

A photograph of a waterfall in a lush forest. The waterfall is the central focus, cascading down a rocky ledge into a pool of water. The surrounding forest is dense with green foliage. In the foreground, two people wearing rain gear (one in a yellow jacket and one in a red jacket) are standing on a rocky bank, looking towards the waterfall. The overall scene is misty and serene.

ciena

**2022
Sustainability
Report**

About this report

Ciena's Sustainability Report provides discussion and analysis of our environmental, social, and governance (ESG) activities across topics that were identified as material to our company by our stakeholders.

This report has been prepared in accordance with the core reporting requirements of the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD).

Most of the data and information in this report is based on Ciena's operations globally for our two financial years, covering November 1, 2020, to October 31, 2022. Our most recent greenhouse gas emission and energy data is from November 1, 2020 to October 31, 2021. Unless otherwise stated, all dollar amounts are given in US dollars.

The report was prepared by our ESG Communications and Social Impact team in collaboration with key internal stakeholders. The report was approved by both our Sustainability Leadership Committee and our Disclosure Committee, each of which include executive leaders representing key functional areas. Ciena's Sustainability Report was published on May 26, 2023.

For questions regarding Ciena's 2022 Sustainability Report: ir@ciena.com



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A letter from our President and CEO

At our very core, we develop technology that delivers connectivity and exceptional digital experiences for people across the globe. Those experiences are meaningful to us because we deliver them while doing good for our people, our customers, our planet, and the communities in which we operate.

Since our last Sustainability Report, we have been on a journey to evolve our sustainability strategy, expand our internal resources, and set additional goals that drive our actions. By strengthening our approach, sustainability is becoming more integral to our innovation and operations, enabling us to drive even greater outcomes for our business and society.

We know this is as important to our stakeholders as it is top-of-mind for the Ciena team. With the increasing concerns about climate change, our customers want to know that our products and services can help them achieve their business and environmental goals. As a new generation enters the workforce, we want them to know that their values are reflected in our own. And our investors want to remain comfortable that we continue to maximize stockholder value and manage long-term risk, doing so with a strong sense of duty, humanity, and ethics.

Throughout this report, you will learn about initiatives we have undertaken across environmental, social, and governance matters of which we are truly proud.

Helping the environment

One of the most positive impacts we can have on the environment is through the innovation of our products and services portfolio. Our products are designed to help customers get more capacity out of their networks with less power, space, and materials required. Our software and automation can provide customers with more visibility into their networks for enhanced monitoring and troubleshooting, reducing unnecessary truck rolls and adding further efficiencies. In addition, we have launched new services that help customers extend the life of their existing equipment and keep our products out of landfills.



Gary Smith, Ciena's President and CEO

In addition to our product and services innovation, we have continued to invest in managing the environmental impact of our operations. Our teams have been working together to reach our goal of being carbon neutral by 2024. We have embraced a new way of working, allowing us to reduce office space and deploy even more digital collaboration tools. We have also made significant investments in renewable energy and challenged our people to make greener travel and commuting choices, helping us to surpass our goal to reduce air travel emissions by 50% from 2019 levels.

As we enter the next phase of our climate change ambitions, we have submitted near-term goals to the Science Based Targets initiative for approval, doing our part to keep global warming to 1.5 degrees Celsius from pre-industrial levels. These goals will address both our operations as well as emissions resulting from our product innovation.

Empowering our people

Our people are the energy that fuels us. They are Ciena's greatest strength and we continue to invest in them, introducing several new learning programs in 2022 to help them develop and grow their careers. In addition, our new wellness platform aims to provide more resources and support for our people's physical and mental wellbeing, which is vital to us in an increasingly complex global environment.

We have continued to expand our diversity, inclusion, and belonging initiatives, including the addition of new employee resource groups. We made our Conscious Inclusion workshops available to everyone, with 90% of our people now having completed the training that helps break biases and promotes allyship and a shared understanding of experiences. I am also happy to report that our pay equity ratio

demonstrates that we are paying both men and women equally for equivalent roles. All of our programs that support our people are seeing results, with another year of strong employee engagement scores that are above industry benchmarks and voluntary turnover rates well below industry averages.

Making a meaningful impact in our communities

We recognize and support every individual's passion for giving back to their communities. Our Ciena Cares volunteering and giving program continues to be a testament to our people's dedication to helping those in need. In 2022, our people volunteered approximately 36,000 hours and donated \$3.2 million to the causes that matter most to them. We also advanced our Digital Inclusion program, expanding the set of organizations we support that bring digital literacy, access, and enabling tools to underserved students. In 2022, we collaborated with 12 new organizations through our Digital Inclusion grant program, expanding our reach to an additional 20,000 students and educators.

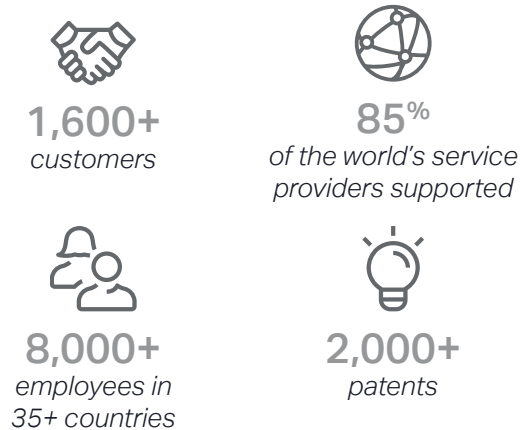
Looking ahead

We believe that bringing sustainability to the forefront of all that we do will continue to make us a stronger employer, partner, and company. I am proud of the work our teams have accomplished over the last year to embed environmental and social considerations into our decision making, policies, and innovation. As we move into 2023, I am confident that we are progressing well on our sustainability journey and welcome your thoughts and feedback on our report.

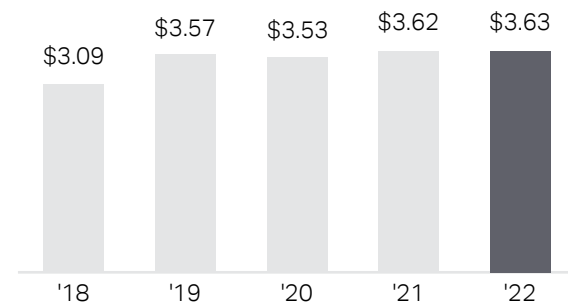
About Ciena

Ciena is a global leader in networking systems, services, and software. We build the most adaptive networks in the industry, enabling customers to anticipate and meet ever-increasing digital demands. For three-plus decades, Ciena has brought our humanity to our relentless pursuit of innovation. Prioritizing collaborative relationships with our customers, partners, and communities, we create flexible, open, and sustainable networks that better serve all users—today and into the future.

Ciena at a glance



Revenue (in billions)



Sustainability highlights

- 81 employee engagement score
- 36,000 hours volunteered
- 50% gender and ethnic diversity on our Board of Directors
- 70% reduction in air travel emissions from 2019
- 90% of our people completed Conscious Inclusion workshops
- 30% women on our Board of Directors
- Submitted Science Based Targets for validation by the SBTi
- Carbon neutral by 2024
- 55% participation in wellbeing programs
- 99% completion of Business Code of Conduct training
- Launched new Sustainability Leadership Committee
- \$5.3 million donated to charitable and non-profit organizations globally
- 52% renewable energy used in 2021
- 95% of our people believe our leadership demonstrates a commitment to ethical business conduct

Sustainability approach

Our focus is guided by our [company Purpose](#)—bringing humanity to innovation. How we work is characterized by two attributes that fuel one another—a relentless desire to innovate and a deep sense of humanity. Our humanity propels us to not only innovate differently, but also to positively impact the world around us. We realize that the technology we bring to market has a profound impact beyond the networks we design and the people who use them. Our solutions and commitments can lead to more people being connected, greater educational access, and increased efficiencies for better health and environmental outcomes.

With our company Purpose at top of mind, we concentrate our sustainability efforts across four focus areas:

- **Furthering our environmental stewardship:** We innovate so our customers' networks can be more sustainable, while also reducing the impacts of our own operations.
- **Making a meaningful difference in our communities:** Our people have a passion for giving back and we amplify that through our Ciena Cares and Digital Inclusion programs.
- **Creating a strong culture for our people:** In line with our [People Promise](#), we strive to create a culture where people are empowered, make a difference, and feel a sense of belonging.
- **Operating with integrity:** We believe that good corporate governance and ethics lead to trusted relationships and long-term growth and success.

Sustainability at Ciena

Our Sustainability Leadership Committee oversees our sustainability strategy, programs, and progress, as well as approves all associated goals and targets. The committee is comprised of senior level executives from across the business who have functional accountability for programs and topics that are aligned to our sustainability focus areas. The committee is facilitated by our Deputy General Counsel and our Director, ESG Communications and Social Impact.

The Governance and Nominations Committee of our Board of Directors has board-level oversight of ESG programming and stakeholder engagement at Ciena. Our Sustainability Leadership Committee reports to this committee on an annual basis at a minimum. In 2022, the Sustainability Leadership Committee reported to the board multiple times to provide updates about our sustainability strategy as well as to raise awareness of our Science Based Targets.

Governance and Nominations Committee of the Board



Sustainability Leadership Committee

- Senior Vice President and General Counsel (Co-Chair)
- Senior Vice President, Global Marketing and Communications (Co-Chair)
- Senior Vice President and Chief People Officer
- Senior Vice President, Global Products and Services
- Deputy General Counsel and Head of Sustainability Strategy and Operations
- Director, ESG Communications and Social Impact

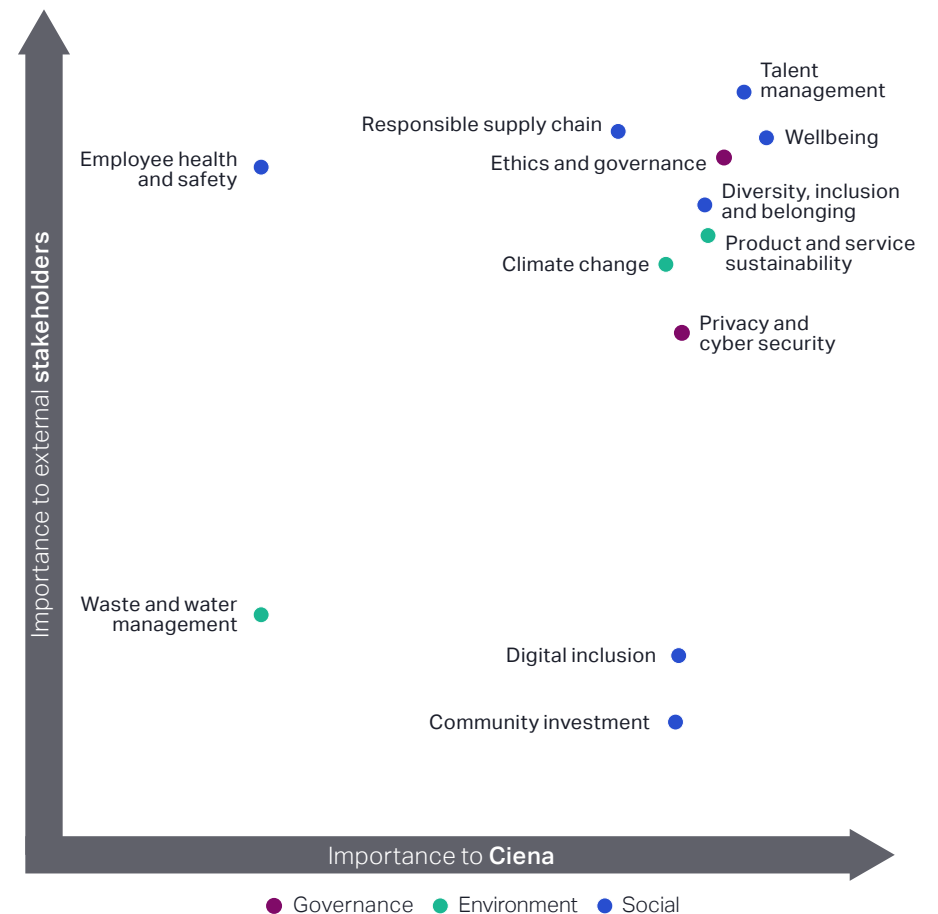
Ciena's material topics

The events of the past three years have brought significant focus and urgency to topics related to well-being, climate change, social and equity issues, and safety, among others. Considering the magnitude of these changes and their impact, we conducted a new materiality assessment in 2022 to better understand the topics that are most important to our people and external stakeholders. These topics help guide our sustainability strategy and focus areas.

