

Corporate Citizenship and Sustainability Report 2019



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About this Report

This document, Juniper Networks' sixth full Corporate Citizenship and Sustainability (CCS) Report, is a summary of the company's environmental, social and governance activities, impacts, and performance. The scope of this report includes the company's business operations and facilities (owned or maintained) during the reporting period, January 1, 2019 through December 31, 2019. Included are links to useful information and publicly available resources related to our financial, corporate governance, social and environmental policies and performance. Juniper Networks reports on CCS activity on an annual cycle, with the next report covering 2020 performance.

Report Availability and Contact

This report is available in its entirety on our website: <https://www.juniper.net/sustainability>. We welcome your questions, comments and feedback at corp-citizenship-sustainability@juniper.net.

External Alignment

At Juniper, we recognize the importance of aligning our corporate social responsibility reporting to reputable, globally recognized frameworks to ensure we meet the expectations of our customers, stockholders, employees and the community. The topics in this report were recognized by our stakeholders as priorities through a third-party materiality assessment that aligns with topics and materiality guidelines from the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI). Beginning with this report, we are working toward achieving greater alignment with SASB, and focusing our 2019 reporting alignment on industry-specific SASB topics. See our SASB index on page 60 for more information. This Report has been prepared in accordance with the GRI Standards: Core option, which begins on page 54.

Through our annual climate change and water reporting with CDP, our environmental disclosures are aligned with the Taskforce for Climate-related Financial Disclosure (TCFD) recommendations. Topics included in this report intersect with and reference our environmental management systems, and climate-related risks and opportunities to our business, however this report is not meant to fully-align with TCFD. An archive of our annual CDP climate change and water disclosures can be accessed on the [CDP online platform](#). This report has not been externally assured.



Letter From the CEO



As companies, governments and people globally respond to the COVID-19 pandemic and its economic disruptions – an unprecedented challenge of our time – Juniper Networks remains steadfastly committed to serving our customers and our communities and leveraging our skills and strengths to help those in need.

Juniper exists to solve the world's most difficult problems in networking. We do this by remaining true to our values of being bold, building trust and delivering excellence. These values are exemplified in actions to our communities, customers and employees through fostering a diverse and inclusive workforce, driving sustainable operations and connecting communities through technology.

We have always valued our alignment within the frameworks and expectations of our most important stakeholders – our customers, investors, employees,

partners and communities. We are proud to share the work we are doing in our corporate citizenship and sustainability programs and to demonstrate this alignment in concrete ways. We leveraged the Sustainability Accounting Standards Board (SASB) guidelines in our 2018 materiality assessment and now we are indexing those standards within our 2019 report and continue to work toward full alignment with SASB as a valuable framework. We've also shared critical information on our climate impacts in line with the Taskforce on Climate-Related Financial Disclosure (TCFD) through our CDP disclosures, and for which we have been recognized as an industry leader. Finally, we continue our longstanding alignment with the Global Reporting Initiative (GRI) standards in both our materiality assessments and public reporting.

Our Junivators around the world live and work every day with the highest integrity, building trust with all of our stakeholders. We're committed to being bold and transparent in our efforts and in sharing our performance. Our commitment to strong governance and ethics extends from within our organization throughout our supply chain.

We take our role as stewards of the environment seriously and it shows up in a number of ways. From our product design and packaging, to our operations, we're committed to delivering excellence while mitigating our environmental impact. Our ongoing commitment to reducing materials use and converting ocean-bound plastics into useful packaging is saving nearly 18,000 pounds of virgin paper and 24,000 pounds of virgin plastic each year. We continue to focus on climate change. We are investing in onsite energy generation and energy purchase from renewable and

lower carbon sources. We've also expanded our Active Commute Rewards program into India and Amsterdam, which encourages more of our colleagues to stay active, reduces congestion in our communities and lowers our greenhouse gas emissions.

In 2019, we continued our commitment to collecting and publishing our diversity data to keep us accountable for building inclusive workplace communities. While our data from last year shows us there is more work to do, we are confident that we are moving in the right direction. We're focused on operationalizing our principles of inclusivity and empowering our people managers to increase employees' overall sense of belonging.

We recognize our opportunity to make bold positive impacts in communities around the world by executing on our mission. In 2019, we launched our partnership with Shared_Studios, a remarkable platform and opportunity to bring together Juniper's vision of connecting humanity and technology around the world. In Orohalli, India, we provide career-training and STEM education to the community, helping to build a future for the citizens of Digital India.

These are but a few examples of the ways in which we demonstrate our commitment to Juniper's Values and our leadership in Corporate Citizenship. I know you will find more proof-points, stories and inspiration in the pages of this report and I invite you to join us on this journey.

Thank you,

Rami Rahim

Company Profile and Vision

Company Profile

At Juniper, we're committed to building more than a network. We believe in constantly challenging convention as a way of realizing the full potential of employees and our customers.

We empower our global customers to be more agile, secure, cost-effective and efficient by designing, developing and selling products and services that support high-performance network technology. We sell our products, which include network hardware and service offerings across routing, switching and security, in more than 150 countries spanning the Americas, Europe, Asia Pacific, the Middle East and Africa.

Our products and services support a variety of customers who view best-in-class network technology as critical to their success. These customers include global service providers, cloud environments, enterprise companies, governments, healthcare and education institutions, and research and public sector organizations. In addition to our hardware products, we offer related services such as technical support, education and training programs, and various other professional services.

Juniper at a Glance

Founded	February 1996
NYSE	JNPR
CEO	Rami Rahim
Headquarters	Sunnyvale, California
Employees	9,419 (Dec. 31, 2019)
Offices	109 offices in 47 countries (2019)
Net Revenue	USD \$4.45 billion (2019)
R&D Investment	USD \$956 million (2019)

Awards and Recognition

- + [2019 CRN 100 People You Don't Know But Should](#)
- + [Juniper Recognized for Excellence in Energy Management](#)
- + [Forbes' List of America's Best Midsize Employers 2019](#)
- + [CRN 2019 Partner Program Guide: 5-Star Networking and Unified Communications Vendors](#)
- + [CRN 2019 Security 100 List](#)
- + [CDP Supplier Engagement Leader](#)
- + [The World's Most Admired Companies](#)
- + [The Just 100](#)



Our Vision

We exist to solve the world’s most difficult networking problems. New technologies such as IoT, big data, and multicloud are introducing new levels of complexity to the business world. And complexity is on the wrong side of progress.

We bring simplicity to networking with products, solutions and services that connect the world. Simple is our obsession. Simple is powerful. And simple always starts with engineering.

A company of innovators, we believe that creating simplicity through engineering is the highest form of innovation. From our first release, the groundbreaking Juniper Networks® M40 router, to today’s end-to-end advancements in network security, automation, performance and scale, our drive to move beyond the constraints of complexity has expanded the reach of networks everywhere.

Our Values: The Juniper Way

At Juniper, solving complex problems with groundbreaking solutions comes naturally. We believe that the network is the single greatest vehicle for knowledge, understanding, and human advancement the world has ever known. The task of delivering a network in the digital transformation era relies on the creativity and commitment of our people. More than a set of shared values, the Juniper Way reflects the company’s commitment to inspire every Juniper employee to do their best work—their life’s work.

We put egos aside to solve the most pressing problems facing our company, our society and our planet. We don’t just look inward; we focus on the vision and outcomes of the organization as a whole. In doing this, we’re reminded to be bold, build trust and consistently deliver excellence – that’s the Juniper Way.



Environmental, Social and Governance Management

Corporate Citizenship and Sustainability

Juniper is committed to demonstrating strong corporate citizenship in our own practices, and to influencing the decisions of those in our worldwide supply chain. To drive this commitment, we've adopted a framework of practices that emphasize good corporate governance, environmental sustainability and social responsibility, and we advocate the advancement of those practices to our partners in all aspects of our business.

In 2018, we restructured our Corporate Citizenship and Sustainability (CCS) strategy and disclosure to align with our most recent materiality assessment. In 2019, we continued to support these material topics through our programs, goals and activities. Our CCS strategy is organized into three pillars that define our priorities and direct our efforts to where they can have the greatest impact. Each of these pillars – Corporate Governance, Environmental Sustainability, and People and Communities – include issues that are most material to our business and to our stakeholders. Within each respective section of the report, we discuss how our management systems enable valuable outcomes for these material topics.

Three Pillars of Our Corporate Citizenship and Sustainability Program

<p>Corporate Governance</p> <p>Business Ethics and Anti-Corruption</p> <p>Product Responsibility</p> <ul style="list-style-type: none"> • Customer Satisfaction • Data Privacy and Product Security • Product Safety and Compliance <p>Supply Chain Management</p> <ul style="list-style-type: none"> • Supply Chain Resilience • Supply Chain Security 	<p>Environmental Sustainability</p> <p>Operational Footprint</p> <ul style="list-style-type: none"> • Energy Management • Greenhouse Gas Emissions • Water and Wastewater Management <p>Product Sustainability</p> <ul style="list-style-type: none"> • Sustainable Design • Lifecycle Management 	<p>People and Communities</p> <p>Our Employees</p> <ul style="list-style-type: none"> • Inclusion and Diversity • Employee Engagement • Employee Wellness <p>Our Partners in the Value Chain</p> <ul style="list-style-type: none"> • Labor Practices and Human Rights • Responsible Materials Sourcing <p>Our Communities</p> <ul style="list-style-type: none"> • Community Engagement
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“As the leading networking supplier to research and education institutions, telecom and cloud companies, we keep the world connected which is more important now than ever.”

Mike Marcellin
SVP, Chief Marketing Officer

Governance Structure and Culture

Integrity is in our DNA, and it's our culture to do the right thing and be accountable. We believe that the only way we can meaningfully address the world's most complex environmental, social and governance (ESG) issues, is to ensure our company leadership is engaged, responsible and accountable.

Juniper's ESG initiatives and priorities are overseen by our chief executive officer (CEO), who receives regular updates from members of our Corporate Social Responsibility (CSR) executive committee. Led by the legal department, the committee also includes senior executives representing our human resources, marketing, sales, engineering, manufacturing operations, real estate and workplace services, and environmental, health, safety and security departments. The committee directs the vision and strategy of our ESG efforts, manages those issues across the organization and ensures alignment with corporate priorities.

Our Integrity and Compliance program is overseen by the Audit Committee of our Board of Directors. They receive updates from executive champions and work with management on ESG-related issues that have the potential to create enterprise-level risks for the company or could otherwise have a significant impact on Juniper's business activities and performance. They are also consulted when preparing regulatory

disclosures, such as our annual conflict minerals report, our human trafficking statement, and ESG initiatives highlighted in our financial and annual reports. The Audit Committee also reports to the full board on ESG-related issues as needed. The Nominating and Corporate Governance Committee of our Board, which exercises general oversight of corporate governance matters affecting our Board of Directors and its activities, also receives regular updates on the company's ESG activities.

Keeping our leadership engaged in our CCS strategy and activities is a critical component of our strong governance and ensures the success of our ESG vision.

Transparency and Reporting

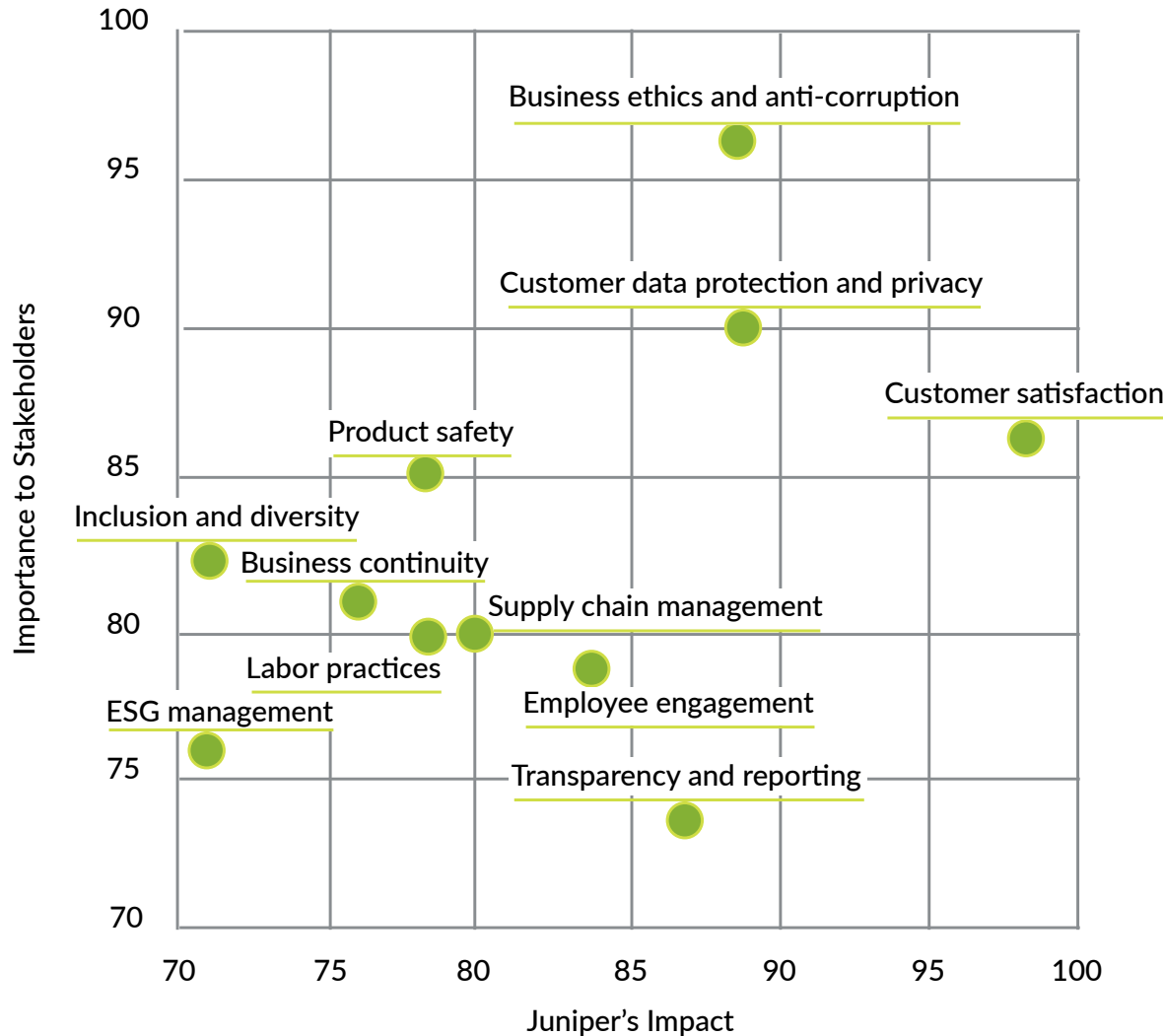
We're committed to providing transparency in all aspects of our business, including our efforts to make a positive impact on society and the environment. To demonstrate this commitment, in 2019 we began publishing our Corporate Citizenship and Sustainability Report on an annual cycle, rather than on our previous two-year cycle. Our intent is to demonstrate our commitment to good environmental, social and governance practices, and to foster a more meaningful dialogue with our stakeholders. We'll continue to ensure the transparency of our sustainability and CSR programs using clear, easily-accessible public disclosures.

