| 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> | <p>2024 CDP Climate Change Response—2.2.2</p> <p>2023 ESG Report - Sustainability Management Committee, management responsibility, and risk identification and management p. 53, 64</p> |
| | 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> | <p>2024 CDP Climate Change Response—2.2.2, 4.3.1</p> <p>2023 ESG Report - Sustainability Management Committee, management responsibility, climate risk management, and risk identification and management p. 53, 63-64</p> |
| | 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. | <p>2024 CDP Climate Change Response—2.2.2, 2.4, 4.1.2, 4.3.1</p> <p>2023 ESG Report - Commitment to governance and integrity p. 51-54</p> |

| Disclosure focus area | Disclosures | TCFD recommendations | Company response |
|--|---|--|--|
| Metrics | | | |
| <p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities</p> | <p>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> | <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>2024 CDP Climate Change Response—7.53.1, 7.54, 7.55</p> <p>2023 ESG Report - Various environmental sustainability metrics tables p. 66-69</p> |
| <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>2024 CDP Climate Change Response—7.3, 7.4, 7.6, 7.7, 7.8, 7.8.1, 7.12</p> <p>2023 ESG Report - Greenhouse gas emissions p. 66</p> |

| Disclosure focus area | Disclosures | TCFD recommendations | Company response |
|---|--|--|--|
| Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities (Continued) | c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets | <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> | <p>2024 CDP Climate Change Response—7.53, 7.53.1</p> <p>2023 ESG Report - Greenhouse gas emissions p. 66</p> |

Sustainability Accounting Standards Board (SASB) index

This index responds to the SASB Standards for the Technology and Communications industry, aligning to the Telecommunications and Software & IT Services sectors. We do not currently disclose all metrics included in this standard but focus on those that are most relevant and where sufficient information is available. Lumen continues to evaluate areas for additional disclosure in future reporting. All data is as of the year ended Dec. 31, 2023, unless otherwise noted.

| Topic | Accounting Metric | 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 | TC-SI-130a.1 | (1) 4,024,435 MWh = 14,487,966 GJ (2023) (2) 98.00% (2023) (3) 2% (2023) | 2023 ESG Report p. 67 |
| | (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress | TC-SI-130a.2 | (1) 386,661,300 gallons = 1,463,672 m ³ (2023) (2) Not disclosed at this time. | 2023 ESG Report p. 68 |
| | Discussion of the integration of environmental considerations into strategic planning for data center needs | 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. | 2023 ESG Report p. 62, 67 |

| Topic | Accounting Metric | Code | Lumen Data/Information Source | Reference |
|--------------------------------------|--|--------------|---|---|
| Data Privacy & Freedom of Expression | Description of policies and practices relating to behavioral advertising and user privacy | 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. | 2023 ESG Report p. 19 2023 ESG Report p. 24 2023 ESG Report p. 25 2024 Proxy Statement p. 44 Lumen Privacy Notice |
| | Number of users whose information is used for secondary purposes | 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 | 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 | TC-SI-220a.4 | Lumen issues semi-annual transparency reports that outlines the type and number of U.S. law enforcement demands Lumen receives. | Transparency Reports |
| | List of countries where core products or services are subject to government-required monitoring, blocking, content filtering, or censoring | TC-SI-220a.5 | Not disclosed at this time. | N/A |
| Data Security | (1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected | 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 | 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). | 2023 ESG Report p. 19-22, 25 2024 Proxy Statement p. 44 Lumen 10-K 2023 p.36-38 |