Our approach to identifying these material topics included:

- Considering our business within the context of our operating environment.
- Identifying impacts on our business as well as impacts of our business on society and the environment and internally assessing the significance of those impacts.
- Interviewing external stakeholders, including our investors and customers, to determine the topics that are most important to them. We also conducted a scan of our most frequently asked questions related to sustainability from media, customers, investors, and other external groups. This allowed us to validate our list of topics against stakeholder expectations.
- Surveying our people on key topics, including inclusion and sustainability, and holding focus groups with people leaders at Ciena, to determine the topics most important to our people.
- Prioritizing, and then finalizing, the list of material topics based on importance to our internal and external stakeholders.

Based on our materiality assessment, we saw changes and the introduction of new topics compared to our previous assessment. The material topics identified can be seen in our materiality chart.



Material topics based on importance to our internal and external stakeholders

Material topic boundaries

The boundaries of our disclosures are inclusive of our global operations unless otherwise stated. For topics related to our greenhouse gas emissions, the boundary extends to our supply chain and the use of sold products by our customers.

Stakeholder engagement

We pride ourselves on our relationships with our stakeholders and maintain open and ongoing contact with them. A significant and growing topic of conversation with our stakeholders continues to be sustainability, as many of our customers have environmental and social goals and investors are reviewing ESG risks in their portfolios.

In 2022, we proactively reached out to our top investors to speak to our ESG goals, programs, and policies, allowing us to better understand what is important to them. We also worked with our customers on ESG matters, including calls to speak about our sustainability programs and the benefits of our products and services. Additionally, we engaged with many of our customers on joint community investment initiatives that help to bridge the digital divide in regions across the globe. Internally, we surveyed our people on matters related to ESG and diversity, inclusion and belonging, to understand what is most important to them. The chart on the right outlines more details on how we engaged and key topics of interest.

Stakeholder group	Ways we engage	Key topics of interest
Customers	<ul style="list-style-type: none"> Meetings Events and conferences RFP processes 	<ul style="list-style-type: none"> Climate change Product and service sustainability Waste and recycling Supply chain responsibility Digital inclusion
Investors and Analysts	<ul style="list-style-type: none"> Meetings Investor and quarterly calls Investor roadshows Quarterly earnings calls Analyst calls and events 	<ul style="list-style-type: none"> Climate change Product and service sustainability Diversity, inclusion, and belonging Supply chain responsibility Employee health and safety
Employees	<ul style="list-style-type: none"> All hands and townhalls Internal communications channels Team meetings One on ones Focus groups Employee pulse surveys 	<ul style="list-style-type: none"> Climate change Product and service sustainability Diversity, inclusion, and belonging Community investment Wellbeing Supply chain responsibility
Media	<ul style="list-style-type: none"> Media calls 	<ul style="list-style-type: none"> Product and service sustainability Climate change Supply chain responsibility
Suppliers	<ul style="list-style-type: none"> Meetings, calls, correspondence Supplier onboarding processes and regular reviews Site visits to manufacturing facilities 	<ul style="list-style-type: none"> Product and service sustainability Climate change Supply chain responsibility

Contributing to the United Nations' Sustainable Development Goals

Ciena is committed to, and supportive of, the United Nations' Sustainable Development Goals. As a networking systems, services, and software company that operates and serves customers globally, we know that we have an impact on all 17 goals. However, through our materiality assessment and looking at the conditions in which we operate, we have a direct impact across nine of the goals.



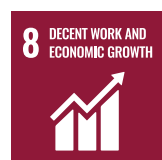
We support quality education initiatives with students around the globe through our Digital Inclusion program.

[Digital inclusion](#)



We practice gender equality through our diversity, inclusion, and belonging initiatives including our annual pay equity assessment and our Women at Ciena employee resource group.

[Diversity, inclusion and belonging](#)



We support inclusive and sustainable economic growth, employment, and decent work through our compensation and talent development programs, and by promoting those values with our business partners.

[Talent management](#)



When developing and delivering our products and services, we work to ensure that we are operating in a sustainable way.

[Product and service sustainability](#)



We actively support underserved and underrepresented individuals through our Digital Inclusion program and diversity, inclusion, and belonging initiatives.

[Digital inclusion](#) [Diversity, inclusion and belonging](#)



It is important that we support and contribute to the communities where we live and work. We are dedicated to helping those in need through our Ciena Cares volunteering and giving program and promoting the sustainable development of cities with our products and services ability to transform networks while connecting more people and having less impact on the environment.

[Community investment](#)
[Product and service sustainability](#)



We monitor our energy, waste, and water consumption and identify ways we can reduce our impact in these areas. We also offer product take back and refurbishment services to promote a circular economy.

[Waste and water management](#)
[Product and service sustainability](#)



While we await validation of our Science Based Target goals, we remain committed to reaching carbon neutrality by 2024 and continue to focus on our decarbonization efforts across our operations.

[Climate change](#)



Ciena's Board of Directors and leadership teams model and set expectations for high ethical standards in how we conduct business to ensure we are contributing to just and equitable societies.

[Governance and ethics](#)

Ciena's sustainability goals

We have set both short- and long-term goals across our material topics. These goals help guide us through our sustainability journey. As we continue to introduce new programs across environmental, social, and governance dimensions, we expect to add to the existing targets.

Material topic	Goal	Status	Performance	2023 goal
Climate change	Carbon neutrality for operational GHG emissions by 2024 (excludes certain Scope 3 categories)	On track	Reduced carbon footprint by 85%	<ul style="list-style-type: none"> Achieve carbon neutrality goal Obtain approval of Science Based Targets
Climate change	Use 100% renewable energy by 2024	On track	52% renewable energy use in 2021 data, 75% estimated for 2022	Achieve 100% renewable energy use
Climate change	Reduce absolute air travel emissions by 50% from 2019 levels	Achieved	Reduced air travel emissions by 70% from 2019 levels	Deliver tools and systems to aid employees to make greener travel choices
Waste and water management	Minimum of 70% recycled content by weight in packaging by 2025	On track	Conducted review of packaging for redesign	Minimum of 70% recycled content by weight in packaging by 2025
Talent management	Maintain employee engagement score within top 25% of peer companies as described by Glint	Achieved	Achieved engagement score of 81, three points above industry benchmark as described by Glint	Maintain employee engagement score within top 25% of peer companies as described by Glint
Diversity, inclusion, and belonging	Maintain 100% pay equity across genders globally and across races and ethnicities in the US	Achieved	Achieved 100% pay equity across genders globally and across races and ethnicities in the US	Maintain 100% pay equity across genders globally and across races and ethnicities in the US
Diversity, inclusion, and belonging	80% completion rate of our Conscious Inclusion workshops	Achieved	90% of our people completed our Conscious Inclusion workshops	Offer quarterly Conscious Inclusion workshops for new employees
Community investment	Achieve 10% increase in participation in our Ciena Cares program from 2021	Achieved	Achieved 14.5% increase in participation from 2021	Achieve 50% participation in our Ciena Cares program by 2030
Digital inclusion	Positively impact 100,000 underserved students through our investments in Digital Inclusion by 2025	On track	Positively impacted 60,000 youth	Positively impact 100,000 underserved youth through our investments in Digital Inclusion by 2025
Governance and ethics	Achieve 98% completion rate of Ciena Code of Business conduct training	Achieved	Achieved 99% completion rate of Ciena Code of Business conduct training	Achieve 98% completion rate of Ciena Code of Business conduct training

Awards and recognition



Our efforts have been recognized by EcoVadis, a global sustainability rating service, and were awarded their Platinum medal, scoring in the top 1% of all companies assessed.



Ciena participates in the Carbon Disclosure Project (CDP) and has been recognized for our climate change progress with a 'B' score, putting us in the top 34% of companies in our activity group.

Ciena was recognized by *Institutional Investor Magazine* as one of the Best ESG Communications for the Telecommunications sector.



Ciena has been recognized by Glassdoor as one of its Best Places to Work in 2023 in Canada.



Ciena was recognized as a Great Place to Work in India for 2022, making this our sixth year in a row.

Ciena has received an Institutional Shareholder Services (ISS) Governance Score 1 of 5, indicating a relatively higher quality disclosure and transparency practices and relatively fewer disclosure omissions.



Ciena was honored with a Gold recognition from the American Heart Association's 2022 Workforce Well-being Scorecard. It recognizes Ciena's achievement in building a culture of health and well-being for our workforce.



Ciena has received an 'A' ESG rating from MSCI, a leading provider of critical decision support tools and services for the global investment community. This score places us in the top 50% of rankings in our industry.



Ciena received a Global Sustainability Award from the Telecommunications Industry Association, recognizing our achievements in showcasing energy, passion, and innovation in our corporate sustainability programs.

Our sustainability efforts were also recognized by Verizon with their 2022 Supplier Environmental Excellence award. Read more about this honor in the blog [here](#).

Environment

As stewards of the planet, we feel an innate responsibility to pursue technological innovation that can positively impact the environment, enable our customers climate ambitions, and ensure responsible business practices. Our efforts are focused on decarbonization through efficiencies in our operations, supply chain, and product and services innovation.

Climate change

It is increasingly important to our customers, people, and investors that we continue to reduce our environmental impact and set meaningful targets. Our environmental programs, goals, and progress are managed by our Environmental Steering Committee (ESC), chaired by our Deputy General Counsel and our Vice President of Global Business Operations. The ESC reports to the Sustainability Leadership Committee and strives to integrate sustainability throughout our business practices and drives targeted goals that address our environmental impact.

Our approach

We focus on two main areas to decarbonize our operations and reduce our impact:

- **Efficiencies in our operations:** This includes transitioning to renewable energy, reducing overall energy use and waste within our operations, and driving sustainability in our supply chain
- **Innovation in our products:** This includes designing each successive generation of our products to enable more capacity and performance with less power and space required, and fewer materials, as well as reducing waste caused through packaging and the end-of-life treatment of our products.

Our environmental strategy is underpinned by our ISO 14001 certified Environmental Management System.

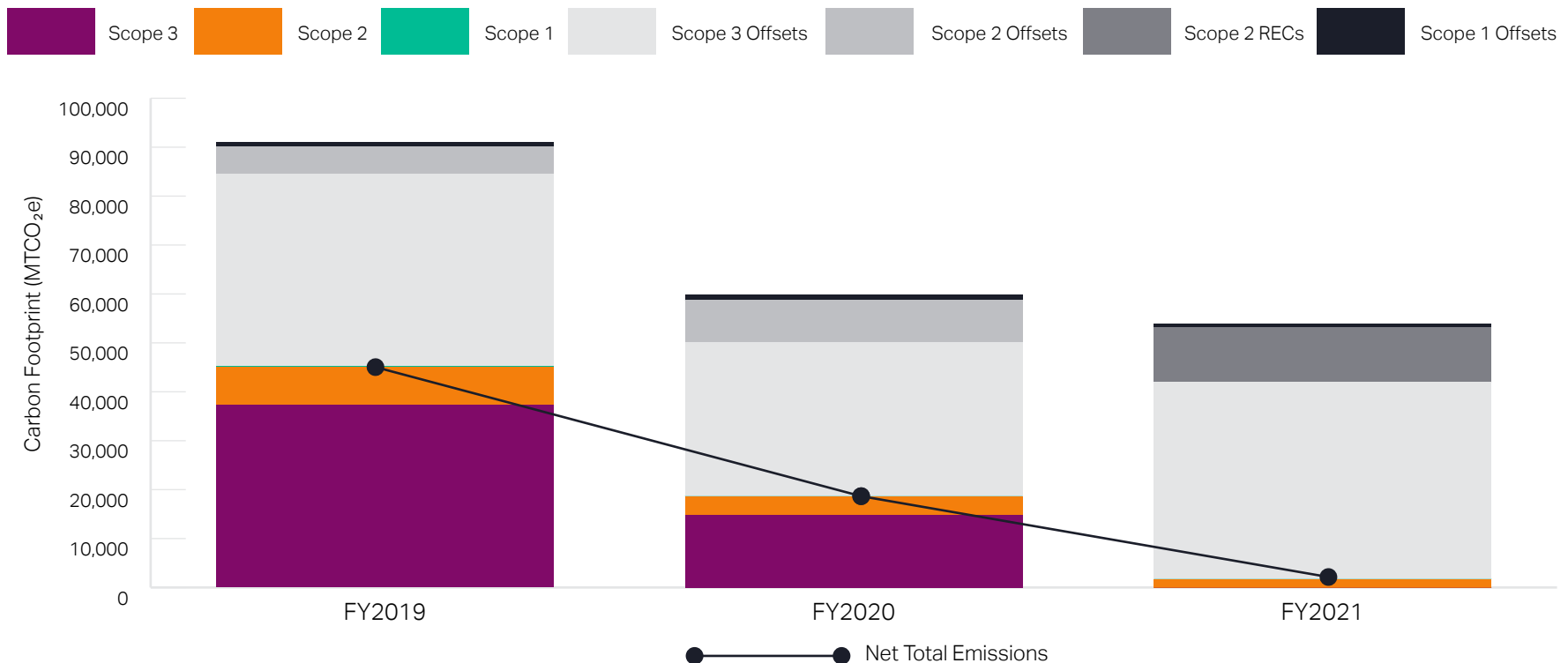


Our teams in Bangkok, Thailand cleaning up a local beach

Our greenhouse gas emission goals

Carbon neutral by 2024

We have committed to being carbon neutral by 2024 across certain Scope 1, 2, and 3 operational emissions that include contract manufacturing, upstream transportation and distribution, waste, business travel, and employee commuting. As of November 2022, we are 85% of the way towards reaching our carbon neutrality goal due to our emission reduction projects, on-site renewables, investments in renewable energy credits, and purchasing carbon offsets. We have been investing in renewable energy and as of 2021, are no longer purchasing carbon offsets for Scope 2 emissions. In 2021, our emissions within the boundaries of our carbon neutrality goal were 51,040 metric tonnes CO₂e. Of those emissions, we offset 41,107 metric tonnes of CO₂e from Scope 1 and 3 relating to natural gas, rental cars, commuting, and certain manufacturing and logistics emissions.