Being bold — and not shying away from data when they show that there is more work to be done — is the Juniper Way. Sometimes, being bold means being honest about our starting point. For this reason, we're publishing an [annual diversity update](#) to share our numbers and to set an example for driving change. The data in our 2019 update shows that, while we're making progress, there is much more to be done to improve gender balance among our employees across the globe — particularly in our engineering teams and leadership ranks. We recognize that we have a long way to go, and we're excited about the journey ahead.

Materiality

To ensure that our CCS strategy, programs and disclosure are in line with our stakeholders' needs and expectations, we conduct a materiality assessment every three years. This assessment process helps us identify issues that are most important to our internal and external stakeholders and most salient to our business. Material topics are defined as issues that have a direct or indirect impact on our ability to create, preserve or erode economic, environmental and social value for the company, stakeholders and society at large.

Juniper's Material Topics



Materiality Assessment Process

We take guidance from the Sustainability Accounting Standards Board (SASB) for material assessment and disclosure of ESG topics. Our process has three key steps:

- + The selection of potentially material topics, in which our team identifies ESG topics and maps them to the materiality categories outlined by SASB. This selection takes into account previous assessment results, the current Global Reporting Initiative (GRI) guidelines, and our industry's ESG landscape.
- + The selection and survey of internal and external stakeholders, who are chosen to represent broad experience, ESG issues and interest groups. Surveys are conducted in an interview style, to gather both qualitative and quantitative feedback on topics that our stakeholders prioritize based on their relative importance and/or their perceived impact.
- + The documentation and analysis of the results—by prioritizing and mapping material and non-material topics. These results are used to set company goals, drive programs, and inform our regular sustainability disclosures.

To the left, we map the results of our 2018 assessment, demonstrated in a scatter graph of the topics' impact and importance. Topics that fall within the top 30% of stakeholder importance are considered material, and will continue to guide our CCS programs, initiatives and disclosure, including the sections covered in this report. Details of these material topics are available in Appendix I of this report.

Stakeholder Communication and Engagement

We value the insights and feedback our stakeholder engagement activities provide and use them to help us assess potential risks and opportunities for our business. As a critical part of these activities, we conduct regular materiality assessments that help us determine the priorities of our key internal and external stakeholders. We also maintain an ongoing and inclusive dialogue with our stakeholders to communicate our progress on identified material ESG topics, as well as other salient issues. The feedback from our stakeholders is used to consistently improve how we manage, refine and respond to these issues in ways that meet their expectations. The table to the right outlines how we engage with our key stakeholders and reveals the concerns that are raised through various channels for engagement.



Primary Stakeholder Groups	Channels for Engagement	Key Topics/Concerns
Customers	Customer surveys; meetings and business reviews; security and corporate social responsibility audits and assessments; codes of conduct compliance	Product innovation and compliance; security; responsible and ethical sourcing; environmental, health and safety; climate change and water security; risk management and business continuity
Employees	Surveys; meetings; internal corporate communication and engagement vehicles	Employee and community engagement; inclusion and diversity; corporate citizenship; wellness and safety; strategy and objectives and key results (OKR)
Shareholders	Annual meetings; quarterly financial results; ESG surveys; shareholder outreach	Financial strategy and metrics; transparency; governance; risk management; inclusion and diversity; climate change; water
Suppliers	CDP Supply Chain initiative; Responsible Business Alliance (RBA); Responsible Minerals Initiative (RMI); code of conduct compliance; audits and assessments; supplier business reviews; supplier forums	Supply chain transparency and compliance; responsible and ethical supply chain; climate change; security; creating shared value; human rights; collaboration; risk management and business continuity
Strategic Partners	Global Partner Conference; surveys; customer request for proposals	Collaboration; partner and customer sustainability requirements
Governments	World Economic Forum; industry organizations; government affairs	Cybersecurity; regulations and standards; competition; responsible and ethical sourcing
Communities and Nonprofits	CDP; Juniper Networks Foundation Fund; nonprofit partnerships	Global and local impacts; climate change; responsible and ethical sourcing; collaboration

Industry Groups and Associations

We're proud of our leadership roles in a number of government and industry organizations, as we find this work essential to ensuring the security of the network that supports vital sectors and resources. Through our memberships with such organizations, Juniper provides key input and expertise for the development of federal, state and international policies.

A full list of the entities we belong to and/or collaborate with is available in Appendix IV—Memberships and Associations.

Political Contributions

Juniper Networks doesn't donate corporate funds to political candidates or political parties, nor do we have an employee-funded political action committee (PAC) that would make such donations.

Public Policy and Advocacy

Issues that threaten the integrity and advancement of the network are of essential importance to Juniper's business and our customers. Therefore, these threats are a focus of our public policy and advocacy work. We work closely with governments in the areas that are crucial to supporting and advancing their networks. In recent years, we've demonstrated thought leadership and expertise in this space, collaborating with the public sector on issues such as:

- + Cybersecurity, supply chain assurance, internet governance and privacy
- + Protecting the freedom of the Internet and the ability of the private sector to innovate
- + The rapidly changing Internet landscape (mobility, cloud computing, 5G)
- + Intellectual property
- + Social and environmental sustainability
- + Educating the next generation of IT leaders
- + Global economy and trade
- + Immigration
- + Tax policy

In 2019, Juniper worked with Congress to pass a law to reinforce federal government acquisition policy in favor of commercial, instead of custom, technology solutions. Commercially-available technology allows the government to acquire networking solutions more quickly and at a lower cost as compared to custom-built solutions. Juniper's expertise and advocacy on behalf of the commercial technology sector helped create a win-win solution for government and industry.



CORPORATE GOVERNANCE



We believe that in order to successfully address complex ESG issues, our company leadership must be informed and accountable. At Juniper, our goal is to improve the world around us, and we believe that honesty, communication and transparency are foundational to our success. To ensure that we're meeting our stakeholders' expectations, we're committed to regularly assessing and reporting on our most material ESG issues. In this section, we discuss our commitment to improving transparency, upholding high ethical standards and maintaining product compliance, safety and customer satisfaction.

Integrity and Compliance

Business Integrity

At Juniper, we are committed to conducting business in an honest and transparent manner as evidenced by our guiding policies, disclosures and the core values defined as [The Juniper Way](#). Our compliance objective is simple: reduce the risk of compliance issues through the implementation of intuitive operating principles and comprehensive policies and disclosures.

We require the highest standards of business and professional conduct – both internally and with those around us, including our customers, partners and suppliers. Interactions with our stakeholders are governed by our [Worldwide Code of Business Conduct](#). The Code of Conduct communicates the expectation that all parties will behave in a responsible, authentic and trustworthy way and will comply with applicable laws and regulations. Beyond policies for our own employees, Juniper also maintains a [Business Partner Code of Conduct](#) for our business partners. We routinely train our employees, suppliers and channel partners on the values and principles outlined by these codes.

Since 2016, our Integrity & Compliance Group (ICG) has measured the impact of employee trainings through the use of an annual anonymous integrity survey. With these surveys, we are able to assess critical attitudes and cultural issues, including trust in senior management, observed misconduct, fear of retaliation and perception of company integrity. In 2019, we expanded the value

of these surveys by conducting focus groups on topics that scored the lowest to help contextualize the responses and inform our approach to remedy. The surveys also provide a yardstick against which we can measure our year-over-year success in isolating and addressing gaps in training. Over time, these surveys have helped us to further enhance our compliance training – including making it more interactive and mobile-friendly – and have helped us improve the accessibility of our company policies and procedures.

Juniper provides regular corporate ethics training to our managers and employees, through online and in-person interactive trainings. In 2019, to ensure our material is delivered most effectively, we rolled out new targeted compliance training based on risk profiles related to location and department. We also created a Manager Toolkit

Training, which optimizes our Code of Conduct trainings by simplifying the messaging and core principles of priority topics, enabling managers to efficiently cascade them to their teams.

Compliance in Practice

Compliance with all local laws and regulations – environmental, social or otherwise – is an integral part of our commitment to conduct our business responsibly. In 2019, there were no significant fines or sanctions for noncompliance with laws and regulations relating to environmental impacts or the provision and use of our products.

To ensure continued compliance, our ICG assesses compliance policies and procedures, mitigates related issues and makes specific recommendations to improve the company's broader enterprise



“At Juniper, integrity underpins all that we do – every day, our employees make the decision to do the right thing and act with boldness, honesty, and virtue. That’s the Juniper Way.”

Brian Martin
SVP, General Counsel and Secretary

risk management ecosystem. Policy development is informed by multiple independent sources, including Amnesty International, the United Nations, the Responsible Business Alliance and the International Labor Organization. Every year, we conduct reviews of our [Worldwide Code of Business Conduct](#) and [Business Partner Code of Conduct](#), taking into account an annual risk assessment that identifies what has changed both inside and outside the business, and making revisions as needed. Other important information about our program is on our [website](#).

A few years ago, Juniper introduced a fraud and anti-corruption data analytics program that examines transactional data in large volumes in an effort to identify anomalies and exceptions that may indicate compliance issues. In 2018, we expanded our brand protection program to include gray market risk analytics, enabling our compliance team to hone their skillset, proactively identify issues and change behaviors at the speed of our business. The use of data analytics has also allowed us to automate trade compliance processes, leading to an increase in on-time orders. In 2019, we improved the data algorithms to fine tune the feedback loop, enabling us to reduce false positives and focus on core materials to investigate. At the same time, we also bolstered our brand protection program, emphasizing remediation for bad actors who violate our sales integrity agreements. This program, and its supporting data analytics tool, has been successful in its goal of reducing violations. These innovations have led to a monumental shift in our operations, further establishing the ICG members as company leaders and elevating the culture of compliance at Juniper.

Product Responsibility and Customer Satisfaction

Delivering excellence is central to our culture. We recognize the importance of creating and delivering products and services in a responsible, sustainable way. From incorporating sustainability into the earliest stages of design, to ensuring stellar customer satisfaction – and protecting the privacy and data of every individual whose life we touch – our vision is to deliver innovative products and services to meet demand while maintaining the highest level of quality and responsibility.

We Care About Our Customers

We take on the world's toughest challenges so our customers don't have to. We design, iterate and simplify to deliver next-generation solutions that help our customers unlock their full business potential. Whether that means bringing new, revenue-generating services to market; reducing network costs; enabling smarter, more efficient business processes; providing security and protection for the most valuable assets; or delivering a deeper and more robust end-user experience, we deliver simple, competitive solutions consistently and reliably.

Juniper serves customers that depend on network technology to deliver mission-critical transactions, applications and services. These include many of the world's largest service providers, the world's top telecom companies, major banks and global financial services organizations, government agencies, healthcare and educational institutions and energy and utility companies.

Why do so many successful businesses rely on Juniper? Quite simply, because we provide the kind of performance, thought leadership and industry-leading services that enable the world's best networks.

Juniper Customer Satisfaction Index

Each year, Juniper conducts a global customer relationship survey to provide an objective assessment and insights into where we're performing well and where there are opportunities to improve.

The Juniper Customer Satisfaction Index is our official measure of customer satisfaction and loyalty. It's a composite index that weighs the average of three questions: overall satisfaction, likelihood to recommend, and likelihood to repurchase. In 2019, we expanded our survey pool from key and major accounts to include all customer accounts, and we're pleased to have achieved an overall score of 8.11/10.

Data Privacy and Product Security

Protecting personal data is mission-critical to Juniper. We respect the privacy of individuals who provide us with personal data, including our customers, vendors, partners and visitors to our facilities and website. Thus, the security and integrity of confidential data are our highest priorities.

Our management approach is guided by our commitment to privacy, as described in our [Privacy Policy](#). The policy outlines, among other topics, individuals' rights to their personal data, how personal information may be collected and used, and our process for notifying individuals about the information we may collect. We require employees who are most likely to have access to personal data to undergo annual privacy training. New employees in sensitive areas also receive this training, as well as function-specific training, as they join. We regularly review our suppliers' privacy and security controls as part of our vendor compliance process, ensuring that they meet our high standards.

We understand that privacy and data security are as important to our customers as they are to us; this is why we extend our protection beyond our direct relationships, enabling designs, policies and procedures that facilitate our customers' protection of their customers' data.

Additionally, to help our customers navigate the rapidly changing cybersecurity landscape and respond to evolving data protection regulations globally, we've produced insightful information about [data protection strategies](#) and [compliance](#), as well as about the security of our products and services, including our recently acquired Mist AI-driven WiFi solution. We also engage productively with industry groups such as the [Forum of Incident Response and Security Teams \(FIRST\)](#) and the [Industry Consortium for the Advancement of Security on the Internet \(ICASI\)](#) to respond to international cybersecurity incidents, fight cybercrime and improve the state of the art.

We are committed to the integrity, security and reliability of our products, and as a major user of our own products in running our own business, we understand the trust customers are placing in Juniper when they buy our products. We provide training to engineers across the company on the fundamental principles of secure end-to-end design, and Juniper's Secure Development Lifecycle (SDL) program helps keep vulnerabilities inside of Juniper through six practices:

- + Training and Awareness
- + Security in Design
- + Threat Modeling
- + Penetration Testing
- + Release Security Review
- + Incident Response Plan

Juniper is committed to making secure networking solutions available to those who need them most. Earlier this year, we made a commitment to offer free secure wifi kits to front line healthcare providers in the U.S., Canada and the U.K. as they rapidly set up remote COVID-19 testing centers and other temporary medical facilities during the global health emergency.



Through our SDL program, we identify, address and mitigate security threats. Additionally, we demonstrate our commitment to addressing security vulnerabilities promptly and appropriately when they are found and to notify customers according to our Security Incident Response Team procedures. More security incident response information is available on our [Security Incident Response Team](#) blog. Juniper is active in industry and government initiatives to enhance the security of ICT products, networks and critical infrastructure, including efforts to agree on industry security standards and certification frameworks globally.

The image above depicts the practice of threat modeling in our SDL program with an example scenario for an application running in a networked environment.

Product Safety and Compliance

When designing our products, we follow the precautionary principle and consider both the materials we use and what happens at the end of their useful life. We're committed to building reliable, safe products and maintaining compliance with all federal, state, local and international regulations, including the Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS); the Regulation concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH); and the Waste Electrical and Electronic Equipment (WEEE) directive.

As leaders in technology, we remain engaged with our industry to consistently evaluate and prioritize the elimination of hazardous substances and provide expertise to inform future environmental product compliance requirements.



Product Quality

At Juniper, our quality policy focuses on continuous improvement for our products and services so that we can achieve the highest levels of satisfaction for our customers. Our Quality Management System (QMS) comprises processes, resources and methods that enable us to responsibly build the best networks for our customers.

Juniper's QMS has been certified by a third-party certification body against the [ISO 9001](#) and [TL9000](#) standards. The two standards are internationally recognized sets of requirements and measurements, commonly accepted as best practices for quality management.

Having these proven controls, checks, and balances in place ensures that we can meet our customers' needs and expectations for developing, delivering and supporting Juniper products. Because expectations inevitably increase over time, the standard also specifies that we include an ongoing focus on improving customer satisfaction, as well as the quality and reliability of our products and support. These improvements are a constant focus for us, to ensure we meet the needs of our customers and build the best network possible.

Supply Chain Management

At Juniper, our sourcing and supply chains are made up of a global network, the key elements of which are comprised of contract manufacturers (CMs), original design manufacturers (ODMs), component suppliers, warehousing and logistic firms, and recruiting firms. Around the world, our CMs and ODMs are responsible for manufacturing at all stages – from prototypes to full production – and assist with activities such as material procurement as well.

