ribbon®

RIBBON COMMUNICATIONS SUSTAINABILITY REPORT 2019-2020

COMMUNICATIONS SOFTWARE AND NETWORK SOLUTIONS FOR A BETTER, SAFER, MORE CONNECTED WORLD

TABLE OF CONTENTS

ABOUT THIS REPORT

This is Ribbon Communications' first global Sustainability Report, embracing the tradition of annual sustainability reporting established over the past eight years at ECI Telecom, following the merger of Ribbon with ECI in 2020. This report presents our global operations, drawing from both legacy Ribbon and ECI operations, and the merged entity. It aims to provide a reflection of the ways in which Ribbon makes a positive contribution to people and society through its core business, and accounts for our Environmental, Social and Governance (ESG) performance through 2019 and 2020.

Data in this report relates to the 2019 calendar year and prior years and includes examples of practice and operational updates through 2020. ECI's last Sustainability Report was published in 2019 covering ECI's 2018 performance. Going forward, Ribbon plans to report annually around mid-year. This year, our report extends into 2020 to account for the critical impacts of COVID-19 on our operations and also our significant integration of ECI, both of which created challenges in the preparation of this first global report. The scope of information in this report is all global business operations owned and operated by Ribbon, unless otherwise stated.

This report was prepared in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standards, Core option. The selection of content for this report was informed by an assessment of material topics following management discussion and incorporates previous work done in this area by ECI. We did not conduct a full materiality assessment in 2020, but we expect to do so in 2021 when the integration process is complete and we hope the effects and implications of the COVID-19 pandemic are clear enough to enable a reasonable assessment.

The data in this report was not verified by an independent third party. We believe our data monitoring and tracking is robust and is largely confirmed through internal audits and quality certifications by third parties.

Data and information in this report may differ from information published in Ribbon's Annual Report, due to the different nature of disclosures and methodologies. In such cases, for regulatory disclosure requirements, the Annual Report should take precedence. In the event of any perceived discrepancy, or any other query, comment or observation, as well as for any feedback or suggestions, we invite you to contact us. Please write to:

Patrick Joggerst,
Executive Vice President and Chief Marketing Officer
sustainability@rbbn.com

SUSTAINABILITY
REPORT
2019-2020

MESSAGE FROM OUR CEO

I am pleased to share Ribbon's first annual Sustainability Report that offers insight into who we are and how we contribute to global sustainable development through our core business. I consider this report a considerable milestone achievement for three reasons:

First, this is my first year as President and Chief Executive Officer of Ribbon and I am proud to start a new era of transparency and responsiveness to all our stakeholders.

Second, as we publish this report in 2020, we reflect how this has been a year unlike any other. The merger of Ribbon and ECI Telecom in early 2020 created a global leader in delivering real-time communications software and packet and optical transport solutions to many of the world's largest service providers, enterprises, and critical infrastructure companies such as utilities and large-scale education networks. This might sound overly technical for those not in our industry, but what it means is that we are now an even greater force for good, innovating and leveraging communications technology to transform and enhance lives while helping reduce the climate change impact of the way we all live, work and connect.

Third, of course, 2020 was the year in which we all experienced the end-to-end disruption of the COVID-19 pandemic. Our top priority has been to continue to put our team members first, knowing that they will then take care of our customers – no matter what! We have followed applicable pandemic protection guidance and aimed to protect our employees while ensuring business continuity through 2020 and beyond.

At Ribbon, we are focused on bringing innovative, environmentally favorable cloud-based technology to market.

The Ribbon-ECI merger allows us to leverage Ribbon's longstanding relationships with some of the world's best-known communications service providers and enterprises and extend the portfolio with ECI's critical infrastructure segment into adjacent, complementary data markets.

In addition, it enables us to unlock significant opportunities to compete in the rapidly growing 5G market, while at the same time serving the ever-increasing data demands on non-5G infrastructure. Our merger also opens the door for the newly combined company to take advantage of other disruptive technologies that are unlocking capital expenditures, such as the Internet of Things (IoT) and Mobile Edge Computing. We are extremely excited about the opportunities that lie ahead.