Science Based Targets

As we enter the next phase of our decarbonization efforts, we have set near-term Science Based Targets that align with the Paris Climate Agreement to keep global warming to 1.5 degrees Celsius from pre-industrial levels. Our targets include a Scope 1 and 2 absolute reduction target and a Scope 3 intensity target by 2030 relative to 2019. At the time of publication, our targets have been submitted to the Science Based Target initiative for validation.

Key performance metrics

All data as of October 31, 2021.

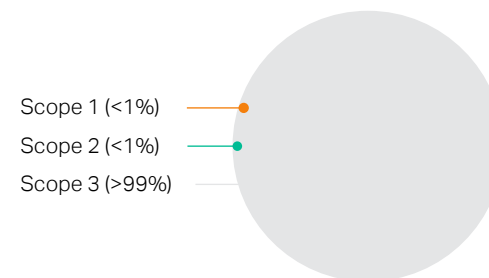
KPI	2021	2020	2019
Scope 1 emissions (metric tonnes CO ₂ e)	2,686	1,976	5,060
Scope 2 emissions (metric tonnes CO ₂ e; market based with RECs)	2,335	15,614	16,138
Scope 3 emissions (metric tonnes CO ₂ e)	1,875,772	1,980,541	2,268,785
Total greenhouse gas emissions (metric tonnes CO₂e)	1,880,793	1,998,131	2,289,983
Total Electricity Use (MWh)	73,673	81,781	81,395
Renewable energy used (MWh)	41,577	594	0
Percentage renewable energy used	51.9%	0%	0%

In preparation for our Science Based Targets, Ciena engaged with a third party to measure the entirety of our Scope 1, 2, and 3 emissions, including those along our value chain. The table on the left reflects our most extensive inventory of greenhouse gas emissions to date, and our improved data quality provides further transparency and insight to stakeholders.

In 2021, our total Scope 1, 2, and 3 emissions were 1,880,793 metric tonnes of CO₂e, a 5.9% reduction from the previous year. Across Scope 1 and 2 emissions, we saw a 71.5% decrease in emissions from 2020 and a 76.3% decrease from 2019, which we attribute to continuous efficiencies, upgrades in our facilities and our investment in renewable energy and renewable energy credits.

Across Scope 3 emissions, we saw a 5.3% reduction in emissions in 2021 from the previous year, and a 17.3% decrease from 2019. We attribute this decrease primarily to developing and shipping new product lines that require less power to operate.

Our Scope 3 emissions include those from purchased goods and services (15.83%), fuel and energy-related activities (0.39%), transportation and distribution (0.95%), waste (0.14%), business travel (0.04%), employee commuting (0.10%), use of sold products (82.53%), and the end-of-life treatment of our products (0.02%).



Ciena's greenhouse gas emissions by Scope

Energy efficient facilities

Our electricity use in 2021 was 73,673MWh, down 9% from 2020. We use Leadership in Energy and Environmental Design (LEED), a global green building rating system, to assess our office buildings and maintain highly-efficient carbon and cost-saving green buildings. This work has awarded us five LEED-certified or certifiable buildings across our sites.

Across our operations, we have been implementing initiatives that help reduce our energy use and bring us closer to our carbon neutral goal. The initiatives undertaken in 2022 include:

- Retrofitting lighting at our offices and labs in Ottawa, Canada with LED light bulbs, which is estimated to reduce our energy use by 600,000 kWh per year
- Connecting the water towers used for our cooling system in our Ottawa offices to increase our cooling efficiency
- Upgrading the heating, ventilation, and air conditioning systems (HVAC) in our Belfast office
- Adding utility metering in our offices in Alpharetta, US, as well as electric metering in our offices in Quebec City, Canada, to better monitor and track our energy use

Transitioning to renewable energy

As we work to reduce energy usage at our offices around the globe, we are transitioning to renewable energy where we can. Our offices in San Jose and Hanover in the United States, Sydney, Australia, London and Belfast, UK, are all operating on renewable energy. We also have a solar photovoltaic (PV) plant at our office in Gurugram, India, that we plan to expand in 2023. In addition, we have been investing in renewable energy credits at our locations where direct renewable energy is unavailable, purchasing from wind, solar, biomass, and hydro sources. In 2021, we used 41,577 MWh of renewable energy, accounting for 52% of our total electricity.



Ciena's PV plant at offices in Gurugram, India

Office optimization projects

As we continue to evolve the way we work at Ciena, we conducted a study to understand how our office space is being used and whether there were opportunities to optimize our footprint. Based on the learnings from this project, we reduced our office footprint in North America, South America, Europe, India, and Asia Pacific.

Sustainable supply chain

Our teams are working to transform our supply chain operations to reduce the amount of greenhouse gas emissions released during the manufacturing and shipping of our products. Using smart inventory positioning, we aim to increase visibility into the materials we have on hand at our inventory locations to help reduce the movement of goods around the globe before our products reach our customers.

We are also working with our contract manufacturers to reduce the emissions in our manufacturing process. For instance, in 2022 we worked with one of our contract manufacturers in Guadalajara, Mexico, to make their manufacturing facility more energy efficient, reducing emissions created in our manufacturing processes. In addition, our new manufacturing capacity for routing and switching products in India helps us move these products closer to our end customers in this region, reducing emissions from logistics and shipping.

Travel emissions and employee commuting

We offer our people options to reduce their emissions from business travel and commuting. In 2022, we set a corporate goal to reduce our air travel emissions by 50% from our 2019 levels. Through our communications efforts and by providing our leaders visibility into the travel emissions of their teams, we reduced our air travel emissions by 70% from 2019 levels, or by approximately 9,900 metric tonnes of CO₂e.

In addition to business travel, we provide ways for our people to reduce their impact from commuting. For instance, we installed new electric vehicle chargers at our offices in Ottawa and Quebec City in Canada, and are implementing further resources that will provide our people with environmentally-friendly travel choices to help reduce their impact from travel and commuting.



Ciena's EV chargers at offices in Quebec City, Canada

Waste and water management

As a networking systems, services, and software company, it is important that we not only address the waste from our offices but also from our research and development processes. Waste and water management efforts are overseen by our Environmental Steering Committee, under the direct supervision of our Director of Enterprise Management Systems and our Associate Director of Sustainability.

Key performance metrics

All data as of October 31, 2022

KPI	2021	2020
Total waste (metric tonnes)	25,820	25,736
Percentage of waste diverted from landfill	99%	99%

In 2021, we generated 25,820 metric tonnes of waste, on par with the previous year. We work with third parties to help manage our facilities around the globe and help us measure and monitor our waste. Our waste diversion rate is 99% as most of our waste consists of cardboard packaging, which is recycled. Other examples of our waste include waste from our offices, organics, and e-waste.

To improve our reporting on waste, in 2023 our on-site facility management teams will be conducting surveys to assess the efficacy of our waste management. We will also implement a global waste policy that will include criteria for audits, vendor selection, landlord engagement, and education regarding site waste management.



Employees volunteering in Ottawa, Canada by picking up litter

Managing e-waste

We generate electronic waste through our research and design process, our manufacturing and services processes, our internal IT systems, and the end-of-life of our products. We work with third-party vendors to take-back, recycle or refurbish our electronic waste in accordance with regulations in the countries where we operate. In addition, we offer [reclamation and refurbishment services](#) to help our customers reduce their environmental waste. In 2021, we had 46 metric tonnes of e-waste in our operations, up from 29 metric tonnes in 2020. This was a result of improved reporting and visibility on our e-waste data as well as internal IT hardware upgrades, with used devices sent to our e-waste vendors for recycling or refurbishment.

Hazardous waste management

Hazardous waste in our operations could include diesel spills from generators or leaks from our HVAC systems as well as certain types of waste within our lab operations. In 2021 and 2022, we had no reportable hazardous spills. We host regular training on managing hazardous materials and spills as well as provide spill kits and signage in our facilities. We also work with our waste and recycling vendors to responsibly handle and address hazardous waste and materials in our operations.

Managing our water consumption

Water is a vital resource, and we are working to ensure that water is consumed sustainably at our offices around the globe. Our water use in 2022 was 62,565 cubic meters and primarily came from our offices. To help reduce water use, we conducted upgrades to the water fixtures in our restrooms at our offices in Gurugram, India as well as in Ottawa, Canada. We also installed a smart device on the exterior irrigation system in Ottawa to automate, monitor, and ultimately reduce water usage.

Biodiversity

By optimizing our real estate footprint, we are reducing our impact on those natural surroundings. All our sites are compliant with the local environmental standards to preserve local ecosystems and we also expect our suppliers to adhere to these principles. We also choose to use pre-existing infrastructure by leasing offices instead of constructing new buildings. In addition, our Ciena Cares program enables our people to volunteer for park clean-up events regularly and give to organizations that help to preserve the environment. Ciena also plants a tree through our partner TreeNation for every new employee that joins our company.

Product and service sustainability

Our customers are setting ambitious environmental goals and are looking to their vendors to help them be more sustainable in their operations and in their networks.

Our approach to research and development includes a critical eye toward environmental responsibility. Our innovations aim to provide more sustainable network solutions for our customers, helping them get more capacity out of their networks while reducing energy consumption, material use, and emissions. Our research and development, which includes work to create sustainable products and services, is overseen by our Senior Vice President, Global Products and Services.

Key performance metrics

All data as of October 31, 2022

KPI	2022	2021
Investment in research and development	\$624,656,000	\$536,666,000
Product recalls	0	0

Our approach to product sustainability

Our design philosophy is centered around innovating to improve the sustainability of our products,—ultimately allowing our customers to do more with less. Our software, including the Blue Planet® Intelligent Automation Portfolio and Ciena's Manage, Control and Plan (MCP) multi-layer domain controller support applications that can also provide sustainability value through virtualization and automation technologies. Through Ciena Services offerings, our customers can transform their

networks and benefit from the latest power-efficient solutions, identify equipment that is no longer required, and refurbish used systems to help extend the life of their networks. From a sustainability perspective, this approach to product design and services enables:

- Reducing energy needed to power and cool equipment
- Decreasing real estate space required to house our products
- Eliminating the need to travel to network sites for network and service provisioning and maintenance
- Using fewer materials in the manufacturing process
- Decreasing waste at the end of life of our products
- Reducing shipping and packaging related waste and emissions

WaveLogic™ coherent optics

We have invested in the sustainable evolution of our WaveLogic coherent optics technology. WaveLogic 5 Extreme (WL5e) increases fiber capacity three times while reducing power per bit by 80% and space needed by 85% compared to the previous generation. Through our continuous innovation, WaveLogic products have allowed customers to avoid 4.8 million metric tonnes of CO₂e from 2012-2021. This is equivalent to the CO₂ emissions from 5,310,764,271 pounds of coal burned or the carbon sequestered by 5,680,490 acres of U.S. forests in one year.