Our customers expect responsible sourcing practices and transparency throughout the entire value chain – their priorities are communicated through codes of conduct and audits based on principles of the [Joint Audit Cooperation \(JAC\)](#), an association of telecom operators with the common goal of raising social, environmental and ethical standards across the ICT supply chain, the [RBA Code of Conduct](#) and international standards. We are committed to working with our suppliers and conducting due diligence to ensure compliance with these responsible sourcing standards.

Supply Chain Resilience

Our supply chain program is constantly evolving as we work with our industry partners, customers and governments to identify new and emerging risks, and collaborate on best practices to mitigate those risks globally. In 2018, Juniper implemented a risk analyst network within our Bangalore facility—an internal team that receives and reviews notifications from our monitoring system about events ranging from natural disasters and labor strikes to political upheaval and power outages.

In 2019, we expanded our capabilities through our partnership with a data analytics company, to implement a hyper-local event monitoring tool, giving us a higher volume of adverse events and more granularity into the threat of each. These rich analytics increased the number of events identified by more than four times, and in order to scale, we instituted a robotic process automation (RPA) to assist with the analysis of this event monitoring. This RPA enabled us to significantly reduce event analysis processing time and ensure better consistency. This year, we're looking to automate the supplier follow-up and communication process to more quickly determine supplier status. The ability of Juniper and our suppliers to respond quickly to adverse events has greatly improved both our customers' experience and our resilience in the midst of increasing global instability.

SUPPLIER EXCELLENCE FRAMEWORK

Our Supplier Excellence Framework is designed to set clear expectations for the nine metrics we use to monitor and manage our suppliers: quality; account support; service; delivery lead time; compliance, sustainability, and risk; measurable execution; competitiveness; speed and agility; and innovation. The goal is to create productive, long-term relationships that align with our vision, values and business objectives. The nine categories give suppliers direction and incentive about ways to improve their processes in order to grow their business with Juniper.

BUSINESS CONTINUITY MATURITY MATRIX

Juniper ranks and tracks supplier performance along a continuum toward world class. In the area of business continuity, Juniper measures suppliers in four areas:

- Management commitment to a business continuity program (BCP)
- BCP readiness in production, key personnel and test equipment
- Selection and readiness of alternative locations
- BCP structure, documentation and training



Supply Chain Security

Our supply chain security management approach focuses on maintaining brand integrity through in-depth lifecycle analysis. This requires lifecycle threat modeling that identifies and proactively addresses potential vulnerabilities, from product development through production, to shipping and warehousing, counterfeit prevention, and the introduction of vulnerabilities in our products. By breaking the product lifecycle into smaller and more transparent pieces, each can be analyzed for potential weaknesses and addressed accordingly.

As we rely on contract and original design manufacturers from around the world, our supply chain integrity program is instrumental to ensuring the integrity of our products and the protection of our partners and customers. Our leading-edge component traceability systems improve component

integrity, prevent the introduction of counterfeit or gray market components, and allow us to conduct failure analysis on products or processes when quality problems arise.

In early 2019, we partnered with a third party data analytics company that provides external component-level risk intelligence. Some examples of the analytics include: predictive analytics on end of life, likeliness and timeframes of risk impacts, environmental compliance, sourcing risks, supplier financial health risks, and sub-tier supplier stability. We've incorporated these added risk factors into our New Product Introduction (NPI) processes to better manage lifecycle risk and revenue protection early on in the product design process.

We also work with the United States government and regulatory bodies around the world to meet and exceed security standards and ward off attempts by adversaries to influence the integrity

of our products. In 2019, we maintained our compliance to the Customs-Trade Partnership Against Terrorism (C-TPAT) and Authorized Economic Operator (AEO) standards and security requirements to support the U.S. Government's and European Union's efforts to improve the security of private companies' supply chains and cargo movement.



"Our robust security programs enable us to clearly understand the global supply chain and address issues to reduce risk. We focus on procuring high-quality components and removing gray market issues, while our extensive end-of-life assessments allow us to identify and mitigate future vulnerabilities."

Brad Minnis
VP, Environment, Health, Safety & Security

In 2019, the U.S. Department of Homeland Security (DHS) initiated the DHS Supply Chain Risk Management Taskforce to assess suppliers for security risks. Juniper is on this task force to help analyze issues of business continuity and provide expertise on risks across the supply chain. These efforts enhance national security by protecting import supply chains into the U.S. and European countries.

ENVIRONMENTAL SUSTAINABILITY



Our vision of environmental stewardship includes making our facilities less resource intensive, more cost efficient, and, ultimately, more sustainable for future generations. We recognize that our greatest opportunity for positive environmental impact comes through our products; that's why designing for sustainability at every stage of a product's lifecycle is important to us. By innovating networking solutions that enable the world to become more connected, we make it more sustainable as well. We're also committed to protecting the environment by reducing our operational footprint and offering products and solutions that support a circular economy. In this section, we'll talk about our initiatives to reduce our energy consumption and carbon footprint, and design our products to reduce their impact on the environment at every stage of their lifecycle.

Operational Sustainability

Our Operations

We strive to make our facilities less resource intensive, more cost efficient, and ultimately more sustainable. To achieve this vision, we look to consistently optimize our sustainability practices in search of new ways to collaborate with business partners and industry experts on cutting-edge solutions. Our management approach emphasizes reducing consumption as well as using resources more sustainably through technology solutions. We're focusing on reducing our energy usage, greenhouse gas (GHG) emissions, waste to landfill, and water usage. To ensure that we are advancing our sustainability performance, we use data management systems that allow us to accurately and efficiently collect data in key impact areas. We also disclose against the Taskforce for Climate-related Financial Disclosure (TCFD) recommendations through our participation in the [CDP](#) annual reporting process, making our energy usage, GHG emissions, and water usage data publicly available.

Energy Management

We recognize that reducing our energy use has the potential to make the biggest impact in mitigating the effects of climate change. Since sites with labs account for up to 85% of our global energy usage, we've focused our energy savings effort on various lab environments housed within our



operating facilities worldwide such as research and development and sales and customer service labs. We started by consolidating lab operations in Sunnyvale into a more efficient location, and then worked to improve on this by relocating labs to a newly opened data center in Quincy, Washington (Geo-DC), where the majority of the energy supply is generated through hydroelectric power. This multi-year migration, which we completed in 2018, provided us an opportunity to consolidate and retire inefficient devices, and resulted in the closure of two operating buildings based in Sunnyvale.

Around the world, we've also been working to reduce energy consumption by using increasingly more sophisticated monitoring and management. For instance, our Automated Management Tool (AMT) has shown great promise for saving considerable

energy in our labs. The tool – which initially allowed lab users to override its recommendations, diminishing the results compared to potential savings – was supplemented with an aggressive education program to reshape behavioral energy efficiency among lab equipment users. Over a period of about eight months, we gathered and mapped usage data for more than 20,000 pieces of equipment and used this information to create new policies. The results speak for themselves: after implementing the new policies in August 2018, energy consumption dropped for the first time since 2014. In 2019 Juniper's global energy consumption decreased from the previous year for the second year in a row. By coupling technology and infrastructure solutions with policy and behavior-related tools, we are making important progress toward reducing energy consumption.

Energy in Efficiency in Building Design

Designing for sustainability has guided our building decisions around the world. From our 635,000 square foot corporate campus in Sunnyvale, California to our India Excellence Center in Bangalore, our construction, design and management approach has integrated [LEED](#)'s principles of energy efficient systems, resource conservation and environmentally-preferred materials, achieving both Platinum and Gold LEED certifications at our facilities around the globe. Wherever possible, we adopt innovative solutions to saving energy in our buildings, such as chiller-less operations that use natural outdoor air to achieve significant gains in energy efficiency. Juniper's building operations, from lighting controls to cooling systems in the labs, are designed and managed to operate efficiently and effectively.

Juniper's Overall Energy Footprint

In our reporting of our total electricity consumption, we focus on facilities with R&D labs, server labs and customer support labs. Since our measurements have shown that locations with labs account for approximately 85% of our total global energy consumption, we do not include Juniper facilities without labs in our energy footprint calculations.

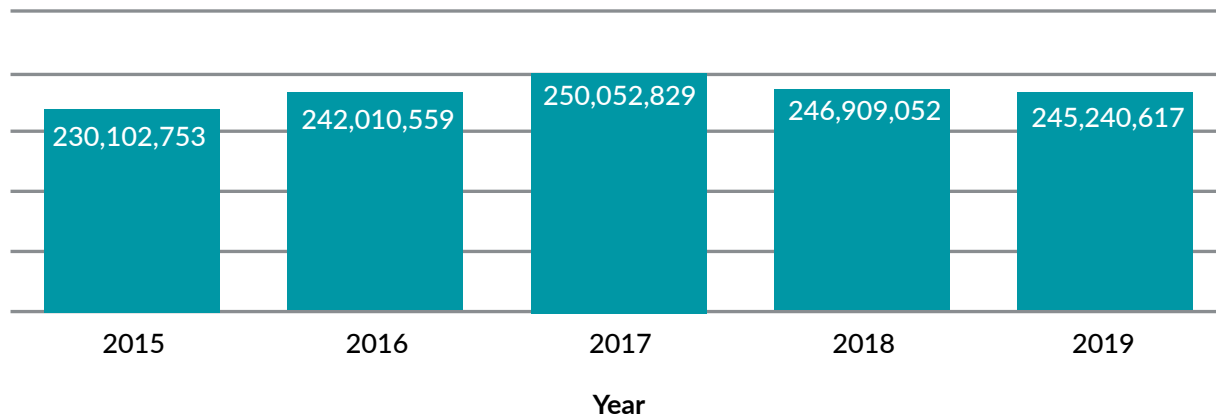
Alternative Power Sources

In efforts to reduce our company's environmental impact, Juniper has implemented several strategic initiatives to embrace clean technology in the form of renewable and low-carbon energy sources.

Hydropower

In 2016, Juniper opened the Geo-DC facility – a 1,500-rack data center-style lab that houses IT and engineering infrastructure and facilities including labs run by Global Lab Operations and our Customer Support Services Ultra Lab. Quincy, Washington, the location of the new facility, was chosen for several reasons - most importantly, because 78% of its electricity is generated by hydropower. In 2017, the Geo-DC was awarded the [U.S. Environmental Protection Agency's Energy Star certification](#) with a score of 100 points, the highest possible score.

Total Electricity Consumed* (MWh)



*Does not include diesel or natural gas consumption from our Sunnyvale site

Solar and Fuel Cells

Our Sunnyvale campus deploys a variety of renewable and low carbon energy options. To reduce demand on the grid, we invested in onsite photovoltaic and fuel cell systems that allowed the Sunnyvale campus to generate 7,372,149 kWh of energy in 2019, which represented approximately 12% of our Sunnyvale campus's total electricity consumption. A small 30 kW co-generation system heats water for showers and the cafeteria.

In 2019, 78% of Bangalore's energy requirement was supplied through the solar power purchase agreements executed over the past two years. Using renewable energy instead of conventional power will greatly reduce greenhouse gas emissions. Our 10-year agreement for this solar energy will last through 2026. Since Bangalore is responsible for our single largest energy demand at an average load of 9.5 MW, these environmental and financial benefits have significant scale.

Greenhouse Gas Emissions

Climate change is one of the greatest threats of our time. At Juniper, we recognize our immense responsibility and opportunity to play a role in mitigating its impact. That's why Juniper has invested in the infrastructure and systems required to inventory and measure our carbon footprint on a global basis. Our goals are twofold: to credibly and transparently account for our carbon emissions, and to significantly reduce the carbon footprint of not only our own operations, but those of our customers and suppliers as well. An intense and

complex multi-year process, we're measuring the energy efficiency of each of our products, as well as the carbon emissions inherent in their production, delivery and implementation. We recognize that opportunities to reduce carbon emissions exist in our own facilities and operations, in those of our suppliers, and through the design of the products we sell. From concept design to reuse and recyclability, we constantly look for ways to reduce our environmental footprint and energy consumption while meeting the ever-growing demands on the new network.

To meet our goals, Juniper works with [CDP](#), a non-profit organization that advises businesses on how to improve sustainability practices through the collection of self-reported data on climate change, water, and forest risk. For more than 15 years, we've engaged with CDP, and we have been reporting our climate change data to them since 2006. In that time, working with CDP has helped

us identify better ways to measure and manage our GHG footprint and improve energy efficiency. For comprehensive reports on Juniper's climate change and GHG management program, please refer to [our CDP disclosures](#).

Juniper's GHG Emissions Profile

Direct (Scope 1) emissions result from operations owned or controlled by the organization.

Indirect (Scope 2) emissions result from the generation of purchased or acquired electricity, heating, cooling and steam consumed within the organization.

Other Indirect (Scope 3) emissions are all indirect emissions (not included in Scope 2) that occur outside of the organization, including both upstream and downstream emissions.

The reported GHG emissions inventory scope includes only facilities with R&D labs, server labs and customer support labs.



Scope 1 and Scope 2 GHG Emissions

When measuring and reporting GHG emissions, our scope includes all of our facilities with labs, which accounts for approximately 85% of Juniper's total energy consumption. In 2016, we established an absolute target to reduce our Scope 1 and Scope 2 (market-based) GHG emissions by 5% by the year 2020 (against our 2011 baseline of 92,864 metric tonnes of CO₂e). We were able to achieve this goal in 2019 ahead of our target date. As a result and to further our continued commitment, we embarked on establishing an absolute Scope 1 and Scope 2 reduction target using the [Science Based Targets initiative \(SBTi\)](#) absolute contraction approach methodology. We selected to adhere to the well below two degrees scenario and established 5-year and 15-year targets: (1) reduce absolute Scope 1 and Scope 2 emissions by 17.5% by 2025 from 2018 baseline and (2) reduce absolute Scope 1 and Scope 2 emissions by 42.5% by 2035 from 2018 baseline. Our Scope 1 and Scope 2 (market-based) 2018 baseline is 56,514 metric tonnes of CO₂e.

We recognize that a large portion of Juniper's emissions are Scope 2: emissions that are produced from the electricity purchased to power our operations. To mitigate these Scope 2 emissions, most of the investments that we've made and continue to make focus on energy efficiency, process optimization measures, and clean energy procurement. In 2019, we focused the majority of our efforts on the Sunnyvale and Bangalore campuses – our two largest facilities based on square footage, employee headcount, and energy consumption – and continued executing

and expanding on initiatives implemented in the previous two years.

In 2018, we implemented the Automated Power Management Tool in our labs, which continues to save an estimated 7,500 metric tonnes of CO₂e annually, and in 2017, the onsite Bloom fuel cell system supporting our Sunnyvale headquarter campus underwent a \$1.2 million upgrade to improve the system's output, contributing to an emissions reduction of approximately 2,700 metric tonnes of CO₂e annually. In Bangalore, we increased our solar power usage, fulfilling 78% of the site's energy demand. These initiatives helped decrease total global Scope 1 and 2 emissions by approximately 6% in 2019 compared to 2018.

Scope 3 GHG Emissions

We recognize that the most significant impact to our overall carbon footprint comes from our Scope 3 emissions—activities outside of our direct operations such as business travel, employee commuting, our product distribution, and emissions resulting from our suppliers' operations.