We remain fully committed to operating ethically, efficiently and inclusively and contributing to the mitigation of climate change and other global sustainable development priorities.

As restrictions begin to ease in the U.S. and around the globe, I look forward to meeting with more of our customers, partners and employees in person.

I wish you all a healthy and safe year ahead.

Thank you for your interest in this report.

Sincerely,

Bruce McClelland
**President and Chief Executive Officer**

ABOUT RIBBON

Ribbon Communications (Nasdaq:RBBN), which recently merged with ECI Telecom, is a global provider of converged communications software and network solutions to service providers, enterprises, and critical infrastructure sectors. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility and builds on more than 12 decades (since our founding as Nortel Networks Corporation in 1895) of expertise and leadership in network solutions.

OUR CUSTOMERS

Our global telecommunications service provider customers include fixed-line, wireless, cable, Internet and interconnect service providers. Our enterprise customers include businesses including micro and small businesses and large and distributed enterprises across various industry verticals with a concentration in the financial, government, healthcare and education sectors. We sell to customers via a direct sales team as well as through indirect channels that include resellers, system integrators and service providers. Independent software vendors also partner with Ribbon to source our software solutions and market them through their sales channels.

Timeline of Ribbon's Evolution

Network Transformation NORTEL Est. 1895	Voice Over IP GENBAND Est.1999	Optical Transport and Packet Networking ECI THE ELASTIC NETWORK Est. 1961

2010	2017	2018	2019	2020

Session Border Controllers Sonus Est. 1997	Enterprise Edge edgewater NETWORKS Est. 2002	Analytics anova Est. 2015
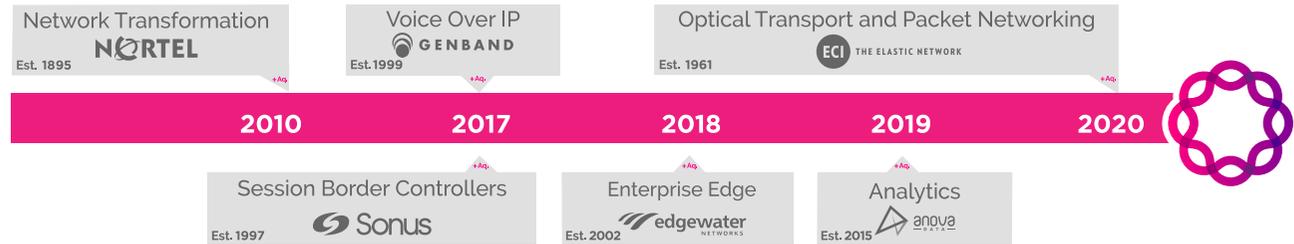
Ribbon is headquartered in Westford, Massachusetts, U.S. and we serve customers in over **140 countries**[1] through our network of R&D and sales and support offices.

Belgium, Czech Rep, France, Germany, Italy, Netherlands, Poland, Spain, Switzerland

Canada
USA
Headquarters Westford Massachusetts
Mexico
Costa Rica
Colombia
Brazil
Chile
Argentina

UK European Union
Russia
Ukraine
Turkey
Israel
UAE
Saudi Arabia
Nigeria
Togo
Kenya
South Africa

Japan
China
Taiwan
Thailand
Vietnam
Philippines
Malaysia
Singapore
Indonesia
India
Australia
New Zealand

R&D Centers of Excellence
Sales & Support Locations

In the twelve months ending on June 30, 2020, Ribbon's combined annual revenue was over **$898 million**[2], and our workforce numbered more than **3,900 employees**[3]. To learn more about Ribbon visit rbbn.com.

1 Cloud and Edge and Packet Optical combined at December 31, 2019.
2 Cloud and Edge and Packet Optical combined trailing twelve months ended June 30, 2020.
3 As of June 30, 2020.