As we introduced the newest generation of this technology, WaveLogic 6, our energy and capacity efficiencies have continued, giving customers up to twice the capacity they were able to get with

WL5e—with just one unit. This means that customers will require fewer network elements, less space, and less power to reach the same capacity in their networks.

Routing and switching platforms

Our routing and switching investments also yield significant energy savings for our customers. For example, our latest routing and switching technology delivers a 70% improvement in power efficiency and a 75% improvement in footprint compared to previous-generation products. We estimate that our routing and switching innovation has helped avoid more than 550,000 metric tonnes of CO₂e from 2014-2021. This is equivalent to the CO₂ emissions from 61,888,151 gallons of gasoline consumed or 23,807,101 trash bags of waste recycled instead of landfilled.

Automation services and applications

Blue Planet

Intelligent automation such as Software Defined Networking (SDN) and virtualizing services with Blue Planet can help network operators towards their carbon reduction goals. For instance, virtualized services can help operators reduce truck rolls and the need for discrete network devices using Cloud-based Network Functions. Intelligent automation and SDN help customers improve the efficiency of their workforce and networks to reduce the amount of network hardware required and associated energy, materials, waste, and emissions.

Manage, Control and Plan (MCP)

Our MCP multi-layer domain controller and applications provide network planning, analytics, software control, and automation

to simplify and optimize multi-layer network performance. With sophisticated planning tools, customers can ensure network design that integrates sustainability from the outset. MCP applications provide additional tools to maintain maximum performance and efficiency in networks over time. For instance, our Liquid Spectrum™ applications increase visibility into our customers networks to enable more capacity while reducing power per bit. The Channel Margin Gauge and Network Defrag applications helps our customers harvest latent capacity in their network, while PinPoint OTDR enables technicians to remotely determine the location of fiber faults so that they can dispatch fleets to the right location, reducing unnecessary dispatches, travel time and related emissions as well as the risk of network outages.

Network transformation and modernization

An effective approach to building sustainable networks is to ensure that they are operating at peak capacity and efficiency using the most modern network architectures and solutions. Ciena offers network transformation services including consultation, project planning, project management and implementation to upgrade and transform networks to more sustainable solutions.

Supporting our customers' circular economy objectives

Our equipment refurbishment service helps extend the life of our products by repairing and updating the hardware and software. The customer can reuse the equipment within their network, eliminating the need to use further resources and materials to build new products. Our equipment recovery and reclamation service is a safe, environmentally friendly way to dispose of our equipment at end of life. The equipment is evaluated, securely wiped of information, and then recycled to remain out of landfill.

In addition, Ciena works with Compliance Partners and Approved Authorized Treatment Facilities (AATFs) to offer take back programs for equipment that falls within the scope of the Waste from Electrical and Electronic Equipment (WEEE) and similar legislation globally. These programs support our customers to responsibly recycle our products that have reached the end of their useful life.

Product packaging

We have been redesigning our product packaging and have set a goal to have more than 70% of our packaging by weight made with recyclable material by 2025. As part of our packaging redesign, we are eliminating non-recyclable Polyurethane (PU) foam from our packaging, and replacing it with Polyethylene (PE) foam and recyclable cardboard with high recycled content. With these upgrades, our product packaging can help us, and our customers, reduce waste while still protecting the product. We continue to work with our suppliers to redesign product packaging across our portfolio, eliminating non-recyclable materials, increasing recycled content, and reducing weight and size so that we can ship products with lower transportation related emissions.

At our manufacturing sites, we have eliminated the standard plastic stretch wrap used to secure products on pallets in favor of reusable and recyclable pallet sleeves. These new pallet sleeves have a lifecycle of approximately five years, allowing us to reduce the need for single-use plastics and our logistics related emissions.

Product safety

We build and test our products to ensure they are safe and secure for our customers to operate. Our Product Compliance Committee monitors and assesses compliance with product-related legislation. We comply with guidelines set by [Restriction of Hazardous Substances Directive \(RoHS\)](#), Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), the [Waste Electrical and Electronic Equipment \(WEEE\) Directive](#), and with the relevant electromagnetic compatibility (EMC) and safety regulations in all countries where we do business. We recorded zero product recalls in 2022 and 2021.



Reusable pallet sleeves in Ciena's contract manufacturing site in Guadalajara, Mexico

Social

At Ciena, we are rooted in people. Through our [People Promise](#), we aim to create a culture in which everyone can make a difference, be empowered, and feel included as they continue to grow and develop in their careers.

Talent management

Our people want to work in a company that offers valuable learning and growth opportunities and recognizes their efforts through competitive compensation. The current war for talent and global inflation has made an even more competitive landscape for hiring and retaining talent.

All aspects of talent management are under the leadership of our Chief People Officer, who provides regular updates to our board of directors on our people and culture programs and performance. The Compensation Committee of our Board of Directors approves all executive and bonus compensation.

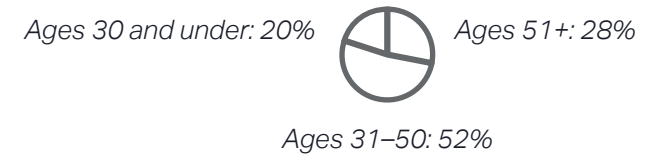


Team members volunteering in Ottawa, Canada

Key performance metrics

All data as of October 31, 2022. Dollar amounts are in millions of dollars USD.

KPI	2022	2021
Employee headcount	8,079	7,241
Voluntary turnover rate	9.4%	8.6%
Percentage of positions filled with internal candidates	18%	18%
Percentage of positions filled by females	27.1%	22.1%
Percentage of positions filled by early in career individuals	53.9%	49.6%
Employee engagement score	81	83
Percentage of employees who participated in the employee engagement surveys	77%	72%
Total remuneration, including salaries and benefits	\$1,128M	\$1,088M



Compensation and rewards

Our Total Rewards programs are designed to drive performance and provide a competitive advantage to attract, retain and motivate talented individuals. We strive to provide compensation and benefits that are competitive, performance-focused, and fair. In 2022, we launched a Salary Range Tool, which provides greater transparency to our employees on market reference ranges for compensation by job type, level, and geographic region.

Recognizing our people

Our Spirit of Ciena Award recognizes and celebrates our colleagues and teams who have embodied Ciena’s values. Team members nominate their peers in the individual or team categories for living the values through contributions to our business and their communities. Additionally, we honor our people who have exhibited extraordinary

commitment to their community with the Spirit of Ciena – Ciena Cares Award. An internal committee reviews nominations and selects finalists, while our CEO selects the winners. All Spirit of Ciena award winners receive either a cash reward or funds to donate to the charity of their choice. In 2023, we will review the efficacy of our Spirit of Ciena Award program to ensure it still reflects our core values.

Our Bravo! recognition program helps build a culture of appreciation through peer-to-peer recognition. Colleagues can send awards to each other to express their gratitude for their hard work and for living by Ciena’s core values – Customer First, Integrity, Agility, Innovation, and Teamwork. Managers can also recognize the efforts of others with a monetary benefit through Spot Awards in Bravo! In 2022, 10,981 Bravo! awards were given to our people and 2,283 people nominated a colleague for an award.

Employee engagement

Listening to our people allows us to understand what's important to them and how we can improve our people practices. In 2022, we conducted four employee pulse surveys related to our company culture and People Promise, integrity, sustainability, and inclusion.

Our engagement score in 2022 was 81, a two-point decrease from 2021 but three points above the industry benchmark as outlined by our third-party survey administrator, Glint. Based on the survey, our people have told us that competitive compensation, career growth, and celebrating success continue to be important to them. Throughout the last year, we have been strengthening our programs to address these interests, with enhanced total reward and development programs.

Retaining and promoting our talent

With the war for talent and the new future of work, attracting and retaining talent is becoming increasingly competitive. Our voluntary turnover rate in 2022 was 9.4%, a 0.8 percentage point increase from the previous year, but well below the industry average of 23%. Our turnover within our high performers and top talent remains low.

We are focused on providing an environment where our people can have engaging and fulfilling careers and we aim to fill positions internally before reviewing external candidates. In 2022, 18% of our positions were filled internally.

Talent development

We actively work to engage, grow, and inspire our people at every stage of their careers. We drive conversations on growth and performance by encouraging our people to proactively approach their career aspirations and lead growth conversations with their managers. We also have programs and tools available to all employees so they can continue to learn and grow their careers, including:

- A mentorship program where our internal mentors work with mentees to support their career growth and development.
- BetterUp Coaching where employees are paired with a professional coach to work on identified development needs. In 2022, 291 individuals participated in BetterUp Coaching and held about 5,600 coaching sessions.
- Early in career development programs for sales, engineering, people and culture, marketing, and IT.
- Sales curriculum training to help refine the sales skills for both new and experienced sales individuals. In 2022, we delivered 218 sales curriculum workshops with 3,113 participants.
- Percipio Learning Hub with resources on multiple business, technical, and development topics.
- Online learning modules on a range of topics, including personal leadership behaviors, office, digital skills, and product education.
- Self-paced management development content based on new and emerging themes for managers.
- 'Branch Out' micro learnings on professional development, personal growth, and diversity and inclusion.

- GlobeSmart tool to discover and compare preferred work styles with colleagues.

At the same time, we encourage our leaders to prioritize the development of our people. We have implemented manager training programs and tools to ensure that they have the capability to develop talent and promote this key aspect of our culture.

Leadership and management development programs

In 2022, we refreshed our leadership framework for leading self and others. Our Management Development Program helps new people leaders build strong foundational skills to become effective people managers, including coaching and developing their teams. In 2022, we had 141 managers participate in the Management Development Program. Our Leadership Development Program helps leaders who are director level and above foster cross functional collaboration with their teams, as well as enhance their executive presence, communication skills, and ability to influence.



Our early in career engineers at a training program at our labs in Gurugram, India

Tuition reimbursement

For our people who wish to continue their education and expand their knowledge, we offer tuition reimbursement for a single course, certification, one- or two-year diploma, and a three- or four-year degree. Our people have used these resources to pursue advanced degrees in business administration, engineering, and other post-graduate certificates and courses to better prepare them for next level roles. We have recently increased the value of tuition reimbursement to \$10,000 per person, and broadened the definition of tuition, providing more opportunity for individuals to take advantage of this benefit.

Ciena's Emerging Tech University

In 2022, we launched a pilot Emerging Tech (ET) University program designed to prepare our people for the coming digital imperatives and technologies over the next five to ten years. The ET University will help upskill our peoples' knowledge of advanced and emerging technologies with live learning sessions and provide access to exclusive learning content. We have partnered with industry leaders, trainers, and our internal subject matter experts to host courses on Artificial Intelligence, Blockchain, and Metaverse. At the end of each program offering, learners receive a certification of their accomplishment. In 2023, we will offer the ET University program to all employees.

Diversity, inclusion, and belonging

The most successful companies are ones that encourage diverse points of view. Those diverse viewpoints are even more resonant and impactful when we create a culture where everyone can belong and be their authentic self.

We provide a workplace environment where all people are recognized, valued, and accepted for who they are regardless of race, nationality, religion, sexual orientation, gender, disability, or age. Our commitment to a fully inclusive and non-discriminatory workplace is outlined within our [Code of Business Conduct and Ethics](#). We have also signed the CEO Action for Diversity and Inclusion pledge as we are committed to supporting an inclusive workplace for our employees.

We have a dedicated Diversity, Inclusion and Belonging team that reports directly to our Chief People Officer and has responsibility for our global programming. Our Global Inclusivity Council—co-chaired by our Chief People Officer, Senior Vice President and General Manager Blue Planet, and comprised of diverse and cross-functional team members—drives our diversity strategy and promotes inclusive behavior, allyship, and psychological safety.

Key performance metrics

All data as of October 31, 2022

KPI	2022	2021
Percentage of our people who are women (globally)	21.5%	20.7%
Percentage of our people who are women (US only)	24%	24.2%
Pay equity ratio men to women (globally)	1:1	1:.96
Pay equity ratio for visible minorities to people who are Caucasian/White (globally)	1.01:1	1:1
Pay equity ratio for people who are Black to people who are Caucasian/White (globally)	1.01:1	.97:1
Percentage of team members undergoing Conscious Inclusion workshops (globally)	90%	18%



Colleagues enjoying the Holi celebrations at our office in Gurugram, India

Our performance

In 2022, we increased our percentage of women globally by one percentage point, up to 21.5% from 20.7% the previous year. In the United States, where we are headquartered with approximately 1,760 people, we have been able to collect diversity data and measure our performance. In 2023, we will collect demographic data across an expanded set of our geographic markets through employee self-identification questionnaires, enabling us to better understand the diversity of our global employee base.