We believe that strong partnership and communication throughout our supply chain provides us the greatest opportunity to make an impact where it counts. As part of our Scope 3 management approach, we actively engage with our suppliers and communicate our expectation that they measure and disclose their GHG emissions. Over the past few years, many of our suppliers have started doing just this, making it possible for Juniper to include their emissions calculations in our Scope 3 disclosures, specifically associated with purchased goods and services.

As a result of overall improved supplier data submissions and internal data validation processes, we were able to identify outliers to the emissions that suppliers allocated to Juniper. In response, we have engaged with those suppliers who submitted the outliers to verify methodology and data inputs in an effort to ensure future submissions are reasonable. The outliers have been removed from our 2019 Scope 3 inventory, being a primary cause of the decrease in the total reported Scope 3 emissions data compared to 2018.

	2016	2017	2018	2019
Scope 1	4,469	4,133	3,859	4,517
Scope 2 (Market Based)	99,800	76,362	52,655	46,307
Scope 2 (Location Based)	109,465	79,774	56,003	48,655
Scope 3	531,264	1,868,039	1,529,699	426,468

Note: Calculations are performed using the [World Resources Institute GHG Protocol](#). Emissions are measured in Metric tonnes of CO₂e.

*Scope 3 calculations for 2019 have been partially externally verified.

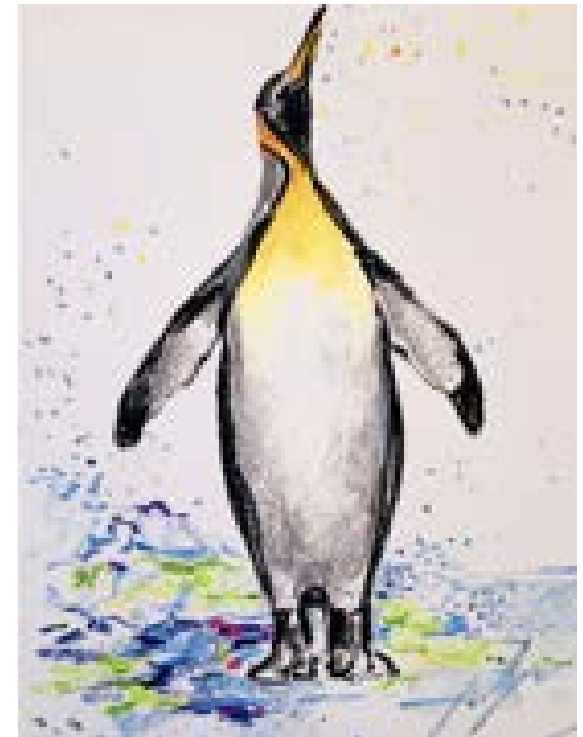
Supplier Engagement for Scope 3 GHG Reduction

Since 2009, we have invited our direct material suppliers, identified as those tier one component suppliers, logistic partners, contract manufacturers and original design manufacturers who represent approximately 99% of total annual direct material expenditure, to measure and report on their GHG emissions. As a lead member of CDP's Supply Chain program, we have built a strong supplier engagement platform that drives disclosure and action on climate-related risks.

We strive to achieve an 80% response rate on the CDP Supply Chain questionnaires, increase the overall average supplier CDP scores to B, and increase the overall number of suppliers reporting on key data points in the CDP Supply Chain climate change and water questionnaires. We are focused on five key areas in the CDP Supply Chain climate change questionnaire: (1) Scope 1 and 2 emissions, (2) identification of active emissions reduction targets, (3) emissions reduction activities, (4) allocation of emissions to Juniper Networks, and (5) proposal of potential opportunities for joint emissions reduction projects.

In 2019, 70% of 133 suppliers contacted by Juniper responded to our request for climate change information, with 67% of them reporting active emissions reduction targets. Those suppliers that responded allocated 336,570 metric tonnes of CO₂e to Juniper.

We're proud of these strong partnerships with our suppliers and are committed to supporting them on their environmental sustainability journey. We expect that through improved measurement and disclosure, our suppliers will identify opportunities to reduce their emissions, share collaborative opportunities, and ultimately reduce emissions across the entire value chain. We recognize we have opportunities to drive supplier participation and action and are expanding our supplier engagement to address these opportunities. Our GHG reduction goals are integrated into annual business reviews and our supplier vetting process. As of 2019, they have also been integrated into our new direct material supplier scorecard, which helps set expectations with suppliers to reduce their environmental footprint, allow for continued performance monitoring and benchmarking, and increase transparency in areas for improvement. Additionally, through our partnership with CDP, we are providing suppliers free training and resources to support them in the submission of their CDP climate change and water security disclosures and development of their internal programs. We are committed to ensuring that we are partnering with suppliers who share our goals and will work collaboratively to mitigate risks and identify opportunities.



“I was fortunate to be able to travel to Antarctica recently... In South Georgia Island, the penguins there viewed humans with curiosity and were singing without fear. This is the world I hope we can live in - one in which humans, mammals, invertebrates, really any life-form that exists, can co-exist in harmony and peace.”

Art by Lyuba Nesteroff, Juniper Networks User Experience Designer

Employee Commuting

Empowering our employees to make sustainable travel decisions is another way that Juniper aims to reduce our Scope 3 GHG emissions. In 2016 we established a Scope 3 emissions target focused on employee commute – a 20% reduction target by 2025, based on our 2015 baseline (22,247 metric tonnes of CO₂e). In 2019, we met our GHG emissions reduction goal by focusing on eliminating single-passenger auto trips.

The Juniper Networks Employee Transportation Program provides incentives for employees to reduce single-passenger auto trips. Annually, we survey our employees on their commuting methods to track our progress and learn how we can better encourage the use of more sustainable transportation. Employee feedback has led us to increase our transportation amenities, providing employees with preferred electric vehicle (EV) parking and charging, mobile fueling and rideshare services, and rewards for active commuting. Through efforts such as our Sunnyvale Active Commute Rewards (ACR) program (previously our Bike to Work program) and the expansion of EV charging stations on campus, we have succeeded in getting more employees to adopt more environmentally friendly modes of transport to and from Juniper. In 2019, we saved over 170,000 kg of GHG emissions through our employees' electric vehicle use.

Due to significant interest from our employees, we have expanded our ACR program over the last two years. In 2018, we enhanced employee incentives for the program by offering an increased dollar amount and more flexibility with the monetary rewards they receive for biking to work. We also provide non-monetary incentives, including secured bicycle storage lockers and emergency bicycle repair support, and recently expanded our online merchandise options to include more cycling apparel and gear.

In 2019, we began a global expansion and improvement of the ACR program, recognizing that employees use many methods of green transport, such as rollerblades, skateboards, and manual scooters. We also expanded ACR to Juniper sites in India and Amsterdam. Currently, we're working on ways to continue the global expansion of this program to enable more employees to get active, earn points, and help make a positive impact in our world.

EMPLOYEE ACTIVE COMMUTE REWARDS PROGRAM

- 153 global active commuters
- Over \$12,000 in prizes awarded for eliminating single-passenger auto trips in 2019
- 100 new participants in India and Amsterdam since 2018



"One of the by-products of the outbreak is this realization of the extent of damage we have done to the earth all these years and I hope it will bring about a change in most of us before it is too late."

Art by Sruthi Somarouthu, Juniper Networks ASIC Engineer

Water and Wastewater Management

As a global company headquartered in California, we recognize our responsibility to protecting the earth’s most valuable resource – water – and we are committed to practicing responsible consumption and stewardship of this precious resource. Juniper’s water management protocols are guided by our comprehensive [Environmental, Health, Safety, and Security Policy](#), which outlines our principles and goals for resource use and conservation. Our operational goal is to use water as efficiently as possible and to use reclaimed water wherever possible, minimizing our impact to the environment. To demonstrate this commitment and help achieve our goal, we have adopted and follow the [RBA Code of Conduct](#), which outlines standards for water use, discharge and conservation.

Water stewardship is a priority for us at all of our facilities around the globe. In our Sunnyvale, CA facilities, our LEED-certified buildings are equipped with low-flow fixtures, and water used for our toilets, urinals, and landscaping is all reclaimed – former wastewater from a local renewable supply that does not deplete the area’s limited potable water. Our partnership with water efficiency consultants provides us with regular water use metrics and insights to reduce our water consumption and optimize landscaping for maximum water efficiency. In 2019, we installed

smart controllers on our irrigation systems in Sunnyvale – these controllers sync with local weather cycles to shut off during rain to reduce unnecessary watering of our landscape. We anticipate this update will save up to 28% of water used for irrigation, beginning in 2020.

These practices were critical to achieving LEED Platinum and Gold certifications for our Sunnyvale campus, and qualified us for the [Bay Area Green Business certification](#). Independent third-party certifications such as LEED, ISO 14001, and Bay Area Green Business confirm our commitment to conservation and responsible corporate citizenship.

We track the annual water use data from our major facilities – which we define as those with more than 100 employees – in China, India, Singapore, Japan, The Netherlands, and the U.S., where the primary potable water uses are for canteen and breakroom operations and cooling systems. We work to continuously improve our tracking of water data for our in-scope facilities to provide robust reporting of water withdrawal, discharge, and consumption. In 2019, we identified a gap in our data collection methodology, which resulted in significant overreporting of water consumption for our in-scope facilities in the past. Using the refined methodology for calendar year 2019 reporting, we estimate 51 megaliters of water was consumed. For comprehensive reports on Juniper’s water management program, please refer to our annual [CDP](#) disclosures.

	2017	2018	2019
Water Use (megaliters)	850	797	51

Similar to the impact of our suppliers’ activities on our overall carbon footprint, we recognize that the most significant impact from water consumption and discharge, and the importance of accessibility to sources of high quality, clean water, reside in our supply chain. Therefore, we utilize the CDP Supply Chain platform and the water security questionnaire to survey our tier one component suppliers, contract manufacturers and original design manufacturers who represent approximately 99% of total annual direct material expenditure. The engagement provides Juniper visibility to our suppliers’ water practices and the potential risks and opportunities to Juniper’s business.

Sustainability on Campus

Our campuses are designed to provide a seamless experience for our employees to focus on what matters most. At Juniper, sustainable practices are a key component of that employee experience. For years, Juniper has implemented sustainable processes in our operational design – from our drought-tolerant landscaping to our local organic sourcing, we partner with vendors who practice good environmental stewardship.

We also reduce waste through composting and recycling. In 2019, we conducted a major waste reduction project for materials that were no longer of use at our facilities. By recycling e-waste such as racks, servers, and towers, we were able to divert over 20 tonnes of e-waste from landfills. The process of collecting this waste helped us identify inefficiencies in past ordering, enabling us to be a more responsible consumer.

Product Sustainability

We design and create products and services for reliable, high-performance networks. At the earliest stages of design, we pay attention to sustainability and we consider the product's entire lifecycle. Sustainable design includes principles of materials innovation, recyclability, and energy efficiency, and a lifecycle management approach considers aspects like logistics and flexibility of use and reuse. We measure and track our product efficiency as a means to assess our product sustainability and continually reduce our environmental impact.

We take a different approach to developing products at Juniper. By removing complexity and focusing on the critical processes at every stage of our products' life cycle, we can innovate and rethink our ways of interacting with Juniper customers and partners. Doing so allows us to create a win-win for our stakeholders and for the environment.

Juniper's Circular Economy Model

Our circular economy model includes six stages, described below:

- + **Engineer:** We design products with sustainability in mind, so they are more environmentally responsible, more reliable, and longer lived.
- + **Manufacture:** We carefully select suppliers and business partners who share our values and commitment to environmental sustainability.
- + **Use:** Our products are built for flexibility, interoperability, and scalability, ensuring long-time customer value.
- + **Repair:** Our modular design makes our products easy to dismantle and repair.
- + **Refurbish:** The Juniper Certified Pre-Owned Program lets our customers extend the life of their existing Juniper architecture. This helps save e-waste from landfills and reduces carbon emissions.
- + **Recycle:** Juniper designs products to be easily dismantled, and our parts are labeled to encourage recycling. For components and products that can no longer be used, Juniper partners with an industry leader in responsible electronics recycling.

Details of our circular economy model are available on our [website](#).

Eco-Design Program

Our innovative product designers and suppliers identify, prioritize and recommend environmental improvements through a company-wide eco-design program integrated into our NPI process. Our eco-design management approach follows guidelines developed to meet evolving customer expectations and regulatory requirements and is influenced by the expertise of our employees and suppliers. Furthermore, we conduct lifecycle assessments to quantify a product's environmental impacts across the entire lifecycle, from design to end-of-life disposal.

The priorities of the Juniper Networks eco-design initiative include:

- + **Materials Innovation:** Reducing the amount of material used in our products and developing materials that have less environmental impact and/or more value at their end of life
- + **Recyclability:** Designing products that are easier to upgrade, reuse, and/or recycle, and taking back products for refurbishment and resale
- + **Energy Efficiency:** Reducing the energy needed to manufacture and/or use our products

Designing for: Materials Innovation

At every feasible point, Juniper sources materials that have the least possible impact on the environment. For example, we communicate to our suppliers our preference for recycled copper and aluminum content, empowering their procurement decisions and creating demand for less intensive mining and production activities upstream in the value chain.

We're also a leader in innovative packaging design—aiming to reduce the impact of the materials we use to safely transport our products. By designing more effective packaging, we reduce waste related to damaged equipment. By prioritizing lighter, recycled/recyclable, and degradable packaging materials, we're also continually focused on reducing the environmental impact of logistics and shipping.

Designing for: Recyclability

We also recognize the importance of improving Juniper products' recyclability of at end of life.

Juniper's modular product design makes dismantling and repair simple and our parts are labeled to encourage recycling. Our regional Global Return Centers (for product repair) limit travel cost and time, logistic miles, and air emissions. For components and products that can no longer be used, we partner with



an industry leader in responsible electronics recycling to mitigate the resulting e-waste. Our partner promotes reuse, encourages reduction of waste, and recycles non-reusable materials, keeping data security top-of-mind throughout. With this approach, the materials in our products can efficiently reenter the commodity loop for our business, or into another value chain.

Designing for: Energy Efficiency

The ICT sector accounts for under 2% of all GHG emissions; most of that comes from energy-intensive data centers. The Global e-Sustainability Initiative (GeSI) estimates that, by continuing to increase energy efficiency in our sector and enabling efficiencies in other industries, the ICT sector has the potential to drive a 20% reduction in global GHG emissions by 2030, which would hold emissions at 2015 levels.

As the platform for ICT-enabled solutions, the networks Juniper builds are a means for enabling growth and innovation while also serving as a source of crucial energy efficiencies. It's the reason energy efficiency is central to our design and development approach. For years, Juniper has played an active role in developing specifications for rating energy consumption in network and telecom devices. We are also an active member of the Alliance for Telecommunications Industry Solutions Sustainability in Telecom: Energy and Protection (STEP) Committee, which created a methodology for measuring and reporting wireless base-station standards.

Every Juniper product is measured in throughput per watt—a metric we've improved with each product iteration. In addition, in the past few years, energy efficiency is now a larger consideration during the NPI process. While energy efficiency has always been a performance indicator of improvement for our products, we now require all products that go through our NPI process to have a quantitative assessment to track improvements to energy usage as compared to previous generations. This helps us

track our progress and ensures that we're taking the strides necessary to meet our customers' growing expectations.