OUR VALUES

TEAM
We work as One Team, advancing together towards common and clear goals.

PASSION
We take pride in and celebrate our achievements!

CUSTOMER
We strive to be trusted advisor to our customers. We do that by listening to them, anticipating their needs and offering best in class solutions. Our customers know that "we do what we say".
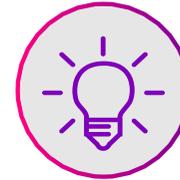
INNOVATION (CREATIVITY)
Ribbon's competitive advantage relies on our ability to offer innovative, creative and state-of-the-art technology.
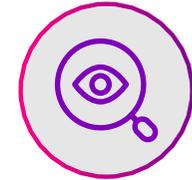
TRUE
Transparency **R**espect **U**npretentious **E**mpowerment
We are open & transparent in everything we do, creating trust amongst employees, customers, partners & vendors.

OUR PRODUCTS

Ribbon's industry-leading portfolio of technology products is designed to ensure that calls and data are efficiently routed and securely transmitted over many of the world's largest communications networks today, and prepare for the networks of tomorrow. Our offerings fall into two broad categories:

CLOUD AND EDGE

A range of cloud-based solutions that include Voice over Internet Protocol (VoIP) applications and voice calling for collaborating apps, as well as security applications and fraud mitigation through identity assurance for robocalling. Our global service provider customers include fixed-line, wireless, cable, Internet and interconnect service providers.

PACKET OPTICAL NETWORKS

A solution portfolio providing cyber-secure multilayer optimized packet and optical transport including carrier ethernet for businesses and networks, enabling efficient and flexible expansion of capabilities, including 5G, for service providers, utilities and critical infrastructure users.

Many of Ribbon's solutions have been certified and deployed by governmental agencies around the world, including the U.S. Department of Defense.

HOW WE TALK

Below are some common industry acronyms and terms used in this report for better understanding of our context, products and performance:

5G: This is the next generation wireless network technology that will transform how we use the internet. 5G is expected to deliver unprecedented scale and speed, enabling entirely new ways of living, working, consuming entertainment and connecting with others, from telehealth, to electric mobility, to smart cities, to remote working and much, much more. 5G requires a step-change in network architecture and infrastructure. Networks around the world are currently preparing for 5G and it is expected to roll out over the next 3-5 years.

IP: Internet Protocol: These are the rules for routing and addressing packets of data so that they can travel across networks and arrive at the correct destination. Data traversing the Internet is divided into smaller pieces, called packets.

Latency: This is how the industry refers to the time it takes for a data packet to travel from one designated point to another. Very low latency – our objective – means that the time is shorter so communications are faster.

LTE: Long-Term Evolution: In most countries, mobile data communications are carried on systems supporting the 4G LTE standard. These systems allow high-speed data for mobile phones and other mobile devices for streaming voice calls, video, and data from social media and streaming services. Mobile phone industry standards often use Voice over LTE (VoLTE) for delivering voice as a data stream within the LTE data transmission.

Robocalling: Robocalling has emerged over the past few years quite extensively and refers to telephone calls from an automated source that deliver a prerecorded message. Robocalls are typically delivered simultaneously to large numbers of people. While there are positive uses for robocalling, such as emergency calls or public service announcements, the downsides are troublesome: harassment, spoof calls, scams, threats and fraud, and these must be mitigated.

RTC: Real-Time Communications: In modern businesses, RTC includes phone calls, video conferencing, chat, text messaging, desktop sharing, and team collaboration.

SBC: Session Border Controller: A communications element that ensures RTC traffic is properly routed between network providers, confirming differing protocols are understood so that calls can be delivered across different networks securely. An SBC secures and controls a SIP network by admitting (or not admitting) and then directing communications between two end devices on the network, such as a VoIP call between two phones or a video conference between multiple devices. SBCs are deployed at the network perimeter so they can control and secure real-time communication sessions for both enterprises and service providers.