KPI	2022	2021
Percentage of our people who are Caucasian/ White (US only)	64.2%	65.5%
Percentage of our people who are Black and African American Heritage (US only)	5.1%	4.7%
Percentage of our people who are Hispanic or Latino (US only)	6.1%	5.8%
Percentage of our people who are Asian (US only)	21.4%	21.3%
Percentage of our people who are two or more races (not Hispanic or Latino, US only)	2.2%	2.1%
Percentage of our people who identify with other diverse groups (including American Indian, Alaska Native, Native Hawaiian, or Other Pacific Islanders, US only).	0.5%	0.6%

Pay equity

We conduct an annual global pay equity assessment based on gender and based on ethnicity in the United States. As part of our measurement, we look at roles, performance, and location which helps us determine if our people with similar jobs and performance are paid equitably and if corrective action is needed.

In 2022, our assessment confirmed that we had 100% pay equity between men and women globally. In the United States, the pay-equity ratio is 0.99:1 in favor of men. Across different ethnicities, we found that our people who identify as a visible minority in the United States are paid at 1.01:1.

Conscious Inclusion Workshops

Over the past two years, we have delivered Conscious Inclusion workshops to help our people better understand their team members' identities, become allies, and foster an inclusive culture. In 2022, 90% of our people undertook Conscious Inclusion workshops, surpassing our 80% completion rate goal. We continue to offer the Conscious Inclusion workshops to employees and have included the workshop as part of our onboarding process.

Thrive Development Program

Our Thrive Development Program is a six-month training program designed to address barriers in the workplace and enhance opportunities for underrepresented individuals. Through this program, participants strengthen their emotional intelligence, communication, and leadership presence through one-on-one coaching and learning modules. Since 2021, we have had 75 people participate in the program and an additional 53 will participate in 2023.

Employee resource groups

Our employee resource groups (ERGs) are employee-led groups with a common goal of supporting underrepresented groups' development, empowerment, and visibility. Our ERGs help raise awareness, educate others on allyship, and exemplify our commitment to diversity, inclusion, and belonging. We currently have six ERGs that work to address the needs of their own communities, but we also strongly encourage collaboration across all groups and allies. Our six ERGs are:

Women at Ciena

Women at Ciena aims to empower and lift our women's voices by hosting professional development workshops as well as networking and community outreach events. This year, the group hosted a global internal event to celebrate International Women's Day, featuring speakers who shared insights and experiences related to personal development and career growth. There are six regional chapters of the Women at Ciena group that organize events and undertake community investment activities locally. The Canadian and British chapters have partnered with organizations that help empower women and girls through digital skills and technology—iSisters Technology Mentoring in Ottawa provides career-ready technology training for Indigenous youth and women, and Academy Achievers based in London, provides STEM-related opportunities to youth from vulnerable and disadvantaged communities.



Members from our Women at Ciena ERG



Members from our Black and African Heritage at Ciena ERG

Black and African Heritage at Ciena

Black and African Heritage at Ciena focuses on creating an environment that values, encourages, and leverages the diverse perspectives and experiences of our colleagues with Black and African heritage. In 2022, the group hosted a global internal event to discuss topics related to racial justice and allyship during Black History Month and was the pilot group on our Thrive Development program that focuses on the development of our people who are from underrepresented groups. The group also helps drive recruitment for people in the Black and African heritage community by developing relationships with historically Black Colleges and Universities. As part of the group's community engagement activities, beginning in 2022, our Black and African Heritage group is partnering with three Atlanta public schools with technology and learning resources as part of our Ciena Solutions Challenge.

Pride at Ciena

Pride at Ciena supports individuals in the LGBTQ+ community and those with family, friends, or colleagues who identify as LGBTQ+. The group aims to engage allies and create a safe place where everyone feels comfortable expressing their authentic selves in the workplace without fear of discrimination. The group took an active role in the Out & Equal 2022 Summit and hosts an annual global internal event to celebrate Pride Month.



Members from our Pride at Ciena ERG at the Atlanta Pride Parade

Latinx at Ciena

In 2022, we celebrated the first full year of our Latinx at Ciena group during Hispanic Heritage Month. During the event, speakers and employees from the Latinx group discussed the impact of their cultures on their careers and lives. Latinx at Ciena is focused on creating cultural awareness among all employees and developing a network of professional and personal growth for Latinx employees and their allies while giving back to their local communities.

Next at Ciena

Next at Ciena drives engagement, professional development, and connection for our early-in-career team members. The group organizes networking and collaboration opportunities to help develop and enhance the skills of our people. In 2022, the group engaged team members through the Next at Ciena games with activities linked to community involvement and wellbeing.

Vets at Ciena

This year we added a new ERG, Vets at Ciena, which recognizes and connects our colleagues who have served their countries in the military. Vets at Ciena is focused on supporting our people who have served through their shared experiences, career growth, development, and the recruitment and retention of veterans. Our Vets at Ciena group was launched on Veterans and Remembrance Day 2022, with a panel discussion featuring veteran team members who shared their military experiences and the value veterans bring to the workplace.

We also have a network of employees who are examining how we can better support and include those who identify with a disability or neurodiversity.

Wellbeing

Our People Promise shows our dedication to providing an experience for our people that emphasizes vibrancy and happiness. Our holistic approach to wellbeing focuses on our peoples' physical, emotional, social, and financial selves—helping our people thrive inside and outside of work. Our Wellbeing programs are managed under our Vice President of Total Rewards, reporting to our Chief People Officer.

Key performance metrics

All data as of October 31, 2022

KPI	2022	2021
Percentage of our people enrolled in our Virgin Pulse wellbeing platform	55%	34%

Flexible workstyles

Flexible working, including where, when, and how people work, is highly valued by our people. We have been on a journey to adapt to various working styles, allowing for greater flexibility while still connecting and collaborating with colleagues in a meaningful way. Many of our people have been given the option of hybrid or remote workstyles, with technology and tools that allow them to collaborate efficiently. As part of our investment in our peoples' workstyles, all new full-time and part-time employees receive a one-time workstyle allowance of \$500 USD (or local equivalent) to assist with offsetting the cost of setting up an appropriate home workspace.

Our wellness programs and platforms

We provide our people with programs and resources to support their total wellbeing. In 2022, we launched Ciena's Work-Life Support Hub to provide holistic wellbeing and resilience resources to employees and their family members for all stages of life. The hub streamlines Ciena's Employee Assistance Program and Global Wellbeing platforms for direct access to specific tools, services and benefits to support through a variety of life situations—such as starting a family, adopting a pet, dealing with grief or loss, battling illness, sending children off to college, preparing for a career change, or getting ready for retirement.



The Ciena Montréal Cycling Team



The winning team from our Global Walking Challenge

Through our Work-Life Support Hub, people can access our Employee Assistance Programs and Virgin Pulse platform. Virgin Pulse allows our people to track their activity, participate in fitness challenges, and receive rewards for participation. Employees can also access our Enrich financial wellbeing platform through Virgin Pulse, which provides financial education and helps our people learn about their spending behaviors. As of October 31, 2022, 55% of our people are participating in the Virgin Pulse wellbeing program and 32% are participating in the Enrich financial wellbeing program.

Supporting mental health

In 2022, our Employee Assistance Programs included SupportLinc and Spring Health, which provide access to mental health practitioners and resources and 24/7 crisis support. Through our Employee Assistance Program, our people can receive personalized care programs with up to six therapy or motivational sessions covered for themselves or their dependents. We also offer free live webinars on topics related to mental wellbeing, from coping with loss to recovering from a set-back. In addition, we give our people managers tools and resources to talk to their teams about their wellbeing and mental health through regular webinars and as part of our leadership development programs.

Providing resources for menopause and hormonal changes

Menopause and hormonal changes can impact us physically and emotionally, and while many are affected by them, there is often a stigma attached that prevents people from asking for the support they need. We have equipped our people in getting comfortable

talking about uncomfortable subjects to create an environment where everyone feels safe to be themselves. We have hosted workshops and information sessions and provided online learnings for individuals and managers to learn about how menopause and hormonal changes can affect someone and how to best support our colleagues who are experiencing these changes.

Employee benefits

We provide our people with comprehensive benefits including medical, dental, vision, life and disability insurance, flexible spending accounts, Employee Stock Purchase Plan (ESPP), retirement savings plans, and voluntary benefits such as group legal insurance, accident, critical illness, hospital indemnity and identity theft, long term care, and auto and home insurance. Our ESPP allows our regular full and part time employees with minimum three months service to become shareholders of Ciena by purchasing Ciena stock at a discounted price through after-tax payroll deductions. In 2022, 58% of eligible employees participated in the ESPP. We also offer business travel protection for any medical or security emergencies that happen while an employee is traveling outside of their home country for business.

For employees in nearly all the countries in which we operate, we offer unlimited flexible paid time off instead of a traditional vacation accrual program. This allows our employees to take time off as they need, with no annual cap on the amount of paid time off they can take.

Global family leave

We offer a suite of global family leave options to support our people as they take time off to care for a family member, from welcoming a new child to caring for a family member with a serious health condition or grieving the loss of a loved one. Our Global Family Leave policies are eligible for all active full-time and part-time employees contracted to work 20 hours or more per week in every country where Ciena operates. In 2022, 167 employees took family leave.

We offer new mothers 18 consecutive weeks from the date of birth, paid at 100% of base pay so they can bond with their newborn child. After 18 weeks, new mothers are eligible for a Phased-In Return-to-Work arrangement allowing them to work 80% of their full-time work schedule while being paid at 100% of their base pay. We offer new fathers ten weeks of paternity leave, paid at 100% of their base pay. We also offer an Adoption Assistance Program in which adoptive parents can receive up to \$10,000 (or their local equivalent) for financial assistance to help with the adoption process and ten weeks of paid time off.

We also offer up to four weeks of Carer's Leave for employees caring for a family member with a serious health condition, paid at 100%. For those who have lost an immediate family member, our Bereavement Leave allows employees two consecutive weeks of leave paid at 100%. All leaves provided are supplemental to all statutory provisions.

Part-time working arrangements and retirement readiness

Full-time employees who are looking to reduce their work schedule as they transition into retirement, experience a shift in their personal lives, or are returning to school can request a part-time working arrangement. Managers and individuals work together to determine the reduced work schedule and scope while the individual is still eligible for an annual bonus at a pro-rated salary.

To support our employees' retirement, we offer defined contribution benefit plans where Ciena matches up to 50% of our people's contributions. Beginning in 2022, employees in the U.S., Canada, and UK, who receive equity compensation awards and are over the age of 60 with ten years of Ciena service, are entitled to receive all unvested shares upon retirement provided they gave a minimum 12 months' notice.

Global pandemic leave

Throughout the Covid-19 pandemic, our Global Pandemic Leave policy enabled all full-time and part-time employees to receive up to four weeks leave to focus on their personal recovery from illness, help a family member who is diagnosed with an illness resulting from the pandemic, or quarantine in line with local legislation.

Employee health and safety

The health and safety of our people is of the utmost importance, and we are committed to ensuring the health and safety of all our employees. Our Environmental Health and Safety (EHS) Policy outlines how we are engaged, responsible, and proactive in relation to the safety of our people. Health and safety is overseen by our Corporate Health and Safety Committee, which is comprised of cross-functional team members at Ciena.

Key performance metrics

All data as of October 31, 2022

KPI	2022	2021
Total recordable injury rate	.03	0
Job-related fatalities	0	0

Ciena has maintained a low recordable injury rate over the past few years. On average our recordable injuries are less than 0.02%. The primary source of injuries has been slips, trips, falls, and minor vehicular accidents. Employees are required to report health and safety incidents to our Health and Safety Team, which conducts a review of the incident and investigates to determine the cause. Once the source of the incident is known, the team seeks to rectify the cause to mitigate future occurrences.

Health and safety management

Our Corporate Health and Safety Committee oversees our EHS program, including our EHS Policy and Principles for all of our employees and operations. The committee includes our Director

of Enterprise Management Systems, corporate health and safety coordinators, global health and safety teams, local health and safety site coordinators, and group representatives.

Our global health and safety teams and local coordinators represent our regional site needs for the United States, Canada, the Caribbean and Latin America, Europe, the Middle East and Africa, India, Asia Pacific, and Japan. Within our global health and safety teams and local coordinators, our group representatives comprise a diverse group of employees and our facilities management to represent their local sites.