Juniper products are also independently tested by a third party for compliance with the following energy-efficiency standards:

- + AT&T ATT-TP-76200, Issue 20, June 2016
- + ECR Draft 3.0.1, December 2010
- + ETSI ES 203 136 V1.2.1, October 2017
- + Verizon VZ.TPR.9205, Issue 6, March 2016

Energy consumption specifications are made available on product technical sheets, another tool that helps customers focus on their energy goals and enables Juniper to stay ahead of energy-efficiency and product-labeling standards.



“We take risks to push our energy efficiency to the highest extent. Our values align closely with our customers, allowing us to deliver more sustainable products with each new generation of technology.”

Andy Athreya

EVP, Juniper Networks Chief
Development Officer

Lifecycle Management

Juniper's management approach to designing, producing and deploying products is focused on the breadth of the lifecycle to minimize waste and inefficiencies at each step of the process. We design our products for longevity, flexibility and interoperability, which allow them to scale to meet demands in an environment of rapid change and growth. This allows us to adapt to our customers' changing needs without requiring equipment replacement. We focus on lowering our products' total cost of ownership by improving product energy efficiency, reducing operational expenses, and offering cloud-based solutions that allow our customers to access applications and services without buying and managing on-premises infrastructure. We also offer leasing models that contribute to a shared economy. Warranties and support extend the useful life of a product and ensure that it runs efficiently. These aspects of our design process create the flexibility required to extend product longevity and reduce the need to replace equipment.

Juniper's Certified Pre-Owned Program

When product demand shifts, we make sure those products can still be put to good use. The [Juniper Certified Pre-Owned \(JCPO\) Program](#) allows our customers to extend the life of their existing Juniper architecture by offering end-of-life hardware products with manufacturer support and warranty. In 2019, we expanded our JCPO program to meet customer needs, offering more trade-ins and buy-backs at a larger scale than ever before. We also launched a wholesale pilot to end-of-life and end-of-support gear such as spare parts, which finds a new opportunity to use these products.

We are excited to see that demand is growing for product recycling, refurbishment, and re-use, and we're committed to continuing to lead the networking industry with our robust circular economy initiatives.

JUNIPER'S CERTIFIED PRE-OWNED PROGRAM

- Over 80 tonnes of e-waste prevented since program inception to end of 2019
- An estimated 469,000 lbs of carbon emissions spared in 2019
- Approximately 1,000 lbs of CO2 and 20 lbs of e-waste prevented from one recycled router or switch



Product Packaging

We know that leaders never stop striving to improve performance and push the limits of innovation. That's why Juniper is constantly looking for ways to drive even greater innovations in the size, weight, and material of packaging solutions. Through engagement and collaboration in supplier partnerships, our packaging engineering team has been working for years to advance our thinking about packaging efficiencies and innovations. With the expanding use of our 100% recycled high-density polyethylene (HDPE) Reflex cushions, Juniper has used more than 2 million pounds of recycled polyethylene (PE) in our packaging, an amount that is growing rapidly every year.

In 2019, we made great strides in our sustainable packaging protocols. With the increased use of 100% recycled cardboard packaging, we avoided using nearly 18,000 pounds of virgin paper – an amount that will be saved annually in future years. Similarly, we switched to 65-100% recycled PE foam packaging for at least eight different products, which will avoid the need for 24,000 pounds of virgin plastic annually.

In addition to using more recycled content, in 2019 our packaging team found new ways to reduce the amount of material needed to safely and reliably deliver our products to customers. For example, they developed a new suspension film package used for smaller fan trays and bigger optics products. This new suspension film uses only 0.02 pounds of plastic, compared to 0.33 pounds in the old foam packaging. That's a 94% reduction in plastic per package shipped.

Ocean-Bound Plastics in Packaging

At Juniper, we pride ourselves in being a pioneer in using innovative materials that prevent plastic from entering our oceans, beaches, rivers, and waterways. Two years ago, we became the first company to use packaging cushions made from 100% recycled ocean-bound plastic (OBP). In 2019, we expanded our use of OBP in packaging materials, to now include 100% OBP cushions for our Ardbeg and Pine Mountain products. For our 1RU products, we also developed new universal cushions, which utilize a mix of 10% OBP and 90% recycled plastic. Juniper is committed to playing a global leadership role in green packaging, and we recognize that the work to improve is never done. We're looking forward to continuing to reduce our environmental footprint through innovative packaging solutions.



Sustainable Packaging in 2019

90%
of spend

90% of our packaging materials spend is regionally sourced

18,000
pounds

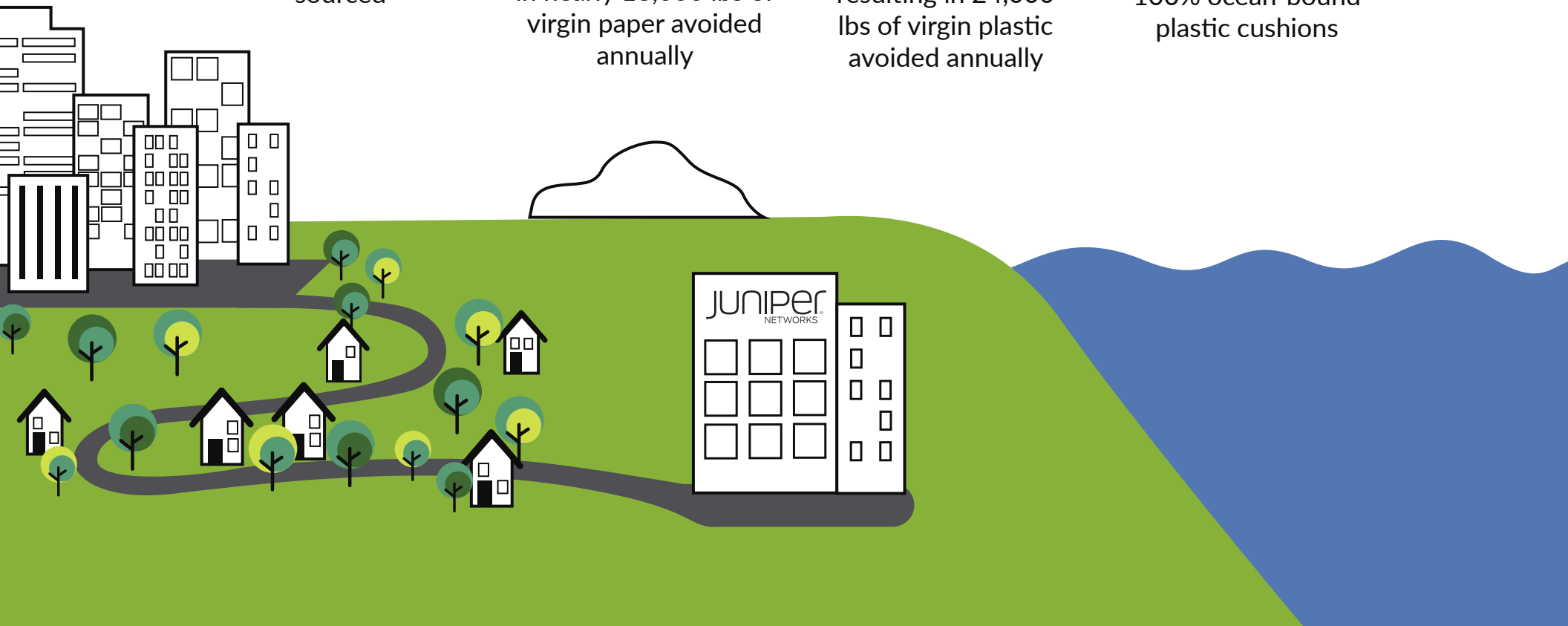
We made green improvements to optics boxes resulting in nearly 18,000 lbs of virgin paper avoided annually

24,000
pounds

We increased recycled content for 14 product cushions resulting in 24,000 lbs of virgin plastic avoided annually

100%
ocean-bound
plastic

Our Ardbeg and Pine Mountain products now use 100% ocean-bound plastic cushions



PEOPLE AND COMMUNITIES



From our employees to each worker throughout our value chain, we invest in our people. Our vision is to create an inclusive, authentic community that inspires collaboration, integrity and innovation. By fostering a culture of integrity in our supply chain, our partners become extensions of our efforts to meet big, bold challenges that make a meaningful difference. We're committed to ensuring that each employee be treated with integrity and respect and given the opportunity to thrive. In this section, we discuss what we're doing to build a more inclusive and diverse community, how we invest in our employees, and how we ensure ethical supply chain management.

Our Employees

Our Employee Community

We're building more than just a network, connecting lives in previously impossible ways. It's our priority to treat each employee with integrity and respect, and every day, we strive to create a world-class employee experience—one that offers opportunity for personal and professional growth, enables work-life balance, and aligns closely with the core values embodied in The Juniper Way.

Inclusion and Diversity

At Juniper, we're on a mission to create change and build a more inclusive and diverse community. As a company committed to innovation and representing our diversity in a multitude of ways—including race, ethnicity, age, gender, sexual orientation, background, perspectives and work style — we see our differences as a competitive asset that we can amplify to drive success. We understand that connection is about more than networks: It's about how we connect with each other.

Over the past year, as we've worked to increase our commitment to Inclusion and Diversity (I&D), we've implemented a global framework and tactical initiatives for company-wide results. We built on the foundational work done in 2018 to accelerate our program, put initiatives in place and broaden our reach to empower more diverse employee populations.

Creating a highly diverse and inclusive workplace, where everyone is empowered to do their best work, starts with transparency and accountability. In 2018, we published our inaugural annual diversity update to share our [2017 workforce data](#) transparently, communicate our I&D strategy and to set an example for driving positive change. We have since published our [2018 and 2019 data](#), which includes information on race in the U.S., allowing us to map our progress year over year and enabling our stakeholders to keep us accountable. While we acknowledge that we have a long way to go to achieve equity, we're proud that our efforts to drive improvement have been taking us in the right direction. We provide regular updates on our I&D strategy and our progress, which are available in our annual CCS report and on our [website](#).

An Environment of Inclusivity

At the beginning of 2019, we formalized a company-wide objective to create a more inclusive workplace, and we recognize that in order to succeed, we need to be engaged and accountable at the highest levels of leadership. Our commitment to progress and inclusivity is carried through by our CEO staff and beyond.

In 2019, we infused the concept of inclusion at all levels in order to effectuate change. For example, we built on our company-wide unconscious bias training by focusing on tactics that make the concept

more tangible for our employees. We worked closely with our managers to run more inclusive meetings and bring in those who sometimes aren't included in the conversation. We also rebuilt our internal I&D website to provide actionable resources for our



“We're excited to expand a meaningful integration of inclusion and diversity into our business operations and incorporate I&D into our day-to day experience. We embrace and celebrate the strength our many differences bring to Juniper.”

Hillary Weingast
VP, Head of Inclusion and Diversity

employees. Twice per month, we release I&D articles on our intranet that teach our employees how to foster inclusivity in their immediate circles. The articles, which cover themes like How to be an Ally and Talent and Development, help us communicate our intentions and empower our employees to create positive change in the workplace every day.

We regularly evaluate how our benefit offerings can be more inclusive of the needs of our employees. Based on ongoing assessment and employee feedback, we expanded our benefit offerings in 2019 to include CLEO, a global concierge resource for new and expecting parents to enable them to succeed as working parents. The resource includes preconception counseling, lactation consultation, child CPR, birth preparation and emotional wellness. It is intended for birth, adoptive, single, same sex and transgender parenting.

Celebrating and Empowering Diverse Talent

Around the world, we provide benefits that address individual employee needs. For example, in the U.S., we offer consultation and support for employees with aging parents, and financial education and budgeting counseling for New College Graduates and Interns.

As a part of our strategy to diversify our talent base, we've refined our recruiting practices, using software and training to improve our interviewing and hiring processes. We recognize, however, that cultivating our internal population is just as important as hiring diverse talent. That's why we're committed to



"We strive to promote an inclusive and collaborative environment, in which our employees thrive solving the most complex problems on networking solutions. That is the Juniper Way."

Eva Andres
SVP, Chief Human Resources Officer

improving employee experiences across the entire employee tenure, to ensure that everyone in our workforce has the opportunity to excel and that they receive benefits to meet their individual needs.

We value the things that make us different, because together, those differences make us better. Over the last year, we've celebrated these differences in more ways than ever, through events such as PRIDE, Hispanic Heritage, International Women's Day and

Veteran's Day celebrations and Women in Leadership conferences.

As leading innovators, we believe that it's our responsibility to support programs that create a network of opportunities for the world's next generation of engineers, critical thinkers and thought leaders. In order to empower future generations of diverse talent, we've made it an important part of our recruiting and citizenship strategy to increase representation of women and communities of color within our science-, technology-, engineering- and math-intensive (STEM) industry, where such representation has historically lagged behind other disciplines. Specifically, Juniper has made supporting K-12 STEM education for girls and underserved minorities a critical component of both our diversity and philanthropy strategies.



Employee Engagement

Professional Development

Juniper is on a mission to win the next decade of networking, and in order to be successful, we must ensure that our employees are empowered to deliver. At Juniper, professional development means more than just performance; it means enabling our employees to be authentic and thrive. In 2019, we designed a global, robust approach to assessing our leaders with talent reviews to focus on leadership development. With increased attention on employee-manager engagement, we've improved our manager development to ensure we're aligning our thriving workforce with our strategy to win.

Our professional development approach includes reviewing and assessing our management teams as well as facilitating personal employee development and growth. In response to feedback from the 2019 Juniper Voice survey, in early 2020, we launched our People Manager Network to create global consistency in how we lead our teams and support our employees. With this program, our managers are empowered and provided with the training and resources to scale employee career growth and provide their teams with the necessary tools to facilitate that growth. We use a framework called Talent Matters to encourage an open and interactive culture between employees and their manager, where individual needs are recognized and met, and company goals are supported. Managers are encouraged to schedule Conversation Days with their direct reports to identify opportunities for the company to better support employees and set goals for professional and personal growth. These

have been so instrumental in fostering a culture of openness, collaboration and purpose within our company, that in 2019, we began holding them quarterly. For all employees, growth goals are tied to our corporate objectives and key results (OKRs), to ensure that they are progressing and are supported by management teams.

Juniper Voice Survey

We consistently work to improve the employee experience by addressing direct feedback from our workforce. In 2019, we launched our annual Juniper Voice survey, which focuses on manager effectiveness in order to cultivate a more globally consistent employee development experience. Feedback we received from 2019's Juniper Voice survey provided us with the input necessary to refine our employee benefit packages to meet employees' individual needs. It also enabled us to create a more inclusive workplace by training our people managers to recognize unconscious bias and to operationalize core principles of inclusivity into everyday activities.

Currently, we're all experiencing one of the most challenging times of our lives, and at Juniper, we're working hard to keep everyone as connected as possible. To ensure we're doing everything we can to empower our employees, we sent out a supplemental survey in early 2020 to check in. We asked questions to help gauge how well employees felt supported, the effectiveness of COVID-19 related communications and better understand how our leaders maintain company confidence during the COVID-19 pandemic. To demonstrate our commitment to supporting our employees, we've increased the frequency of our manager trainings, to help Juniper managers lead their teams remotely, with compassion and empathy.