SIP: Session Initiated Protocol: The primary protocol that establishes the connection between two endpoints and closes the connection when the call is finished.

Streaming: This refers to transmitting or receiving data (especially video and audio material) over a computer network as a steady, continuous flow, allowing playback to start while the rest of the data is still being received. Streaming is possible with high-speed connections and low latency.

VoIP: Voice over Internet Protocol: A system that allows users to make voice calls using the Internet, rather than a telephone landline.

COVID-19 RESPONSE

At the onset of the COVID-19 pandemic, our thoughts were two-fold: first, protect the health and safety of our employees and their families, and second, maintain continuity of service for our customers where the critical reliance upon network communications is amplified - especially in times where physical movement is restricted. From the early days of the pandemic, Ribbon's solutions were instrumental in keeping the global economy afloat by helping our service provider and enterprise customers deliver capacity to meet increased network traffic caused by more people working from home.

Pandemic response is familiar to us at Ribbon, as we had already added to our business continuity plans following the influenza pandemic in August of 2016. We held enterprise pandemic preparedness drills in Ireland and Malaysia in 2019, and gained learnings from both exercises, which were later applied in our COVID-19 response in 2020. Our preparations included work from home (WFH) policies and risk assessments, as well as technical procedures for data storage, laptop hardware and more. Business Continuity planning at Ribbon is aligned with ISO 22301:2012 for the governance of our entire Business Continuity Management System.

Similarly, through 2020, we closely monitored the guidance of the World Health Organization (WHO), the U.S. Centers for Disease Control and Prevention (CDC) and local governmental bodies to ensure that we adhered to their recommendations regarding the health and safety of our customers, communities, partners and employees. We strived to observe all regulatory guidance for teleworking to keep our employees informed, avoiding furloughs and maintaining benefits through the pandemic with the help of our employees who took temporary salary reductions to help offset the impacts the pandemic had on our operations. For employees in critical roles who continued working at our sites or in the field, we provided training, PPE and physical distancing protocols and guidance.

With gradual return to the office programs in different countries around the world, we continue to monitor each local situation, comply with local requirements, and adapt work planning to meet local needs.
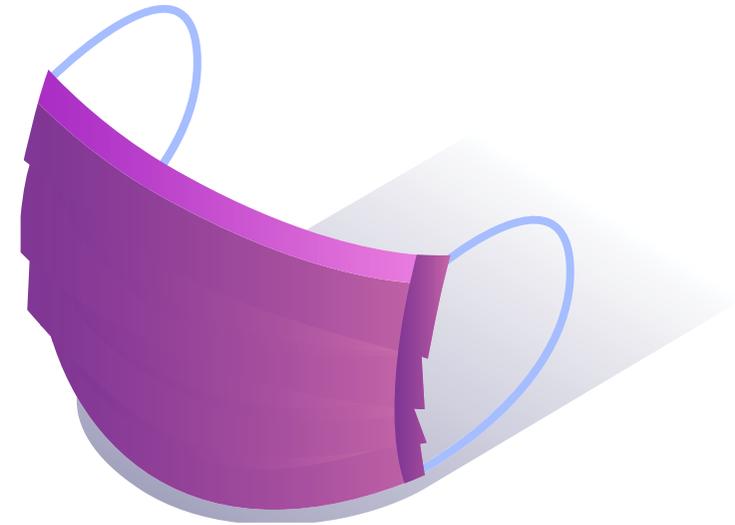
SUPPORTING CUSTOMERS THROUGH THE PANDEMIC

In March 2020, our Chief Executive Officer issued a letter to our customer and business partners to reassure them of our continued commitment to their success, and of the continuity in our service.

Further, we implemented programs to help customers address temporary surges in network traffic. These programs included expanding capacity on our **Session Border Controllers** with temporary licenses if applicable, and rapidly deploying work-at-home offerings via our cloud to equip remote workers and remote call center agents. For example, in April, Ribbon offered free delivery of cloud-based communications and collaboration technology on the IBM public cloud to support IBM enterprise clients' remote staff who transitioned to working from home during the COVID-19 pandemic.