Audits and certifications

To ensure that we stay true to our EHS principles of being engaged, responsible, and proactive, we actively review and update our policies and procedures to comply with local legislation so we can operate safely and responsibly.

Every year, we assess our facilities for environmental aspects and impacts, as well as health and safety risks. In addition, we maintain a robust audit program through both internal and external audits. We are certified to the TL 9000, ISO 14001, ISO 45001, BCP ISO 22301 standards and are UK Safe Contractor accredited.

Emergency alert system

We use an emergency alert tool to contact employees during disasters or incidents in their local areas to determine if they are safe. This tool allows us to quickly assess where and which employees need help so we can respond with the necessary support.

Home Based Risk Assessment

Now that many of our employees choose to work from home or in a hybrid environment between the home and office, we developed the Home Based Risk Assessment to help employees assess the safety of their home office setup. Since we cannot physically control the safety of our employees' home office environment, our EHS team created this assessment for individuals to perform on their own. It includes checklists on ergonomics, lighting and ventilation, flooring hazards, and fire and electrical safety.

Community investment

Our people are passionate about giving back and our Ciena Cares program is a key aspect of our culture and corporate identity. Our community investment initiatives are managed by our ESG and Social Impact team, along with a committee of Ciena Cares champions across the globe who engage our people in giving back to make a difference in their local communities.

Key performance metrics

All data as of October 31, 2022. Dollar amounts are in millions of dollars USD.

KPI	2022	2021
Total employee donations committed	\$1.31M	\$0.86M
Company match and volunteer rewards	\$1.94M	\$1.69M
Other company donations	\$2.01M	\$1.33M
Total donations	\$5.26M	\$3.88M
Number of volunteer hours	35,936	37,302
Number of participants in our Ciena Cares program	3,008	2,640
Number of employees who made a donation	2,311	2,113
Number of employees who volunteered through our Ciena Cares program	1,961	1,856



Our employees in Buenos Aires, Argentina volunteering at their local food bank

In 2022, we continued to make a meaningful impact in our communities across the globe through our Ciena Cares program and our investments in digital inclusion. Our total community investments in 2022 were \$5.26 million USD.

A year of giving back

Through Ciena Cares, our global volunteering and giving program, our people once again demonstrated their passion for helping their local communities. In 2022, we had a bonus-aligned goal to increase engagement in the program by 10% from 2021 levels. Our employees rose to the challenge, with 3,008 of our people participating in the program, up 14.5% from the previous year. This engagement resulted in a combined impact of \$3.25 million through employee donations, matched giving, and employee rewards, and 35,936 hours spent volunteering in our communities.

Ciena Cares benefits

Through Ciena Cares, we offer the following benefits to our people:

- 1:1 matched giving
- Volunteer rewards of \$25 per hour volunteered
- Volunteering time off
- New hire giving credits of \$20 USD per person

Across all rewards, we offer our people up to \$5,000 USD in matched giving and volunteer rewards to support the organizations that matter most to them.

Our people in action

Earth Day

On Earth Day this year, our people from around the world came together to help protect the planet. From Ottawa to Belfast, London to Singapore, our people cleaned up their local parks and beaches and helped keep their communities green and free from litter. Read more about this day [here](#).

Go Do Good Days

Our Sales and Marketing teams and Products and Services teams led two significant global volunteer days where our people could disconnect from work and reconnect with each other to make a difference in their local communities. Watch this short [video](#) and read this [article](#) to see how our global teams spent the days.

Employee-run Annual Ottawa Golf Tournament

As a testament to our people's deep passion for giving back, our employees often coordinate and run their own volunteer and giving events like the annual Ottawa Golf Tournament benefitting the Ottawa Food Bank and United Way. Read about the history of this impactful event and Ray Bains, the employee who brought it to life, [here](#).



Ezra Pugliano (pictured in middle)

"I have loved being a Ciena Cares Champion. Having the ability to leverage my passion for service and team up with my colleagues to provide meaningful service in my community has been incredible. I am so happy I got involved as a Ciena Cares Champion."

– Ezra Pugliano, Ciena Cares Champion in the United States



Jayne Ciencia (pictured far right)

"I often remind myself, 'Be the reason someone believes in good people.' I am truly fortunate to be part of Ciena, a company that strongly supports my passion for community service. Ciena Cares not only match donations and reward volunteer hours, but it also gives me flexibility on doing outreach activities during working hours which opens more possibilities on when I can be of service to my community."

– Jayne Ciencia, Ciena Cares Champion in Singapore

"As a Ciena Cares Champion for Ottawa, I have the pleasure of working with a small committee to develop volunteer and giving opportunities to mobilize employees to support those in need in our communities. It is truly rewarding to see the generosity of the Ottawa team in both volunteering their time and/or making monetary donations to benefit both local and global charities. I am proud to be part of the Ciena Cares team and am very appreciative of the Ciena Cares program that support our employees through matched giving, volunteering time off and volunteer rewards."

– May Lee, Ciena Cares Champion in Canada



Digital inclusion

As we pursue the advancement of network connectivity and intelligent automation, we want to ensure that no communities or individuals are left behind. Our Digital Inclusion program commits \$10 million over five years to unlock opportunities for underserved communities through digital access, tools, and learning. We aim to enable greater connectivity for 100,000 students globally through the program. Our Digital Inclusion program is overseen by our ESG and Social Impact team.

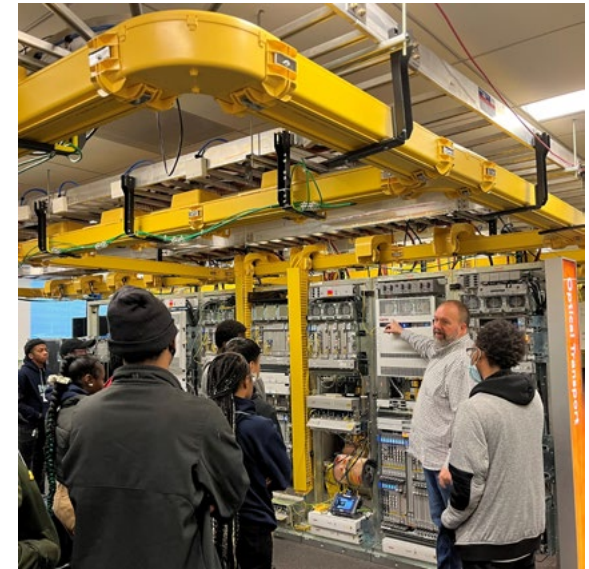
Key performance metrics

All data as of October 31, 2022. Dollar amounts are in millions of dollars USD.

KPI	2022	2021
Investment in Digital Inclusion	\$1.76M	\$1.33M
Number of individuals impacted	60,000	40,000

Digital inclusion collaborations

We collaborate with non-profit and charitable organizations from all around the globe. Through our Digital Inclusion grants, we engage our employees to nominate organizations that help to bridge the digital divide in their local communities. In 2022, we supported 12 new organizations through our Digital Inclusion grant program, impacting more than 20,000 underserved youth, women, and their families. These new collaborations expanded the reach our program and opportunities created from grants made in the previous two years.



Touring our lab in Hanover, United States with our digital inclusion charity, Building STEPS

New digital inclusion investments in 2022

Ciena teamed up with iSisters Technology Mentoring, an Ottawa-based charity helping women gain technology and career-ready skills. With Ciena’s support, iSisters can expand their technical training programs for Indigenous women and youth while offering programming in Indigenous languages for the first time. iSisters was nominated by Ciena’s Women at Ciena employee resource group in Canada and offers volunteer opportunities with its members.



Ciena has collaborated with WeEMBRACE, a non-profit organization in Sacramento helping provide comprehensive support to people with different abilities and their families. Ciena’s support will help them offer essential technology tools and other resources to the families in need.



Ciena supports PURE India Trust, a non-governmental organization empowering women and youth with entrepreneurship and skill development and career guidance.



Ciena is supporting Asociación Conciencia, a non-profit organization in Argentina aiming to help young people develop soft, digital, entrepreneurial and employability skills through a virtual community. Ciena’s Women at Ciena employee resource group also provides mentorship support, hosts computer skills trainings, and helps to expand Asociación Conciencia’s reach locally.



Digital NEST is a not-for-profit organization that creates sustainable and scalable technology learning centers for Latinx youth to foster economic equality. Ciena has partnered with Digital NEST to help expand its programming to include trainings in web, information technology, digital arts, and soft skills development as well as helping young adults get their first job experiences. Ciena’s Latinx employee resource group is supporting Digital NEST through various volunteer opportunities.



After the conflict in Ukraine began in early 2022, the University of Toronto’s Department of Computer Science created a program for displaced students Ukrainian who were studying Computer Science. Ciena helped sponsor two students from Ukraine so they could attend the Department of Computer Science’s program and continue their studies.



Read more about our digital inclusion collaborations [here](#).

Ciena Solutions Challenge

One signature initiative of our Digital Inclusion program is the [Ciena Solutions Challenge](#) in partnership with [Digital Promise](#). The Ciena Solutions Challenge engages middle and high school students in a STEM-based challenge to address global problems identified in the [17 Sustainable Development Goals](#) that impact them and their communities. Students submit their ideas and a committee of Ciena volunteers selects projects to receive a Ciena Solutions Challenge Sustainability Award. The \$2,500 award enables the schools to purchase technology, equipment, and other resources that will help them bring their projects to life. At the end of each school year, Digital Promise hosts a virtual YouthMADE Festival to celebrate the creativity and innovation demonstrated by our Ciena Solutions Challenge participants. Since launching the challenge in 2021, more than 2,000 students and 240 teachers from schools and youth organizations across 48 countries have engaged with the program.

In addition to the Ciena Solutions Challenge, we launched the Ciena Solutions Challenge Model Schools program in 2021 to support three high schools in Ottawa, Canada, and in 2022 we announced the funding of an additional three middle and high schools in the U.S. in Atlanta, Georgia. These schools received funding to provide STEM-related resources, including digital fabrication, coding, robotics, and production equipment, to further support students throughout these schools. Read more about the impact of the Ciena Solutions Challenge [here](#).



Student participating in the Ciena Solutions Challenge

Responsible supply chain

It is important to us that our suppliers align to our values and exhibit socially responsible and ethical behaviors throughout the value chain. Our Supplier Code of Conduct outlines the behaviors and expectations we expect from our suppliers across social, labor, ethical, and environmental topics. In addition, we remain committed to the [Responsible Business Alliance's \(RBA\) Code of Conduct](#) and hold our suppliers accountable to these same standards. Our Global Supply Chain Leader manages our supply chain and procurement practices.

Key performance metrics

All data as of October 31, 2022. Dollar amounts are in millions of dollars USD.

KPI	2022	2021
Number of suppliers	9499	8783
Number of diverse suppliers	1,033	1,045
Spend with diverse suppliers	\$94.6M	\$55.3M

Supplier onboarding, assessment, and monitoring

When onboarding a new supplier, we assess them based on financial, cybersecurity, and corruption risks and conduct a review to ensure they are not included on any external blacklists. All suppliers must sign a non-disclosure agreement (NDA) and be compliant with the RBA Code of Conduct and our Supplier Guidelines. We reassess our suppliers every year on risk and work with a third party for continuous media monitoring throughout the year to remain alerted to adverse events.

As part of our Responsible Business Alliance membership, we have access to all supplier audits that provide further information on whether our suppliers working conditions are safe, that employees are treated with dignity and respect, and that business operations are environmentally responsible and ethical.

Supplier sustainability assessment

To assess the sustainability ratings of our suppliers, we engage the independent sustainability ratings company, EcoVadis, to provide supplier scorecards on the procurement, ethics, labor, human rights, and environmental performance of the company. We use this assessment to identify the strengths of our suppliers and determine areas of risk. The EcoVadis assessment also helps inform our review of our supply chain strategy.

The suppliers we assess through EcoVadis account for 90% of our supplier spend. Of those suppliers with EcoVadis ratings, 58% have an EcoVadis score within the top 50% of suppliers assessed.