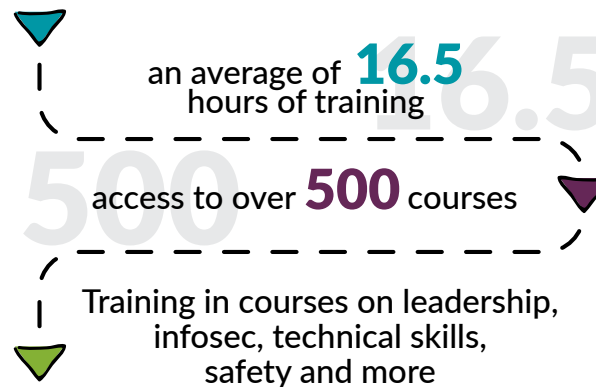


Training and Development

Employee training is one way in which we create an inclusive and diverse environment where employees are able to thrive as their most authentic selves. We work consistently with our training partners to ensure our course offerings promote respect and awareness, and encourage empathy, compassion and emotional intelligence. Each year, Juniper employees also receive role-specific training on topics including human rights, environmental performance, compliance with the Juniper Worldwide Code of Business Conduct, engineering and other compliance and industry-specific subjects.

To ensure our employees' personal and professional growth, we strive to connect with our leaders and colleagues around the globe to offer quality programs in all locations, departments and positions. In the past two years, Juniper has ensured that our training and development programs align with the interests and professional needs of our employees. After receiving and taking into account valuable feedback from our employees, we developed more courses focused on building personal capabilities as well as skill development. Currently, we're looking to provide better global access to professional development learning for our employees, through LinkedIn learning courses.

In 2019, employees received:



Employee Wellness

Global Health, Safety and Security

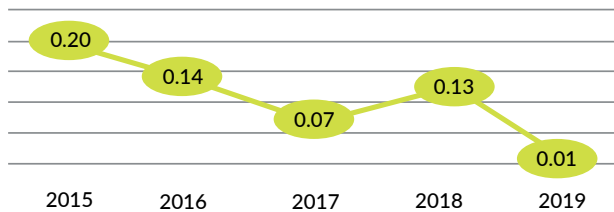
Juniper strives for excellence in global environmental, health, safety and security management. Our management system provides the framework for us to be a responsible corporate citizen and make meaningful differences. It is guided by our [Environmental, Health, Safety, and Security \(EHSS\) Policy](#), which articulates our commitment to maintaining healthy, safe and secure working conditions—a workplace where our employees are treated with respect and dignity—and ensuring that our products and operations are environmentally responsible. In 2019, we refreshed our EHSS Policy to ensure clarity that it applies to all Juniper entities around the world.

At Juniper, our EHSS management system offers a framework to reduce and eliminate potential hazards, risks and negative impacts to our employees, partners, customers, our communities and the environment. It is developed and implemented in conformance with the globally-recognized ISO 45001 and ISO 14001 standards. Our [Sunnyvale](#) and [Amsterdam](#) facilities, our Corporate and Sales Headquarters and APAC and EMEA Headquarters, respectively, maintain certified ISO 14001 management systems, and our Amsterdam facility is also [ISO 45001](#) certified. We comply with all applicable local rules and regulations. To date, Juniper has not received any fines or citations for non-compliance with laws and regulations relating to environmental, health or safety.

Our Corporate EHSS Department is responsible for the management, execution and monitoring of the performance of our EHSS management system. Juniper has formal safety committees in all locations with a headcount of over 50 employees and in locations required by law, which represents nearly 80% of our office-based workforce. Additionally, our EHSS Department is authorized to conduct corporate environmental, health, safety and security investigations on behalf of our management and report investigative findings and recommendations to the appropriate management personnel.

To assess the performance of our EHSS management system, we measure and monitor workplace safety with our Total Global Recordable Incident Rate. Juniper has consistently maintained a low global incident rate due to the policies, processes and controls we have implemented to eliminate and manage identified workplace hazards. In 2019, the recordable injuries were associated with exposure to ergonomic risk factors. To date, Juniper has not experienced a fatality. All injuries and incidents, including near-misses, are investigated and corrected to prevent recurrence, and where present reported to the local safety committee.

Total Global Recordable Incident Rate
(number of recordable incidents per 100 employees)*



*Numbers rounded to two decimal places.

OUR RESPONSE TO COVID-19

More than ever, we are committed to connecting organizations that are delivering critical services to those most in need. As we work to deliver the world’s network, the health of our employees, customers and partners is our top priority.

In 2005, in response to the threat of the H5N1 Bird Flu, Juniper created our first Pandemic Preparedness Plan, outlining necessary actions to take in the event of a global disease outbreak. Since then, we’ve continually updated our plan to ensure we could successfully mitigate the effects of such a scenario on our business operations and the lives of our employees.

In January of 2020, in response to the COVID-19 outbreak, Juniper activated our crisis team to deploy our Pandemic Preparedness Plan, which provided us with critical guidelines for the management of our employees’ health and safety, including social distancing protocols, proper hygiene, and the deployment and use of personal protective equipment (PPE).

Our strong supply chain partnerships allowed us to supply our facilities with hygiene products and protective gear for essential workers still on campus. Keeping PPE stocked proactively enabled us to immediately send masks to the homes of our employees to keep themselves, their families, and their communities safe. It also enabled us to donate 6,000 masks to affected communities in Massachusetts and the Netherlands.

Our network is built to be secure and reliable even when the world is full of uncertainty. With over 95% of our employees currently working remotely, our network has remained stable, allowing us to stay connected and help each other during this most challenging time.

Employee Benefits and Work-Life Balance

At Juniper, we pride ourselves on our diversity of talent, and in order to retain our employees, we must provide benefits that enable them to be their most authentic selves. We recognize that having a truly inclusive and diverse environment means that the benefits have to work for the individual; there is no one-size-fits-all approach. When designing our employee benefits program, we think first about what makes us human and what enables us to thrive.

For this reason, we've intentionally considered elements of human dignity and integrity in planning our workplaces. In 2019, we provided our Bangalore, India campus with an on-site daycare facility and increased the amount of space available to ensure that no woman at Juniper would be put on the waitlist. We also ensure that employees around the globe have access to breastfeeding and pumping rooms, prayer rooms, childcare rooms, medical care centers for employees and their families, and gender-neutral restroom facilities.

In an effort to give our employees the ability to work and thrive in ways that enable them to perform at their best, we've developed a Flexible Work Policy. We care most about the groundbreaking work our employees do – and less about where they do it. Our flexible work program allows Juniper to find and retain the best talent, regardless of where they live or their current life situations. We don't limit ourselves to individuals who must relocate or work in a physical Juniper office; instead, we strive to grow a talented team that can focus on delivering the next generation of networking connectivity.

Juniper regularly surveys our employees to solicit

feedback on our benefits and Total Rewards package. Over the years, we've improved our programs and offerings, which include tuition assistance and funding for leadership courses, 16-week paid parental leave and access to the same level of benefits for both full- and part-time employees.

43% of highly skilled women drop out of the workforce after their first child*.

At Juniper, our global rate of return to work for mothers is over 90%.

*According to data from [CLEO](#).

Employee Experience and Workplace Environment

We strive to create an environment where our employees feel inspired to solve the world's most complex problems. We think of our company as a community, and our employee experience as an opportunity to connect our individual employees to a larger societal purpose. We work to achieve this vision through community spacemaking and the thoughtful design of our offices, keeping collaboration and innovation in mind.

Our campuses are designed to foster community, communication and collaboration, so that all of our employees around the globe feel inspired to find the new best solution. Through activities like book fairs, fitness challenges, games, events and Juniper-sponsored forums, our employees can connect with each other, and build a stronger sense of community.



“We strive to provide a workplace experience that connects our employees and empowers them to do their best work. To achieve this vision, we continuously listen to our employees to design workplaces that foster collaboration and innovation to inspire passion, productivity and performance.”

John Lucas

VP, Global Real Estate & Workplace Services

University Talent Program

Each year, Juniper welcomes over 250 interns and new college graduates into our University Talent Program, a global initiative through which we bring together the most inventive minds to help solve customer problems, change the way people live and make the world a better place. From day one, our interns and new college graduates (NCGs) roll up their sleeves and immerse themselves in projects that unleash their potential and creativity.

Our early career Junivators are mentored by highly experienced people who inspire and challenge them. We work with them on groundbreaking projects that enable them to deliver value, while making sure they have fun and feel supported every step of the way. In 2019, we launched the NCG Intern Workplace Buddies (NIW-B) Program at our Sunnyvale campus, a cross-functional buddy system that provides NCGs and interns at Juniper the opportunity to learn about each other's worlds. While most interns have a Juniper employee mentor, the NIW-B program provided a touchpoint outside their working group to expand their friend group and support network. The program gives our interns the opportunity to learn from a peer and be exposed to a broader range of Juniper's innovative work.

Labor Practices and Human Rights

Our Commitment to Human Rights

We honor human rights, including the eradication of human trafficking, modern slavery, and forced and child labor. We believe in upholding high ethical standards and expect our global supply chain to follow ethical business practices and comply with laws.

The Juniper [Business Partner Code of Conduct](#) outlines these expectations, lays out our zero-tolerance policy for human trafficking, involuntary servitude and child labor, and articulates our alignment with the RBA [Code of Conduct](#) on fair labor practices and human rights. It is reviewed annually and is woven into all of our supplier contracts when entering into or renewing supplier master agreements.

We are committed to a collaborative approach, applying leading standards and practices in the electronics industry to drive performance and compliance with critical corporate social responsibility policies. To this end, in 2007, we adopted the Responsible Business Alliance (RBA) Code of Conduct, and in 2015, we became an RBA member. As a member of the RBA we support the development of industry guidelines and resources to ensure that working conditions in the electronic industry supply chain are safe, that workers are treated with respect and dignity, and that manufacturing processes are environmentally responsible. Juniper fully supports the vision, mission and principles of the RBA and is committed to the industry's collaborative approach in applying leading standards and practices throughout the supply chain.

More information on our commitment to human rights in the supply chain is available [here](#).

Our Partners in the Value Chain

At Juniper, we develop trust with our customers, our employees and our suppliers by being honest, respectful and reliable in all our business dealings. We expect ethical business practices throughout the value chain and encourage our suppliers to adopt critical corporate social responsibility policies that help ensure working conditions in the electronic industry supply chain are safe and workers are treated with respect and dignity.

Our sourcing and manufacturing activities are outsourced to a worldwide network, the key elements of which are comprised of: CMs, ODMs, component suppliers, warehousing and logistic firms, and recruiting firms. Our outsourced model provides a tremendous opportunity and responsibility to encourage the adoption of responsible business practices.



Responsible Materials Sourcing

Our ability to manage a resilient, responsible supply chain is dependent on strong alignment with our supply chain partners. This is why we encourage the adoption of responsible and sustainable business practices among our direct and indirect suppliers. Over 90% of all our suppliers are managed through a direct agreement and have been selected using sourcing strategies drafted in coordination with our engineering teams.

Our Supplier Management Program is based on several key elements, including:

- + **Performance Evaluation:** Our Supplier Excellence Framework and Business Continuity Maturity Matrix are used to evaluate suppliers. Performance is monitored through verification and audit mechanisms, and results are communicated during business reviews.
- + **Verification and Audit:** We conduct assessments and announced onsite audits of our CMs, ODMs, and critical partners to assess and evaluate their performance compared to Juniper standards.
- + **Certification:** Each supplier must certify compliance with Juniper's [Business Partner Code of Conduct](#), which addresses important corporate social responsibility standards and is informed by the RBA Code of Conduct and the [Ten Principles of the United Nations Global Compact](#).

- + **Accountability:** Both Juniper employees who manage supplier relationships and our suppliers are held accountable for upholding the Juniper Business Partner Code of Conduct and executing on the Supplier Excellence Framework. If suppliers do not follow Juniper's policies or meet Juniper's performance expectations, we may escalate the matter in the supplier business review process and take the non-compliance into account in supplier performance scorecards. Supplier non-compliance and poor performance on scorecards may result in a determination to suspend, disengage or take other corrective actions with respect to the supplier.

In 2019 we deployed enhanced supplier scorecards throughout our supply chain to be transparent with our suppliers about our expectations, promote more meaningful discussions with our suppliers and commodity management team, and drive initiatives that support Juniper's responsible supply chain goals. As a part of this refresh, we included metrics that assess supplier performance on the responsible sourcing of raw materials and minerals and compliance with the Juniper and RBA codes of conduct, which encompass requirements on labor rights.

Vetting and Monitoring Suppliers

At Juniper, we work to maintain a culture of integrity and ethics to inspire confidence throughout our ecosystem. It is important that our suppliers are committed to promoting fair labor practices, upholding ethical human rights standards and making a positive impact on society. We screen potential suppliers to confirm their commitment to these important principles through our robust vetting process for new suppliers, which looks at financials, compliance and risk assessments and background checks.

We also monitor Tier 1 suppliers who represent at least 80% of our direct material expenditure in the relevant calendar year (based in part on forecasted spend), 100% of our CMs and ODMs and all direct material suppliers who provide what are identified as

the most critical technologies and can have a broad impact across Juniper. We verify their compliance with the RBA Code of Conduct and the Juniper Business Partner Code of Conduct. Additionally we conduct C-TPAT security audits and business continuity program reviews at critical supplier sites, and use supplier self-assessments, risk assessments, declarations and certifications and announced onsite audits to ensure supplier conformance.

Scheduled onsite audits at our CM, ODM and critical component supplier facilities are crucial to the success of our supplier program. Annually, we conduct CSR, security and loss prevention audits at 100% of our CM and ODM facilities and, based on risk assessment results and incident and performance trends, at select Tier 1 component and logistics supplier sites. This process is aligned with industry standards, including the [RBA assessment](#) and

[Validated Assessment Process \(VAP\)](#). All audit findings are tracked to closure in accordance with our corrective action process.

In 2019, Juniper utilized the RBA risk assessment process to evaluate compliance risks at 105 supplier facilities, a 33% increase in the number of assessed supplier facilities compared to 2018. Of the assessed facilities, less than 1% of the supplier facilities were identified as high risk due to priority findings associated with the lack of robust processes and policies related to freely chosen employment and emergency preparedness. The supplier was able to correct the findings through the RBA corrective action process and verified the effectiveness of the actions through a subsequent third-party closure audit. As a result of this activity the supplier was recategorized as lower risk in 2020. Through our membership with the RBA, we audit 25% of suppliers that are determined as high risk.

Conflict Minerals

We are committed to eliminating materials from sources that could support conflict and negatively impact health, safety and human rights from our products and our supply chain. Conflict minerals, often referred to as 3TG, include columbite-tantalite (coltan); cassiterite; wolframite; their derivatives tantalum, tin, and tungsten; and gold. While these materials are necessary for successful technological advancement, they are at risk of financing conflict in the Democratic Republic of the Congo or an



adjoining country. At Juniper, we recognize the importance of eradicating the sourcing of these materials and supporting conflict-free sourcing in high risk areas of the world.

We believe this cannot be done effectively and efficiently without industry alignment therefore we strongly support industry-wide, multi-stakeholder efforts to promote responsible sourcing. For more than seven years, Juniper has supported the development of industry tools and programs that facilitate the reporting and collection of due diligence information on the source and chain of custody of 3TG through our membership and participation in the Responsible Minerals Initiative (RMI) and a number of its workgroups.

Given our downstream position in the supply chain, such that we do not have any direct relationships with the smelters or refiners upstream, we rely on our first-tier suppliers to procure materials that go into Juniper routing, switching and security hardware. We conduct due diligence by working closely with these suppliers to obtain information about the sources of 3TG used in the components. We are also committed to our continual engagement with our manufacturing partners and first-tier suppliers in order to advance their knowledge and capacity, so they can source responsibly and provide complete and accurate information on the origin and chain of custody of 3TG used in the products provided to Juniper.