Session Border Controller

"It's a privilege to work with our longtime partner IBM to help businesses continue to operate as close to normal as possible under these highly unusual circumstances. Combining IBM's trusted and secure public cloud environment with our advanced unified communications provides enterprise teams with the communications tools they need to collaborate, stay productive and offer their customers great support."

Patrick Joggerst, Executive Vice President and Chief Marketing Officer

bandwidth

"We worked with the Ribbon team to rapidly deploy their Session Border Controller Software Edition on Amazon Web Services and were able to easily accommodate the rapid spike in demand from our customers. Our customers are some of the most recognized brands in the world and they have come to expect world-class support from Bandwidth."

Scott Mullen, Chief Technology Office, Bandwidth

MORE BANDWIDTH FOR BANDWIDTH

Bandwidth is a software company focused on communications for the enterprise. Companies like Google, Microsoft, GoDaddy, Cisco, Zoom and Ring Central use Bandwidth's solutions to easily embed voice, messaging and emergency services access into software and applications. At the onset of the COVID-19 pandemic, the rapid migration to WFH across markets caused dramatic changes to Bandwidth's network traffic, urgently requiring additional session border controller capacity while ensuring continued security and reliability. Bandwidth selected Ribbon's Session Border Controller Software Edition for cloud application that could be rapidly scaled without sacrificing any features or functionality. The Ribbon and Bandwidth teams took on this challenge together and made it happen in less than a week, enabling Bandwidth to implement 8,000 calls per second of additional SBC capacity for their customers.

SUSTAINABILITY AT RIBBON

Ribbon aims to help transform the lives of people, society and the health of the planet through leveraging our expertise in transforming networks, enhancing security and delivering world-class solutions to the largest communications service providers, enterprises and governments around the world. Communications technology and continuous innovation form the backbone upon which sustainable development largely depends.

The Global Enabling Sustainability Initiative's (GeSI) Smarter 2030 Report[1] indicates that the Information and Communications Technology Sector (ICT):

- Will improve the quality of life by 2030 by connecting 2.5 billion previously unconnected people to services.

- Could enable $11.4 trillion stakeholder benefits, comprising $6.5 trillion in new revenues across key sectors and $4.9 trillion in cost savings from greater efficiencies and decreased waste.

- Has the potential to maintain global CO_{2e} emissions at 2015 levels, decoupling the past pattern where growth equated to emissions increases, thereby promoting sustainable growth through 2030.

1 https://smarter2030.gesi.org/ accessed October 2020

We support the UN Sustainable Development Goals as a blueprint for global prosperity and recognize that our solutions can be instrumental in helping drive progress to achieve these goals. At the same time, as a global business, we embrace our responsibility to conduct business in a way that upholds our values, ethical principles and standards, and serves people and the environment in positive ways, throughout our entire value chain. Ribbon aims to accelerate our positive impact on society and the environment through our core business, in a way that builds trust, enables dialogue, partnerships and collaboration, and serves a broader agenda of social justice, equity and long-term wellbeing.

At present, we identify 10 priority sustainability issues in alignment with the aims of four Sustainable Development Goals:

8 DECENT WORK AND ECONOMIC GROWTH

Employee development, safety and wellbeing

Community partnerships

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Technology innovation

Communications security

Universal access to communications

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Ethical conduct

Human rights

Responsible supply chain

13 CLIMATE ACTION

Climate change

Reducing waste

Due to changes in our business in 2019-2020, and the impact of the COVID-19 pandemic, we did not perform a full materiality assessment to develop these priority topics. Instead, our selection was informed by previous work in this area, a review of sustainability trends in our sector, and management discussion.

Looking forward, we plan to make further progress on a number of fronts in 2021 and beyond:

- We intend to perform a full materiality assessment in 2021 and establish multi-year targets to 2030.