Ciena's supplier EcoVadis scorecard medals		
Medal Status	Overall Score Award	Percentage of Assessed Suppliers
No medal	<50	42
Bronze	50-58	26
Silver	59-69	17
Gold	70-77	11
Platinum	78-100	4

Supplier diversity

Our supplier diversity program ensures we are providing an equal access to a supplier base. In 2022, \$46.9 million USD of our supplier spend was with diverse suppliers, a 17% increase from 2021. Through our RFP process, we invite our suppliers to provide information on the diversity of their operations. Our diverse suppliers include those that are at least 51% owned, or 51% of the shares are owned, by individuals who are:

- Socially or economically disadvantaged individuals (small disadvantaged businesses)
- Women or a group of women (women-owned businesses)
- Veterans (veteran-owned small businesses)
- Disabled veterans (disabled veteran-owned small businesses)
- Minorities (minority-owned businesses)

We also include businesses that are based in geographical areas where our business is located, and where 35% of our people reside, that are owned by one or more U.S. citizens (historically underutilized business zone small business concern).

Human rights

We work with many third-party suppliers and want to ensure that our expectations for safeguarding human rights are clearly communicated and accepted.

Our [Human Rights Policy](#) is guided by international human rights frameworks, standards, and principles encompassed in the [U.N. Universal Declaration of Human Rights](#), including those contained within the [International Bill of Rights](#), the [U.N. International Covenant on Civil and Political Rights](#), the [U.N. International Covenant on Economic, Social and Cultural Rights](#), the [International Labor](#)

[Organizations' eight core conventions](#) and the [International Labor Organization's 1998 Declaration on Fundamental Principles and Rights to Work](#). We also strive to operate in accordance with the [U.N. Guiding Principles on Business and Human Rights](#) when working with fellow employees, suppliers, and business partners. In the U.S., we recognize the principles set out in the key legislation on human rights and the prevention of modern-day slavery and adhere to statutory requirements intended to prevent forced labor in our supply chain.

We seek to work only with suppliers who share and uphold these principles as outlined in our Human Rights policy. The policy is approved and maintained by our Sustainability Leadership Committee.

Conflict minerals

We are committed to sourcing the materials used in our products in an ethical and environmentally responsible manner and expect our suppliers to be as well. Although we do not directly purchase Tantalum, Tin, Tungsten, and Gold (3TG), we want to ensure our suppliers are not purchasing 3TG from sources that directly or indirectly support armed groups in the Democratic Republic of Congo or any other Covered Countries. We work with a third party to conduct a Reasonable Country of Origin Inquiry (RCOI) annually on our suppliers whose components are included into our products. We also require our suppliers to complete and provide a Responsible Minerals Initiative Conflict Minerals Reporting Template (CMRT), which includes questions on supplier engagement with its suppliers and requests a list of smelters and refiners that process the supplier's Necessary 3TG and asks about their due diligence efforts. Based on the RCOI and the CMRT, we may perform due diligence measures if we believe a supplier to have obtained 3TG from Covered Countries or are not from recycled or scrap sources.

Our Conflict Minerals report filed with the SEC for our most recent period of review can be found [here](#).

Governance

Governance and ethics

Ciena's Board of Directors and management believe that good corporate governance and high ethical standards are essential to the company's long-term success. Our corporate governance practices consist of policies and procedures that promote independent and diverse voices. At Ciena, we want to win in our markets, but only when doing so the right way. Our Business Code of Conduct outlines how we can work together to drive a culture of integrity and sets forth the behaviors and ethical standards by which we hold ourselves, our people, and our business partners accountable.

In addition, Ciena's Board of Directors abides by our [Code of Ethics for Directors](#) and operates in alignment with our [Principles of Corporate Governance](#). Both documents guide board composition, procedures, responsibilities, and our commitment to acting in the best interest of our shareholders. The board regularly reviews its governance policies and procedures to ensure we are embracing best practices and abiding by our stakeholder expectations. Operational management of our governance and ethics programs are with our SVP and General Counsel.

Board leadership structure

During 2022, Ciena's Board of Directors comprises ten individuals, five of whom are diverse and three of whom are women. The board has three committees for audits, compensation, and governance and nominations, two of which are chaired by women. The [Audit Committee](#) is responsible for assessing and monitoring the quality and integrity of the company's accounting systems and practices; financial information and reporting practices; potential financial, legal, and regulatory exposures; systems of internal controls; internal audit function; and the independent audit process. This committee also oversees our cybersecurity, data privacy, and information technology-related controls and receives regular, quarterly updates from our Chief Information Security Officer.



Two members of our Executive Leadership team with Ciena's CEO Gary Smith

The **Compensation Committee** oversees the company's compensation strategy and policy, administering the company's compensation plans, reviewing the performance of and determining the compensation for the Executive Chair of the Board and the Chief Executive Officer, determining the compensation of the other members of the senior executive team, and reviewing the compensation of members of the board.

Our **Governance and Nominations Committee** on Ciena's Board of Directors oversees corporate governance policies, practices, and procedures by recommending policies on corporate conduct and ethics, identifying individuals qualified to be members of the board, recommending director nominees for each annual meeting of the company's stockholders, and nominating candidates to fill vacancies on the board. The committee also provides oversight and direction for our compliance and ethics program and stockholder engagement related to our sustainability practices.

Key performance metrics

All data as of October 31, 2022

KPI	2022	2021
Code of Business Conduct and Ethics Training completion rate	99%	100%
Percentage of our people who believe Ciena's leadership team demonstrates a commitment to conducting business in an ethical manner	95%	93%
Percentage of our board of directors who are women	30%	30%
Percentage of our board of directors who are ethnically diverse	20%	20%
Political donations	\$0	\$0

Ciena's good governance practices

- Separation of CEO and Chairman roles
- Whistleblower program
- Lead Independent Director
- 50% diverse board members
- Compensation limits on non-employee board directors
- Minimum ownership requirements for directors and officers
- Eight independent directors
- Annually update Code of Ethics for directors, Principles of Corporate Governance, and Board Committee Charters

Code of conduct training

In 2022, Ciena's Board of Directors approved an updated Code of Business Conduct and Ethics that focused on working together to promote and sustain our culture of integrity. Last year we also rolled out a new compliance mobile app and updated our training, improving accessibility features and providing practical advice so that our people better understand the concepts and behaviors expected of them.

Every year our people must complete our mandatory Code of Business Conduct and Ethics training, which in 2022 focused on conflicts of interest, respectful communication, fair competition, and preventing fraud. In 2022, 99% of our people undertook the training, surpassing our goal of achieving 98% participation. In 2023, we are continuing to enhance our training, focusing on opportunities to tailor for risk- and role-based applications, so that the content is clear and engaging for our people.

Board diversity

At Ciena, we believe that having diverse voices on our board of directors leads to better business outcomes. In 2022, we had 30% female representation on our board of directors, and 50% was either female or diverse. Our Principles of Corporate Governance state that our directors should have complementary and diverse skills, experiences, and backgrounds, including diversity with respect to gender, ethnicity, nationality, and age.

Compliance and Ethics program

We continuously improve our Corporate Compliance and Ethics program to ensure alignment with emerging areas of risk for our business, government, and legal requirements, and the lessons learned in our own business operations. Executives and managers

have a responsibility to make sure that we all live up to our core values and promote a workplace that promotes doing the right thing. Our executive leadership plays an active role in setting the right tone at the top; and in recent years, we have focused our efforts on management development programming and creative outreach initiatives to ensure our robust compliance culture permeates all levels of the organization.

We measure the impact of our program through employee surveys such as our anonymous Culture of Integrity survey. Through tools like this, we gain a better understanding of employee perceptions of important topics, including:

- 'Tone at the top', 'mood in the middle', and 'buzz at the bottom'
- Comfort speaking up
- Openness of communication
- Managing with integrity
- Organizational justice

Culture of Integrity Survey

In 2022, more than 5,000, or 70%, of our people voluntarily completed our Culture of Integrity survey, giving us insight into the effectiveness of our compliance and ethics program and how we can better support our colleagues. Our scores show that our people view Ciena's culture of integrity favorably, with 95% believing that Ciena's leadership team, by their actions, tone, and messaging, demonstrate a commitment to conducting business in an ethical manner.

95% of people believe that Ciena's leadership team demonstrates a commitment to conducting business ethically

Whistleblower program

We are committed to a workplace where employees can raise concerns and report violations without fear of harassment, discrimination, or retaliation. Our whistleblower program allows our people to report concerns anonymously via an independent third-party reporting service. Our Audit Committee reviews reports on a quarterly basis or as circumstances may otherwise necessitate.

Updated governance documents and policies

Our board reviews our key governance documents and committee charters on an annual basis. In 2022, we updated our Principles of Corporate Governance to include mechanisms to prevent anticompetitive behaviors and interlocking directorates, as well as provided board oversight of enterprise-level ESG goals. In 2022, we also updated our bylaws to adopt new, universal proxy rules, updated our stockholder nomination procedures, and adopted gender-neutral language throughout our documents.

Additional policy updates in 2022 included our Insider Trading Policy and internal 10b5-1 trading plan policy to align to best practices. We also adopted a new Conflict of Interest Policy and created a Conflict of Interest intake tool for individuals to use when assessing if a situation qualifies as a conflict of interest that would require disclosure and approval. We also released a new Human Rights Policy, highlighting our respect for human rights in our operations and in our supply chain, and adherence to internationally recognized codes and principles of human rights.

Political donations and lobbying

Ciena's Code of Business Conduct outlines our policy and guidelines regarding political activities and donations. Ciena does not make contributions to political candidates or parties.

Privacy and cybersecurity

The technology and communications sectors are frequently targeted industries for cyber attacks and e-crimes. Our employees and customers want to know that their information and our products are safe and secure from cybersecurity threats. Ciena's Privacy Policy outlines how we collect, manage, and protect personal information. Our Information Security Policy defines the process for securing the Ciena computing environment. Cybersecurity is managed by our Vice President, Chief Information Security Officer, who reports directly to our Chief Financial Officer, and our Senior Vice President and General Counsel manages privacy. The Audit Committee of our Board of Directors oversees all cybersecurity, data privacy, and information technology controls and policies and receives regular updates on these matters.

Security risk management

Our Cybersecurity team plays a critical role in securing our products and solutions, as well as Ciena's network infrastructure to shield customer information from cyberattacks. Ciena's cybersecurity strategy comprises three principal areas of focus:

- Doing the right things and doing them well: Understand the regulatory landscape and the needs of our customers while having

the right framework and controls in place to assess and manage security risks.

- Protecting the company from current and evolving threats: Deploy and monitor security controls and identify and remedy exposures and threats.
- Build trust in our products: Develop products with integrity while meeting and exceeding customer expectations and regulatory requirements.

To help our teams identify cyberthreats and risks, we have created a Cyberthreat Landscape to assess the likelihood of an occurrence with the impact of the threat activity. The landscape maps out diverse types of cyberthreats with the likelihood of the threat occurring based on the level of impact if the cyberthreat occurs. We also maintain an information security risk insurance policy as part of our risk management efforts.

Data privacy

Our Data Privacy program is aligned with the National Institute of Standards and Technology (NIST) privacy framework. It is also updated as new laws and regulations are passed such as the California Consumer Privacy Act (CCPA).

Over the last year, we have enhanced our Data Privacy program with additional subject matter expertise and updates to our privacy policies. We have focused on supply chain security by setting contractual terms with our key vendors and suppliers to hold them accountable if there is a data breach.

We have a dedicated privacy inbox for individuals to contact Ciena in case of a complaint or data subject access request. We also have a centralized location for disclosing a potential internal loss or compromise.

Cybersecurity and privacy training

To ensure that our people are vigilant and ready to mitigate any cybersecurity and privacy incidents, we conduct employee security awareness training throughout the year including regular phishing detection exercises and awareness initiatives. We provide virtual trainings through our Workday learning platform and have created a playbook for our people to understand how best to manage incidents. There also is a cross-functional extended incident response team that meets regularly and conducts tabletop exercises.

Sustainability Reporting Index

This report was prepared in accordance with the core reporting requirements of the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD). Our Sustainability Reporting Index lists where you can find information related to each indicator, including this sustainability report, [Ciena's 2022 Annual Report](#), [Ciena's 2023 Proxy Statement](#), or [Ciena's 2022 CDP Submission](#).