We expect our suppliers to exercise due diligence, source responsibly from certified conflict-free smelters and support Juniper's compliance obligations, including trade compliance laws and trade restrictions from sanctioned entities and persons. More information on our conflict minerals program is available [here](#).



“As a core part of our values, we act with integrity at every point in the supply chain. We recognize corporate social responsibility is important to our customers, our communities, and our business.”

Steve Darendinger
VP, Supply Chain Operations

ENGAGING WITH OUR SUPPLY CHAIN PARTNERS: SUPPLIER ACADEMY 2019

In September 2019, Juniper hosted its first Supplier Academy in Suzhou, China where our suppliers gained a strong understanding of Juniper's vision, priorities and requirements for supplier quality. During the three-day event, 67 participants from 30 companies joined us to discuss and learn about topics such as component quality and traceability, and we conducted a yellow-belt training for our Supplier Quality Engineers. In both English and Mandarin, we shared stories of successful supplier partnerships and recognized our top suppliers for responsible business practices.

Our suppliers provided overwhelmingly positive feedback regarding the course outline, content, delivery and logistics. Supplier quality engineers were excited to share and use their training tools to measure and report their progress. We look forward to continuing the supplier academy program, adding new topics and case studies to enrich the learning experience of our supply chain partners.

Our Communities

Community Engagement

At Juniper, we believe that it's our responsibility as innovators to support philanthropic programs that create a network of opportunities for the world's next generation of engineers, critical thinkers and technical thought leaders. Every day, we strive to enrich lives around the globe through education programs, donations, volunteer work and disaster relief aid.



Engaging meaningfully with our communities is a critical part of being a good corporate citizen. Our philanthropic activities are a critical part of that engagement, and we see philanthropy as an integral part of our business and our culture. Through our Juniper Networks Foundation Fund, employee volunteer programs, matching gifts and annual Global

Day of Giving, we look for bold ways to make a significant, positive impact on communities around the globe.

Juniper Networks Foundation Fund

Over 19 years ago, we founded the Juniper Networks Foundation to meaningfully engage and make a positive impact in our communities. Since then, we have granted over \$18 million to nonprofit organizations around the world. As part of our mission to support a talented and diverse global workforce, we've concentrated on funding education nonprofits, especially those that focus on empowering girls as well as underprivileged and underrepresented students. We're proud to support incredible initiatives that make a lasting and meaningful difference in students' lives, some of which are listed below:

- + [Girlstart](#)
- + [Iridescent](#)
- + [Merrimack Valley Robotics, Inc.](#)
- + [Project Learn](#)
- + [Silicon Valley Education Foundation](#)
- + [SMASH Academy](#)
- + [The Hidden Genius Project](#)
- + [RAFT \(Resource Area for Teaching\)](#)
- + [Girl Geek Academy](#)

It's our mission to create a better world, and our employees are the lifeblood of that change. To help them make a meaningful difference, our full-time employees can take up to five workdays a year, with pay, to volunteer for a cause they believe in. In 2019, we expanded our efforts to include a quarterly volunteer day for new hires at our Sunnyvale campus, which enables the new employees to connect with each other while making a difference in the world. We also match donations up to \$1,000 per year per full-time employee. To date, Juniper has provided over \$2.5 million of employee matching funds, nearly \$275,000 of which was in 2019 alone.

At the 2019 NXTWORK event, the Juniper Australia and New Zealand team partnered with Girl Geek Academy, one of the non-profit enterprises that is a beneficiary of Juniper ANZ Community Partnership Program. Girl Geek Academy seeks to address the gender gap in tech by going on a mission to teach 1 million women technology skills by 2025.

Global Citizenship and Giving

For the past three years, our employees around the world have participated in an annual Global Day of Giving, in which they've engaged in a meaningful volunteer experience to uplift and empower local communities. In 2019, more than 450 employees from nine sites participated in packing over 175,000 meals for Rise Against Hunger, a nonprofit dedicated to providing nutrition to the most vulnerable children in underserved communities.

We recognize that we have a responsibility to support those who are affected by natural disasters around the globe. Since 2015, we've given more than \$150,000 to support disaster relief efforts in Argentina, Bahamas, Bosnia, Colombia, Croatia, India, Japan, Mexico, Nepal, Philippines, Puerto Rico, Serbia and the U.S., \$30,000 of which was donated in 2019 to help those impacted by the Assam floods in India, Hurricane Dorian in the Bahamas and the Kincadee fires in Northern California.



In 2019, one of our brilliant interns partnered with the University Talent Program to lead a philanthropy initiative during the annual Intern Showcase, a forum where our exiting interns share their best work. At the event, our employees were given donation tickets and the names of three interns from different teams within Juniper to visit with and learn about the work they accomplished during their program. Our interns collected these donation tickets, which allocated funds to [RiseAgainstHunger](#), [RAFT](#), and [Not4Sale](#), three nonprofit partners of choice. The showcase was a smashing success – over 700 employees participated, visiting an average of 10 interns from technical and non-technical backgrounds, to share ideas, connect over a cause, and donate more than \$7,500 to communities in need.

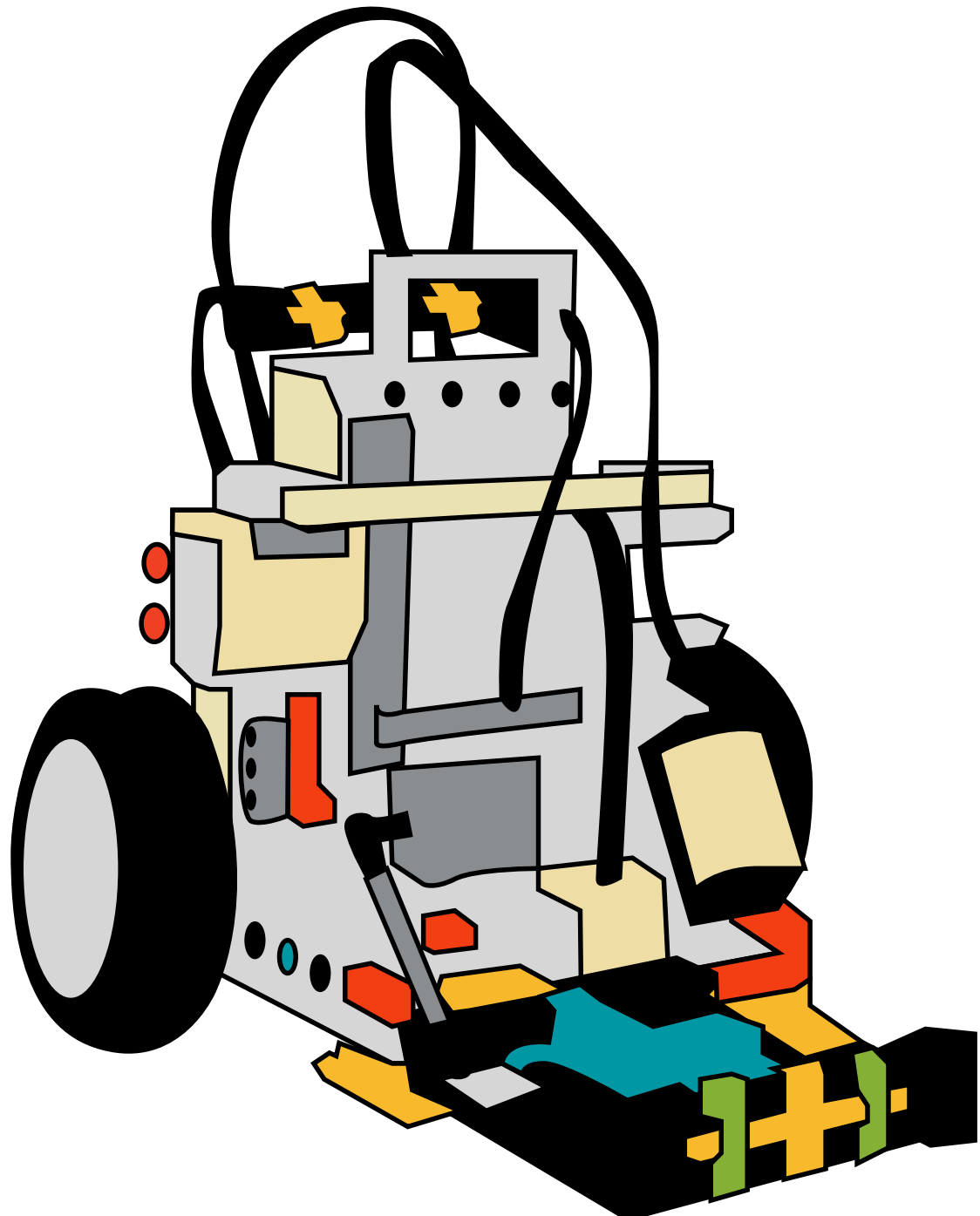
World Robot Olympiad

We believe it is imperative that the upcoming generations understand automation – Artificial Intelligence, Machine Learning, virtualization – in order to take technology forward into their future.

To demonstrate our commitment to enabling the digital future, Juniper has been a premium sponsor of the World Robot Olympiad (WRO) since the start of the 2018 season. This annual event encourages young people, ages seven to 25, to get involved with a STEM education path, equipping them for future success. In 2019 Juniper participated as a panel judge at the WRO in Gyor, Hungary where more than 28,000 teams from over 75 countries used robotics and coding to compete across three categories of competition, divided by age group: Regular Category, Smart Cities, and WRO Football.

Juniper greatly values our partnership with the WRO, and the opportunity it allows us to think outside the box and encourage young people into STEM futures all around the world. In 2018, Juniper created a documentary, [ME & MY ROBOT](#), to shine a light on the WRO's incredible achievements and help explain to interested parties the competition's scope of work. In 2019, we also hosted the U.S. finals at our Sunnyvale campus.

Along with LEGO, we are proud to be the global technology partner of World Robot Olympiad in 2018 and beyond, as it is the perfect nurturing environment for tomorrow's automation innovators.



Our Partnership with Eastside College Prep

Since 2015, we have been in partnership with Eastside College Prep, a preparatory academy whose student base is 94% Latino or African American, 50% women, and 99% first generation college students. We work with Eastside to recruit students for intern and NCG roles, two of whom we hired in 2019. In February of last year, we hosted Eastsiders for their Job Shadow Day, held informal career coaching and conducted mock job interviews. We are honored to be a partner of Eastside's community as we help shape the next generation of innovators.

Connecting People with Shared_Studios

Juniper believes in celebrating our differences and connecting over what makes us human. That's why in September 2019, Juniper launched an official partnership with [Shared_Studios](#), an innovative new company that exists to create meaningful human connections among people separated by distance and difference.

Powered by Juniper technology, Shared_Studios creates immersive portals for users to connect virtually with others across the world in an identical-looking space. From refugee camps in Syria, to train stations in the Netherlands, to our very own Sunnyvale campus, Shared_Studios

has created more than 50 portals in the world to facilitate meaningful conversations across cultures.

In late 2019, at our Sunnyvale portal, our sustainability employees transcended boundaries of distance for an open discussion during National Green Week. Our teams engaged with experts, students and legislators around the world – from Marin to Kigali – on topics of sustainability, plastic consumption, and democracy. By engaging with Shared_Studios, we breathe life into the mission of Juniper: to bring human and technology elements together in life-changing ways.



Empowering Our Communities: Digital India

With a presence in many parts of the world, we recognize and act on opportunities to uplift the communities around us. In 2015, Juniper began addressing inequality in our local communities through our partnership with Orohalli, a cluster of villages just 30 kilometers away from our home in Bangalore, India. Though the physical distance between Bangalore and Orohalli is small, the difference in quality of life is vast. Like the majority of India's population, the residents of Orohalli live in poverty and without access to basic needs, education or economic opportunity. Despite these

challenging circumstances, we believe that there are opportunities to build smart villages where technology and network connectivity can promote development and a higher quality of life.

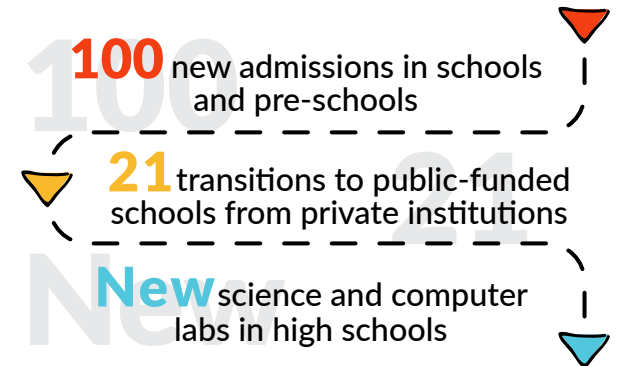
With collaboration from local NGOs, Juniper has created a plan to address four development priorities: education, healthcare, occupational opportunities and network connectivity. With our first few years focusing on education and public health, we set a strong foundation for advancement in livelihood opportunities in the last year. We also launched career training to improve skill development for Orohalli residents, including trades such as plumbing, sewing, electrical engineering, and agriculture.

Read our most recent India Excellence Center Corporate Social Responsibility Report [here](#).

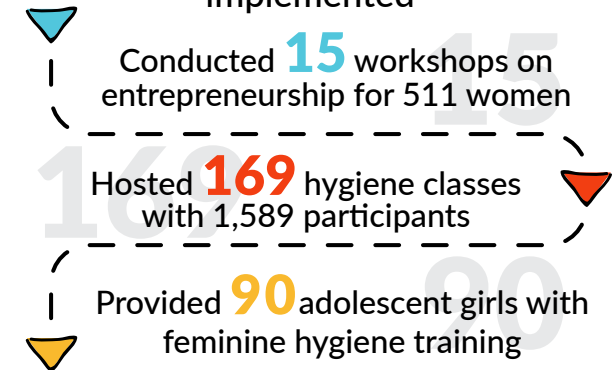


Orohalli Impact 2019

Schools saw improvements in enrollment and resources



Community programs were implemented



APPENDIX

In This Section

[Appendix I: Material Topics and Material Aspects](#)

[Appendix II: Global Reporting Initiative \(GRI\) Content Index](#)

[Appendix III: Sustainability Accounting Standards Board \(SASB\) Index](#)

[Appendix IV: Memberships and Associations](#)

Appendix I: Material Topics and Material Aspects

Our material topics were identified in our 2018 materiality assessment. The topic boundary is inclusive of the company, the explanation of the material topics is included in the 'Topic Description' below.