- We intend to examine the Sustainability Accounting Standards Board (SASB) Standards for our industry and start reporting against the relevant indicators.

- We will study the requirements and commitments needed to confirm Science Based Targets for our greenhouse gas emissions and work towards establishing such targets.

TRUSTED SOLUTIONS TO CONNECT PEOPLE AND TECHNOLOGIES

We are proud to serve over 1,000 customers globally. Our customers are located around the world in over 50 countries and include many of the leading global telecommunications service providers and enterprises, as well as large organizations including banks, hospitals and universities. We have continually served many of our largest customers for over 30 years. Service providers use our products to provide secure software-enabled RTC for enterprises and the end-users they serve, and in some cases, other service providers. Enterprises use our products to provide software-enabled RTC for their employees (including remote workers) as well as provide secure communications networks for their customer-facing components, such as call and contact centers.

Our solutions are trusted by many of the world's largest global and national communications service providers and enterprises, national governmental agencies, airlines, hospitals, educational institutions, financial institutions and public safety organizations.

Ribbon innovates and designs our technology to help future-proof communications networks over the long term, in many cases for 20 years or more, so that service providers and enterprises can avoid having to replace costly network equipment frequently. Our advanced analytics solutions help service providers continuously monitor their networks to ensure that they run efficiently. Ribbon's packet optical network transport solutions help improve data transmission and will play a critical role in 5G deployments as the technology is gradually deployed in the coming years.

ALIGNINING WITH MAJOR TECHNOLOGY AND CONNECTIVITY TRENDS

Ribbon's solutions support many of the major technology trends that will underpin economic stability and growth, especially in a post-COVID world:

- **The 5G Revolution:** 5G technology promises to dramatically improve download speeds and offer faster data connections to allow unprecedented possibilities that will change the way we live and work. 5G will usher in increased adoption of technology in life-changing areas such as remote surgeries and other telehealth applications, electric mobility, educational platforms and much more. Ribbon's solutions enable service providers to improve and expand their offerings with activities such as improved gaming and **streaming** experiences through ultra-low **latency,** faster downloads and flexible and agile 5G readiness.

- **Accelerating the Cloud:** Ribbon's software-centric, cloud-based portfolio enables customers to transfer carbon-intensive data storage from physical environments into the cloud, allowing for efficiencies of scale, reduction in real estate assets and most significantly, substantial power savings and greenhouse gas emission reductions.

- **Redefining Working from Home:** Ribbon's portfolio has been instrumental in supporting service providers' increased network demand during the COVID-19 pandemic. Most companies were able to effectively respond and support their employees work from home needs by using remote, Internet and cloud-based tools – redefining what is possible. We fully expect that employee options to work from home will become an embedded feature of the future workplace in 2021 and beyond, requiring that the demand for high quality, versatile and reliable connectivity will be central to business strategies going forward, with or without the pandemic.

- **New analytics to maximize efficiency:** The increased demand for data creates a heightened need for improved analytics and forecasting tools to ensure that resources are optimally utilized and efficiencies are effectively captured. Ribbon's big data analytics solutions with artificial intelligence (AI) and machine learning (ML) help customers identify efficiency opportunities, such as moving to carbon-efficient cloud-based storage, improving operational profitability and maintaining performance, resiliency, security and scalability.

- **Solving real-world problems (robocalling):** Unsolicited robocalling is one of the biggest issues facing the telecommunications industry. Our innovative identity assurance solutions are designed to mitigate annoying, fraudulent and unethical robocalls and increase the trust consumers have in their telephone communications networks.

- **Connecting the unconnected:** Ribbon's technology solutions help bridge the digital divide by bringing the latest in **IP-**based solutions to rural and underserved communities. Ribbon's solutions allow rural service providers to efficiently transform their legacy telecommunications networks to the latest in digital technology with comparative ease and efficiency, often by building on legacy systems rather than destroying them.