Global Reporting Index (GRI)		
Disclosure	Disclosure Title	Response
2-1	Organizational details	Ciena Corporation Ciena's 2022 Annual Report About Ciena
2-2	Entities included in the organization's sustainability reporting	About this report
2-3	Reporting period, frequency and contact point	About this report
2-4	Restatements of information	Climate change
2-5	External assurance	Ciena has not received external assurance for its 2022 Sustainability Report. Our Carbon Disclosure Project submission is assured by a third party.
2-6	Activities, value chain and other business relationships	About Ciena Stakeholder Engagement Responsible supply chain
2-7	Employees	About Ciena Talent management Diversity, inclusion, and belonging
2-8	Workers who are not employees	Of Ciena's 8,079 employees in 2022, 112 were temporary, contract, or interns
2-9	Governance structure and composition	Ciena's 2023 Proxy Statement Sustainability management at Ciena Governance and ethics

Global Reporting Index (GRI)		
Disclosure	Disclosure Title	Response
2-10	Nomination and selection of highest governance body	Ciena's 2023 Proxy Statement Governance and ethics
2-11	Chair of the highest governance body	Ciena's 2023 Proxy Statement
2-12	Role of the highest governance body in overseeing the management of impacts	Ciena's 2023 Proxy Statement Sustainability management at Ciena Governance and ethics
2-13	Delegation of responsibility for managing impacts	Sustainability management at Ciena Governance and ethics
2-14	Role of the highest governance body in sustainability reporting	Sustainability management at Ciena Governance and ethics
2-15	Conflicts of interest	Ciena's 2023 Proxy Statement Governance and ethics
2-16	Communication of critical concerns	Ciena's 2023 Proxy Statement
2-17	Collective knowledge of the highest governance body	Sustainability management at Ciena Governance and ethics
2-18	Evaluation of the performance of the highest governance body	Ciena's 2023 Proxy Statement
2-19	Remuneration policies	Ciena's 2023 Proxy Statement
2-20	Process to determine remuneration	Ciena's 2023 Proxy Statement Governance and ethics
2-21	Annual total compensation ratio	Ciena's 2023 Proxy Statement
2-22	Statement on sustainable development strategy	Letter from our President and CEO Sustainability approach

Global Reporting Index (GRI)		
Disclosure	Disclosure Title	Response
2-23	Policy commitments	Ciena's 2022 Annual Report Diversity, inclusion, and belonging Responsible supply chain Governance and ethics
2-24	Embedding policy commitments	Ciena's 2022 Annual Report Responsible supply chain Governance and ethics
2-25	Processes to remediate negative impacts	Ciena's 2022 Annual Report
2-26	Mechanisms for seeking advice and raising concerns	Ciena's 2023 Proxy Statement Governance and ethics Privacy and cybersecurity
2-27	Compliance with laws and regulations	Ciena's 2022 Annual Report
2-28	Memberships associations	Responsible Business Alliance Responsible Minerals Initiative Telecommunications Industry Association National Minority Supplier Development Council (NMSDC) Women's Business Enterprise National Council (WBENC) Canadian Aboriginal and Minority Supplier Council (CAMSC)
2-29	Approach to stakeholder engagement	Stakeholder engagement
2-30	Collective bargaining agreements	Less than 1% of Ciena's employees are covered by collective bargaining agreements.
3-1	Process to determine material topics	Our material topics
3-2	List of material topics	Our material topics
3-3	Management of material topics	Our material topics Sustainability management at Ciena Information on management of material topics is included throughout the report

Global Reporting Index (GRI)

Disclosure	Disclosure Title	Response
201-1	Direct economic value generated and distributed	Ciena's 2022 Annual Report
201-2	Financial implications and other risks and opportunities due to climate change	Ciena's 2022 Annual Report
201-3	Defined benefit plan obligations and other retirement plans	Ciena's 2022 Annual Report Wellbeing
201-4	Financial assistance received from government	Ciena's 2022 Annual Report
202-2	Proportion of senior management hired from the local community	Ciena's 2023 Proxy Statement
203-1	Infrastructure investments and services supported	Ciena's 2022 Annual Report Product and service sustainability Community investment Digital inclusion
203-2	Significant indirect economic impacts	Community investment Digital inclusion Responsible supply chain
204-1	Proportion of spending on local suppliers	Responsible supply chain
205-1	Operations assessed for risks related to corruption	Ciena's 2022 Annual Report Governance and ethics
205-2	Communication and training about anti-corruption policies and procedures	Ciena's 2022 Annual Report Governance and ethics
205-3	Confirmed incidents of corruption and action taken	There were no confirmed incidents of corruption in 2022. Ciena's 2022 Annual Report Governance and ethics
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Ciena's 2022 Annual Report
207-1	Approach to tax	Ciena's 2022 Annual Report

Global Reporting Index (GRI)		
Disclosure	Disclosure Title	Response
207-2	Tax governance, control, and risk management	Ciena's 2022 Annual Report
207-3	Stakeholder engagement and management of concerns related to tax	Ciena's 2022 Annual Report
207-4	Country-by-country reporting	Ciena's 2022 Annual Report
301-1	Materials used by weight and volume	Waste and water management
301-2	Recycled input materials used	Product and service sustainability
301-3	Reclaimed products and their packaging materials	Product and service sustainability Waste and water management
302-1	Energy consumption within the organization	Climate change
302-2	Energy consumption outside of the organization	Climate change
302-3	Energy intensity	Climate change
302-4	Reduction on energy consumption	Climate change
302-5	Reductions in energy requirements of products and services	Climate change Product and service sustainability
303-1	Interactions with water as a shared resource	Waste and water management
303-2	Management of water discharge-related impacts	Waste and water management
303-3	Water withdrawal	Waste and water management
303-4	Water discharge	Waste and water management
303-5	Water consumption	Waste and water management
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Waste and water management
304-2	Significant impacts of activities, products and services on biodiversity	Climate change

Global Reporting Index (GRI)

Disclosure	Disclosure Title	Response
305-1	Direct (Scope 1) GHG emissions	Climate change
305-2	Energy indirect (Scope 2) GHG emissions	Climate change
305-3	Other indirect (Scope 3) GHG emissions	Climate change
305-4	GHG emissions intensity	Climate change
305-5	Reduction of GHG emissions	Climate change
305-6	Emissions of ozone-depleting substances (ODS)	Climate change
306-1	Waste generation and significant waste-related impacts	Waste and water management
306-2	Management of significant waste-related impacts	Waste and water management
306-3	Waste generated	Waste and water management
306-4	Waste diverted from disposal	Waste and water management
306-5	Waste directed to disposal	Waste and water management
308-1	New suppliers that were screened using environmental criteria	Responsible supply chain
308-2	Negative environmental impacts in the supply chain and actions taken	Responsible supply chain
401-1	New employee hires and turnover	Talent management
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Wellbeing
401-3	Parental leave	Wellbeing
403-1	Occupational health and safety management system	Employee health and safety
403-2	Hazard identification, risk assessment, and incident investigation	Employee health and safety
403-3	Occupational health services	Employee health and safety Wellbeing

Global Reporting Index (GRI)		
Disclosure	Disclosure Title	Response
403-4	Worker participation, consultation, and communication on occupational health and safety	Employee health and safety
403-5	Worker training on occupational health and safety	Employee health and safety
403-6	Promotion of worker health	Employee health and safety Wellbeing
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Employee health and safety
403-8	Workers covered by an occupational health and safety management system	Employee health and safety
403-9	Work-related injuries	Employee health and safety
403-10	Work-related ill health	Employee health and safety
404-2	Programs for upgrading employee skills and transition assistance programs	Talent management
404-3	Percentage of employees receiving regular performance and career development reviews	Our people receive career development reviews on an annual basis.
405-1	Diversity of governance bodies and employees	Diversity, inclusion, and belonging Talent management Governance and ethics
405-2	Ratio of basic salary and remuneration of women to men	Diversity, inclusion, and belonging Talent management
406-1	Incidents of discrimination and corrective actions taken	There were no incidents of discrimination in 2022.
408-1	Operations and suppliers at significant risk for incidents of child labor	Responsible supply chain
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Responsible supply chain
411-1	Incidents of violations involving rights of indigenous peoples	There were no incidents of violations involving rights of indigenous peoples in 2022.

Global Reporting Index (GRI)		
Disclosure	Disclosure Title	Response
413-1	Operations with local community engagement, impact assessments, and development programs	Community investment Digital inclusion
413-2	Operations with significant actual and potential negative impacts on local communities	Community investment Digital inclusion Climate change Waste and water management
414-1	New suppliers that were screened using social criteria	Responsible supply chain
414-2	Negative social impacts in the supply chain and actions taken	Responsible supply chain
415-1	Political contributions	Governance and ethics
416-1	Assessment of the health and safety impacts of product and service categories	Product and service sustainability
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Product and service sustainability
417-1	Requirements for product and service information and labeling	Ciena's 2022 Annual Report
417-2	Incidents of non-compliance concerning product and service information and labeling	We also had no legal and regulatory fines, settlements, and enforcement actions during 2022 and 2021 associated with false, deceptive, or unfair marketing, labeling, and advertising
417-3	Incidents of non-compliance concerning marketing communications	We also had no legal and regulatory fines, settlements, and enforcement actions during 2022 and 2021 associated with false, deceptive, or unfair marketing, labeling, and advertising
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Privacy and cybersecurity

Sustainability Accounting Standards Board (SASB)		
SASB Code	Accounting metric	Response
TC-HW-230a.1	Product security: description of approach to identifying and addressing data security risks and products	Privacy and cybersecurity
TC-HW-330a.1	Employee Diversity & Inclusion: Percentage of gender and racial/ethnic group representation for management, technical staff, and all other employees	Diversity, inclusion, and belonging
TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Not applicable to the Ciena Portfolio
TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	Not applicable to the Ciena Portfolio
TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR criteria	Not applicable to the Ciena Portfolio
TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	Waste and water management
TC-HW-430a.1	Supply chain management: Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP) or equivalent, by (s) all facilities and (b) high-risk facilities	All Ciena's Tier 1 suppliers are audited by the Responsible Business Alliance Responsible supply chain
TC-HW-430a.2	Supply chain management: Tier 1 suppliers' (1) non-conformance rate with the RBA Validated Audit Process (VAP) or equivalent, and (2) associated corrective action rate for (a) priority non-conformances and (b) other non-conformances	All Ciena's Tier 1 suppliers are audited by the Responsible Business Alliance Responsible supply chain
TC-HW-440a.1	Materials sourcing: Description of the management of risks associated with the use of critical materials	Responsible supply chain
TC-HW-000.A	Number of units produced by product category	Not publicly shared data
TC-HW-000.B	Area of manufacturing facilities	We operate with an outsourced manufacturing model
TC-HW-000.C	Percentage of production from owned facilities	We operate with an outsourced manufacturing model

Task Force on Climate-related Financial Disclosures (TCFD)

Core Element	Disclosures	Response
Governance	<ul style="list-style-type: none"> a. Describe the board's oversight of climate-related risks and opportunities. b. Describe management's role in assessing and managing climate-related risks and opportunities. 	Ciena's 2023 Proxy Statement Sustainability management at Ciena Governance and ethics Ciena's 2022 CDP Submission
Strategy	<ul style="list-style-type: none"> a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including 2°C or lower scenario. 	Ciena's 2022 Annual Report Climate change Ciena's 2022 CDP Submission
Risk Management	<ul style="list-style-type: none"> a. Describe the organization's processes for identifying and assessing climate-related risks. b. Describe the organization's processes for managing climate-related risks. c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management. 	Ciena's 2022 Annual Report Ciena's 2022 CDP Submission
Metrics and Targets	<ul style="list-style-type: none"> a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. 	Ciena's 2022 Annual Report Climate change Ciena's 2022 CDP Submission

Forward-Looking Statements

This report contains forward-looking statements regarding future events that involve risks and uncertainties. Statements in this report other than statements of historical facts could be deemed forward-looking statements. These statements are based on current expectations, estimates, forecasts, and projections available to us as of the date hereof or represent the current beliefs or the assumptions of our management. Words such as “expects,” “anticipates,” “targets,” “goals,” “projects,” “intends,” “plans,” “believes,” “seeks,” “estimates,” “could,” “continues,” “endeavors,” “strives,” “may,” variations of such words, and similar expressions are intended to identify such forward-looking statements. In addition, statements that refer to (i) our goals, targets, and commitments; (ii) our strategy, business plans and initiatives; (iii) our assumptions and expectations; (iv) the future scope of our sustainability reporting, programming or its impact; and (v) sustainability risks and opportunities are forward-looking. Readers are cautioned that these forward-looking statements are only predictions and are subject to risks, uncertainties, and assumptions that are difficult to predict, including those identified in our most recent filings with the Securities and Exchange Commission on Form 10-K and Form 10Q. Ciena’s actual results or performance may differ materially from these forward-looking statements as a result of these and other risks. Forward-looking statements speak only as of the date they are made, and we do not undertake any obligation to update any forward-looking statement.