| Topic | Accounting Metric | Code | Lumen Data/Information Source | Reference |
|---|---|--------------|---|--|
| Recruiting & Managing a Global, Diverse & Skilled Workforce | Percentage of employees that are (1) foreign nationals and (2) located offshore | TC-SI-330a.1 | We do not break down this data; however at Dec. 31, 2023, we had approximately 28,000 employees worldwide, including approximately 3,700 outside the U.S. | Lumen 10-K 2023 p. 8 |
| | Employee engagement as a 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 2023 engagement survey showed a strong participation level of 69% and overall well-being score of 80%. | 2024 Proxy Statement - HRCC Engagement and Compensation Governance p. 109 2023 ESG Report p. 35 |
| | Percentage of gender representation for (1) management, (2) technical staff, and (3) all other employees | TC-SI-330a.3 | Gender representation of global employees: (1) Women: 32.88%, Men: 67.08%, N/A: 0.04% (2) Women: 17.91%, Men: 81.99%, N/A: 0.09% (3) Women: 29.86%, Men: 70.02%, N/A: 0.12% | 2023 ESG Report p. 43 |
| Intellectual Property Protection & Competitive Behavior | Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations | 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 | TC-SI-550a.1 | Not disclosed at this time. | N/A |
| | Description of business continuity risks related to disruptions of operations | TC-SI-550a.2 | 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) Program 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. | 2023 ESG Report p. 27 2023 ESG Report p. 63 Lumen 10-K 2023 p. 23-25, 36-38 |
| Activity Metric | | Code | Lumen Data/Information Source | Reference |
| (1) Number of licenses or subscriptions (2) percentage cloudbased | | TC-SI-000.A | Not disclosed at this time. | N/A |
| (1) Data processing capacity (2) percentage outsourced | | TC-SI-000.B | Not disclosed at this time. | N/A |
| (1) Amount of data storage (2) percentage outsourced | | TC-SI-000.C | Not disclosed at this time. | N/A |

| Topic | Accounting Metric | 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 | TC-TL-130a.1 | (1) 4,024,435 MWh = 14,487,966 GJ (2023) (2) 98.00% (2023) (3) 2% (2023) | 2023 ESG Report p. 67 |
| Data Privacy | Description of policies and practices relating to behavioral advertising and customer privacy | 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. | 2023 ESG Report p. 25 2024 Proxy Statement p. 44 Lumen Privacy Notice |
| | Number of customers whose information is used for secondary purposes | 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 | 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 | TC-TL-220a.4 | Lumen issues semi-annual transparency reports that outlines the type and number of U.S. law enforcement demands Lumen receives. | Transparency Reports |
| Data Security | (1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of customers affected | 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 | TC-TL-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 270001, the Payment Card industry (PCI) Security Standards Council, and the American Institute of Certified Public Accountants (AICPA). | 2023 ESG Report p. 19-22, 25 2024 Proxy Statement p. 44 Lumen 10-K 2023 p.36-38 |

| Topic | Accounting Metric | Code | Lumen Data/Information Source | Reference |
|---|--|--------------|---|--|
| 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 | 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. | 2023 ESG Report p. 69 Lumen 10-K 2023 p. 11 |
| Competitive Behavior & Open Internet | Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations | 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 | 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 | 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 | TC-TL-550a.1 | Not disclosed at this time. | N/A |
| | Discussion of systems to provide unimpeded service during service interruptions | TC-TL-550a.2 | BCM maintains uninterrupted service whenever possible and, when necessary, coordinates recovery from business disruptions safely and quickly. | 2023 ESG Report p. 27 |

| Activity Metric | Code | Lumen Data/Information Source | Reference |
|---------------------------------|-------------|---|-----------------------|
| Number of wireless subscribers | TC-TI-000.A | Not disclosed at this time. | N/A |
| Number of wireline subscribers | TC-TI-000.B | Not disclosed at this time. | N/A |
| Number of broadband subscribers | TC-TI-000.C | At Dec. 31, 2023, we served 2.8 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. 42 |
| Network traffic | 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. This 2023 ESG Report covers Lumen's operations and performance from January 1 through December 31, 2023, unless otherwise noted, and reflects the most accurate information available at the time of publishing. In this report, Lumen (which includes Lumen Technologies, Inc and its consolidated subsidiaries) is at times referred to in as "we," "our," "us" or "the company." 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. Such statements may include, without limitation, expectations regarding our future performance, innovation and efficiencies, our achievement of targets, the adequacy and strengths of our systems and protocols, our attainment of key performance indicators and goals, including emissions and other ESG targets, and value creation, which are subject to risks and uncertainties that could cause actual results to differ materially. 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, 2023, 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. All financial figures are quoted in U.S. dollars unless otherwise noted. Some figures and percentages may not add up to the total figure or 100% due to rounding.

Continuous improvements to our data collection systems and measurement methodologies may lead to restatements of previously reported data. We plan to provide restatements when a change in measurement methodology or an error in previously reported information has the potential to significantly impact a users' decision-making. Restatements will also be provided in cases of significant changes in reporting parameters (such as those caused by mergers, acquisitions, divestments). These restatements are included as footnotes where applicable.

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