Juniper CCS Material Issue	Topic Description	Report Section	GRI Category	Specific GRI Disclosure
Business Ethics and Anti-corruption	Upholds high standards for business ethics across Juniper's operations and supply chain, including addressing corruption as a risk factor and providing employee training on anti-corruption practices.	Integrity and Compliance	Anti-corruption	GRI 205
Customer Satisfaction	Refers to the degree to which end-users feel Juniper products meet or exceed performance expectations and emphasizes sustained product quality.	Product Responsibility and Customer Satisfaction	N/A	N/A
Customer Data Protection and Privacy	Ensures Juniper take measures to ensure the security of personal data that is collected, stored, processed, or disseminated.	Privacy and Data Security	Customer Privacy	GRI 418
Product Safety	Addresses Juniper's ability to offer manufactured products that meet customer expectations and legal requirements with respect to the health and safety of the end-user.	Product Safety and Compliance	N/A	N/A
Employee Engagement	Refers to company-provided training and programs for upgrading employee skills and ensures employees are receiving regular performance and career development reviews.	Employee Engagement	Training and Education	GRI 404
Energy Management	Includes the types and amount of energy consumed within the business operations, the reduction of energy usage, and the reduction in energy required to produce products and services. Includes the use of renewable energy, and the improvement rate of product energy efficiency compared to previous year.	Energy Management	Energy	GRI 302
Greenhouse Gas (GHG) Emissions	Refers to the effort made to mitigate the effects of climate change through the reduction of GHG emissions, as well as the disclosure of the use and the mitigation of ozone-depleting substances (ODS), nitrogen oxides (NOX), and sulfur oxides (SOX).	Greenhouse Gas Emissions	Greenhouse Gas Emissions	GRI 305

Water and Wastewater Management	Includes reporting on water withdrawal by source, water sources significantly affected by withdrawal of water, and water recycling and reuse. Emphasizes the reduction or elimination of wastewater.	Water and Wastewater Management	Water	GRI 303
Product Sustainability	Refers to resource reduction and materials innovation in the production and use of the product, and design for low-carbon, energy-efficient output of the product. Includes managing the lifecycle impacts of products and services, such as those related to packaging, distribution, use-phase resource intensity, and other environmental and social externalities that may occur during their use or at the end of life.	Product Sustainability	N/A	N/A
Supply Chain Management	Emphasizes a robust supply chain management system, including mechanisms such as supplier scorecards and screening, comprehensive codes of conduct, and supplier audits and monitoring.	Supply Chain Management Labor Practices and Human Rights	N/A	N/A
Labor Practices	Ensures company activities have no negative impacts on the labor rights of workers, including the right to form or join trade unions and to bargain collectively, ensures compliance with local labor laws throughout the supply chain. Emphasizes Juniper's efforts to remove operations and suppliers at significant risk for incidents of forced, compulsory, or child labor.	Labor Practices and Human Rights	Freedom of Association and Collective Bargaining Child Labor Forced or Compulsory Labor	GRI 407 GRI 408 GRI 409
Business Continuity	Includes planning and preparation to ensure Juniper's continued operation in case of serious incidents or disasters throughout the value chain.	Supply Chain Management	N/A	N/A
Transparency and Reporting	Emphasizes transparency in reporting Juniper's corporate citizenship and sustainability goals, progress, and programs through clear, accessible public disclosures.	Transparency and Reporting	N/A	N/A
Environmental, Social, Governance Management	Promotes the engagement of Juniper's leadership team on material ESG topics, including decision-making, management, review, and disclosure. Ensures the consultation of stakeholders on these topics.	Management of ESG Issues	Governance	GRI 102-29 GRI 102-31 GRI 102-32

<p>Inclusion and Diversity</p>	<p>Ensures that Juniper’s culture and hiring practices embrace the building of a diverse and inclusive workforce. Includes compliance with non-discriminatory laws and addresses the issues of discriminatory practices on the basis of race, gender, ethnicity, religion, sexual orientation, and other factors.</p>	<p>Inclusion and Diversity</p>	<p>Non-discrimination</p>	<p>GRI 406</p>
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Appendix II: Global Reporting Initiative (GRI) Content Index

GRI Indicator	General Standard Disclosure	Report Section	Page Number
102-1	Name of the organization	Company Profile and Vision	5
102-2	Activities, brands, products, and services, including an explanation of any products or services that are banned in certain markets	Company Profile and Vision	5
102-3	Location of headquarters	Company Profile and Vision	5
102-4	Location of operations	Company Profile and Vision	5
102-5	Ownership and legal form	Company Profile and Vision	5
102-6	Markets served	Company Profile and Vision	5
102-7	Report the scale of the organization, including:	Company Profile and Vision	5
102-8	Information on employees and other workers	Company Profile and Vision Inclusion and Diversity	5; 35
102-9	Supply chain	Supply Chain Management Labor Practices and Human Rights	17; 41
102-10	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	About This Report	3
102-11	Report how the Precautionary Approach or Principle is addressed by the organization.	Product Safety and Compliance	17
102-12	List externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	Integrity and Compliance Operational Sustainability Employee Wellness Supply Chain Management Responsible Materials Sourcing Our Communities	13; 21; 38; 17; 42; 45

102-13	List memberships of associations (such as industry associations) and national or international advocacy organizations. This refers primarily to memberships maintained at the organizational level.	Appendix IV – Memberships and Associations	62
102-14	Statement from senior decision-maker	Letter from the CEO	4
102-16	Describe the organization's values, principles, standards, and norms of behavior such as codes of conduct and codes of ethics.	Company Profile and Vision Integrity and Compliance	5; 13
102-18	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental, and social topics.	Governance Structure and Culture	8
102-40	Provide a list of stakeholder groups engaged by the organization.	Stakeholder Communication and Engagement	10
102-41	Report the percentage of employees covered by collective bargaining agreements.	We do not currently have this information available for disclosure.	N/A
102-42	Report the basis for identification and selection of stakeholders with whom to engage.	Materiality Stakeholder Communication and Engagement	8; 10
102-43	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	Stakeholder Communication and Engagement	10
102-44	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	Materiality Stakeholder Communication and Engagement	8; 10
102-45	List all entities included in the organization's consolidated financial statements or equivalent documents. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	Company Profile and Vision	5

102-46	<p>Explain the process for defining the report content and the material boundaries.</p> <p>Explain how the organization has implemented the Reporting Principles for Defining Report Content.</p>	<p>About this Report</p> <p>Materiality</p> <p>Stakeholder Communication and Engagement</p>	3; 8; 10
102-47	List all the material topics identified in the process for defining report content.	<p>Corporate Citizenship and Sustainability</p> <p>Stakeholder Communication and Engagement</p>	7; 10
102-48	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	No restatements	N/A
102-49	Report significant changes from previous reporting periods in the list of material topics and material topic boundaries.	There are no significant changes in the list of material topics and material topic boundaries from the previous reporting periods.	N/A
102-50	Reporting period (such as fiscal or calendar year) for information provided.	About This Report	3
102-51	Date of most recent previous report (if any).	About This Report	3
102-52	Reporting cycle (such as annual, biennial).	About This Report	3
102-53	Provide the contact point for questions regarding the report or its contents.	About This Report	3
102-54	Report the “in accordance” option the organization has chosen.	About This Report	3
102-55	Report the GRI Content Index for the chosen option. Index must include disclosure numbers and page numbers (or direct URLs).	Appendix II – GRI Content Index	54
102-56	<p>Report the organization’s policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided.</p> <p>Report the relationship between the organization and the assurance providers.</p> <p>Report whether the highest governance body or senior executives are involved in seeking assurance for the organization’s sustainability report.</p>	<p>This report was not externally assured and there are currently no plans to seek external assurance. The report content was thoroughly reviewed by internal subject matter experts and senior management to ensure the accuracy of statements and data.</p>	N/A

Topic Specific Disclosures			
GRI Standard	GRI Topic	Report Section	Page Number
Management Approach			
103-1	Explanation of the material topic and its boundary	Appendix I—Material Topics and Material Aspects	51
103-2	Management approach and its components	Appendix I—Material Topics and Material Aspects	51
103-3	Evaluation of the management approach	Appendix I—Material Topics and Material Aspects	51
Material Topic: Business Ethics and Anti-corruption			
205-1	Operations assessed for risks related to corruption	Integrity and Compliance	13
Material Topic: Consumer Data Protection and Privacy			
418-1	Substantiated complaints regarding concerning breaches of customer privacy and losses of customer data	Data Privacy and Product Security Security Incident Response Team Blog	15
Material Topic: Product Safety			
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Compliance in Practice	13
Material Topic: Employee Engagement			
404-1	Average hours of training per year per employee	Training and Development	38
Material Topic: Energy Management			
302-1	Energy consumption within the organization	Energy Management	21

302-2	Reduction of energy consumption	Energy Management	21
Material Topic: Greenhouse Gas Emissions			
305-1	Direct (Scope 1) GHG emissions	Greenhouse Gas Emissions	23
305-2	Energy indirect (Scope 2) GHG emissions	Greenhouse Gas Emissions	23
305-3	Other indirect (Scope 3) GHG emissions	Greenhouse Gas Emissions	23
Material Topic: Water and Waste Management			
303-5	Water consumption	Water and Wastewater Management	27
Material Topic: Supply Chain Management			
308-1	New suppliers that were screened using environmental criteria	Responsible Materials Sourcing	42
414-1	New suppliers that were screened using social criteria	Responsible Materials Sourcing	42
Material Topic: Labor Practices			
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Benefits and Work-Life Balance	40
403-1	Occupational health and safety management system	Global Health, Safety and Security	38
403-3	Occupational health services	Global Health, Safety and Security	38
403-5	Worker training on occupational health and safety	Training and Development Global Health Safety and Security	38

403-6	Promotion of worker health	Employee Benefits and Work-Life Balance	40
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Labor Practices and Human Rights Responsible Materials Sourcing	41; 42
403-8	Workers covered by an occupational health and safety management system	Global Health, Safety and Security	38
Material Topic: Business Continuity			
201-2	Financial implications and other risks and opportunities due to climate change	Greenhouse Gas Emissions For more information, see: CDP Climate Change 2019 response	23
Material Topic: Transparency and Reporting			
417-1	Requirements for product and service information and labeling	Product Sustainability Product Safety and Compliance	28; 17
Material Topic: ESG Management			
307-1	Non-compliance with environmental laws and regulations	Compliance in Practice	13
308-1	New suppliers that were screened using environmental criteria	Responsible Materials Sourcing	42
Material Topic: Inclusion and Diversity			
405-1	Diversity of Governance Bodies and Employees	Inclusion and Diversity For more information see: Equal Employment Opportunity – 2018 Employer Information Report	35

Appendix III: Sustainability Accounting Standards Board (SASB) Index

Topic	Accounting Metric	Category	Unit of Measure	Code	Report Reference/ Direct Response
Product Security	Description of approach to identifying and addressing data security risks in products	Discussion and Analysis	n/a	TC-HW-230a.1	Please see “Data Privacy and Product Security” for more details.
Employee Diversity & Inclusion	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	Quantitative	Percentage (%)	TC-HW-330a.1	Please see “Inclusion and Diversity: By the Numbers” on our website.
Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%)	TC-HW-410a.1	100%
	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	Quantitative	Percentage (%)	TC-HW-410a.2	100% of qualifying products
	Percentage of eligible products, by revenue, meeting ENERGY STAR criteria	Quantitative	Percentage (%)	TC-HW-410a.3	100% of qualifying products
Supply Chain Management	Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP) or equivalent, by (a) all facilities and (b) high-risk facilities	Quantitative	Percentage (%)	TC-HW-430a.1	Please see “Vetting and Monitoring Suppliers” for more details.
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Discussion and Analysis	n/a	TC-HW-440a.1	Please see “Responsible Sourcing” and “Conflict Minerals” for more details.

Activity Metric	Category	Unit of Measure	Code	Report Reference
Number of units produced by product category	Quantitative	Number	TC-HW-000.A	We are not able to report the number of units produced by product category, however, we are able to report the product category by revenue per the below: Routing: 57% Switching: 31% Security: 12%
Area of manufacturing facilities	Quantitative	Square feet (ft.)	TC-HW-000.B	0 square feet. Juniper does not own any manufacturing facilities
Percentage of production from owned facilities	Quantitative	Percentage (%)	TC-HW-000.C	0%

Appendix IV: Memberships and Associations

Trade Associations and Public Advocacy Groups

Alliance for Gray Market and Counterfeit Abatement
www.agmaglobal.org

Armed Forces & Communications Electronics Association
www.afcea.org

ASIS International (American Society for Industrial Security)
www.asisonline.org

Cellular Operators Association of India
www.coai.com

Forum of Incident Response and Security Teams
www.first.org

Gartner - Corporate Executive Board
www.gartner.com

Industry Consortium for the Advancement of Security on the Internet
www.icasi.org

Information Technology Industry Council
www.itic.org

International Security Management Association
www.isma.com

National Association of Environmental, Health and Safety Managers
www.naem.org

Open RAN Policy Coalition
www.openranpolicy.org

Responsible Business Alliance
www.responsiblebusiness.org

Responsible Minerals Initiative
www.responsiblemineralsinitiative.org

Silicon Valley Leadership Group
www.svlg.com

United States-India Business Council (USIBC)
www.usibc.com

United States-India Strategic Partnership Forum
www.usispf.org

Standards Bodies

3rd Generation Partnership Project
www.3gpp.org/

Alliance for Telecommunications Industry Solutions (ATIS)
www.atis.org

Broadband Forum
www.broadband-forum.org

CDP
www.cdp.net

Ethernet Alliance
www.ethernetalliance.org

European Telecommunications Standards Institute
www.etsi.org/WebSite/homepage.aspx

International Telecommunication Union
www.itu.int/ITU-T/

Internet Engineering Task Force
www.ietf.org/

Internet Society (ISOC)
www.isoc.org/

Metro Ethernet Forum
www.mef.net/about-mef/

Next Generation Mobile Networks Alliance
www.ngmn.org

Optical Internetworking Forum
www.oiforum.com

PCI-SIG
www.pcisig.com/home

QuEST Forum
www.questforum.org

Society of Cable Telecommunications Engineers
www.scte.org/standards-development/

Storage Networking Industry Association
www.snia.org/home

Trusted Computing Group
www.trustedcomputinggroup.org

Critical Infrastructure Protection, Incident Response, and/or Government-Industry Partnership Organizations

Communications Sector Coordinating Council

www.comms-scc.org/

Cybersecurity Tech Accord

www.cybertechaccord.org/

DHS National Coordination Center for Communications

www.cisa.gov

Enduring Security Framework Working Group – Critical Infrastructure Partnership Advisory Council

www.cisa.gov

Industry Consortium for the Advance of Security on the Internet

www.icaso.org/

Information Technology Sector Coordinating Council

www.it-scc.org

Information Technology Sector Information Sharing and Analysis Center

www.it-isac.org/

National Cybersecurity Excellence Partnership

www.nccoe.nist.gov/partners

Forward-Looking Statements

This report contains forward-looking statements regarding future events or future expected results of Juniper Networks, Inc. that involve a number of uncertainties and risks because they are based on our current expectations, estimates, forecasts, and projections about our business, economic and market outlook, the industry in which we operate and the beliefs and assumptions of our management. Words such as “expects,” “anticipates,” “targets,” “goals,” “projects,” “would,” “could,” “intends,” “plans,” “believes,” “seeks,” “estimates,” variations of such words, and similar expressions are intended to identify such forward-looking statements. These statements may include information with respect to Juniper’s future strategies; technology; competitive landscape; partners, customers and suppliers; product portfolio and pipeline; performance; and overall prospects and are forward-looking statements within the meaning of the Private Securities Litigation Reform Act. Actual results or events could differ materially from those anticipated in these forward-looking statements.

Further information on these and other factors that could affect the company’s financial results is included in the company’s report on Form 10-K, Form 10-Q and other filings we make with the Securities and Exchange Commission from time to time. All statements contained in this report are made only as of the date of this report, and Juniper Networks undertakes no obligation to update the information in this report in the event facts or circumstances may change after the date of this report.



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