Microsoft Teams and Zoom are two of the fastest growing collaboration platforms in the market. Ribbon's technology delivers critical voice functionality support to both of these popular platforms to help improve the communications experience of end users. Using Ribbon's technology, customers can initiate calls directly from Microsoft Teams or Zoom without having to leave the application.

❝❝What traditional firewalls do for data, SBCs do for voice and video data, which is increasingly shared over IP networks. More often than not, SBCs are the first line of defense for voice and video endpoints because of their ability to detect suspicious or anomalous behavior and communicate between other devices, firewalls and technology within a network – an ability that firewalls alone do not have.❞❞

Patrick Joggerst, Executive Vice President and Chief Marketing Officer

MAKING A 5G WORLD POSSIBLE

At Ribbon, we are leading the technology that will enable a seamless transition to 5G. **Sam Bucci, Ribbon's Executive Vice President & General Manager, Packet Optical Networks** shares his perspectives on the transition to 5G:

How will 5G change network communications?

💬 The network will be one of the most strategic things in every country. Whoever controls the 5G network can control the country. Just as 5G has the power to enable advanced ways of living, communicating, working and enjoying entertainment, so can a failure of 5G, or a deliberate malicious intervention, cause collapse and confusion. For this reason, the precision of the network needs to be much higher than it is today, latency must be much lower, and availability must be much higher. The amount of traffic continues to increase and will continue to grow. Everyone will be wanting to do everything from anywhere, and the network must provide this capability securely and reliably. With 5G, we can say we are building network that will take us to a next generation world, not a next generation network. 💬

How is Ribbon supporting the transition to 5G?

💬 The changes required in infrastructure, network architecture and seamless interoperability between different vendors and solutions will be key to success. At Ribbon, we are ready. In fact, we have been preparing our capabilities and offerings for the past several years and we are already engaging with many companies in the world. We have evolved our networks and built solutions that currently perform in a 4G environment and they are 5G ready whenever our customers flip the switch . One of our unique capabilities, for example, is network slicing. Current systems cannot handle such a multitude of services as we expect with 5G. At Ribbon, we have developed our slicing capabilities so that services of a similar type can be bundled into slices that have the same characteristics, enable the carrying capacity of the network to handle them effectively. We add security and isolation layers between the different slices, thereby making the entire network less vulnerable to attack. 💬

SEAMLESS EVOLUTION TO 5G IN INDIA

In 2020, a long-time valued customer of Ribbon, Bharti Airtel, India's leading integrated telco, selected Ribbon's 5G-Native Neptune platform to upgrade its packet transport network to deliver its strategy to make its network future-proof and ready for a seamless transition to its emerging technologies. Ribbon's 5G-native Neptune multi-layer solution will be deployed throughout Bharti Airtel's India network, providing high capacity, low latency and real time programmability. The program includes end-to-end automated migration from the existing network to the modernized one and, once deployed, will deliver the most advanced communications capabilities in Asia to millions of Bharti Airtel's customers.

💬 Ribbon has been a trusted partner since 2004, and their proven track record gives us confidence that they will successfully manage this upgrade. This compact, robust solution from Ribbon will both serve our current needs and make the Airtel network 5G ready. 💬

Randeep Sekhon, Chief Technology Officer, Bharti Airtel

TRUSTED, CERTIFIED PRODUCTS

At Ribbon, we strive to anticipate and meet our customers' needs by delivering innovative solutions, providing high quality products and services and ensuring our environment and offerings are secure.

Our solutions are trusted by many of the world's largest global and national communications service providers and enterprises, national governmental agencies, airlines, hospitals, educational institutions, financial institutions and public safety organizations.

In addition to meeting all regulatory requirements for our products and their component parts, we hold a host of internationally recognized certifications for our global offerings, including:

- **ISO 9001:2015:** Quality Management System (QMS)

- **ISO 14001:2015:** Environmental Management System (EMS)

- **ISO 17025:2015:** Laboratory Testing Competency

- **ISO 27001:2013:** Information Security Management System (ISMS)

- **ISO 22301:2012:** Business Continuity Management System (BCMS) - our Business Continuity Management program is aligned to this standard but not certified.

- **ISO 45001:2018:** Safety Management System

- **TL 9000:R6.2/ R5.6:** Quality Management System standard designed by the QuEST Forum in 1998. It was created to focus on supply chain directives throughout the international telecommunications industry.

- **SI 10000:2013:** Social Responsibility (Israeli Standard) covering our sites in Israel.

Ribbon aligns its compliance goals with component directives such as the Restriction of Hazardous Substances (RoHS) legislation in the EU and China, and with the European Waste Electrical and Electronic Equipment (WEEE) directive.

SILVER MEDALS FROM ECOVADIS

To date, both Ribbon and ECI have engaged separately with EcoVadis, a leading global provider of business sustainability ratings and performance improvement tools for global supply chains. The EcoVadis Sustainability Scorecard illustrates performance across 21 indicators in four themes: environment, labor and human rights, ethics and sustainable procurement. For info, visit: **ecovadis.com**

Both Ribbon and ECI separately submitted information and supporting documentation to meet EcoVadis' requirements and received Silver Medal rankings from EcoVadis in 2019 and 2020, demonstrating sustainability achievement and leadership in our industry.

GOVERNANCE, COMPLIANCE & ETHICS

It has always been paramount to our way of doing business at Ribbon to act with the utmost integrity, honesty, and transparency. Ribbon's commitment to ethical business practices guide the company in its compliance with applicable national and international laws and regulations, including anti-corruption, anti-bribery and unfair competition, antitrust, and human rights. Ribbon will forgo business opportunities rather than act in an unethical manner or in violation of applicable law. Preserving an ethical workplace is critical to our long-term success as a company.

CORPORATE GOVERNANCE

We are committed to strong corporate governance practices, which include building long-term value and assuring the success of the company for our stockholders and stakeholders, including employees, customers, suppliers and the communities in which we operate. To achieve these goals, our Board of Directors is charged with monitoring the performance of the company and its officers as well as its programs and procedures to ensure compliance with law and our overall success.

As of September 2020, our Board consists of nine directors, one of whom is employed by Ribbon in the position of President and Chief Executive Officer, Bruce McClelland. Since mid-2020, Shaul Shani assumed the role of Board Chair, following the March 2020 merger of Ribbon and ECI Telecom. Mr. Shani was formerly the Chairman of ECI Telecom. Two (22%) of our Board members are women and one (11%) is a person of color.

Our Board has four standing committees: the Audit Committee, the Compensation Committee, the Nominating and Corporate Governance Committee and the Technology and Innovation Committee. Each committee is composed entirely of independent directors as defined under applicable rules, including Nasdaq. All members of the Audit Committee meet the independence requirements of Rule 10A-3 under the SEC's Securities Exchange Act and all members of the Compensation Committee meet the heightened independence requirements for Compensation Committee members under Nasdaq rules.

For more about our Corporate Governance and Board of Directors, see:

- **Corporate Governance**

- **Board of Directors**

ETHICAL CONDUCT

Ethical conduct is the North Star for our employees, based on our belief that the principles of integrity, accountability and fair dealing are critical to our trusted relationships throughout the business and our interactions, and to our future success. Our **Code of Conduct** was reviewed and amended by our Board of Directors in 2020 and remains in force for all directors, executives, managers and employees.

During the new hire onboarding process, Ribbon employees certify that they have read the Ribbon Code of Conduct and confirm that they agree to the policies, including the prohibition of forced labor. Ribbon requires all current employees to complete the Code of Conduct training and re-certification each year via its online learning management system to track compliance. Completion of this annual re-certification process is a condition of continued employment with Ribbon, in accordance with applicable laws. In 2020, ECI Telecom employees also completed their Code of Conduct training and certification prerequisite. Such training is monitored via an online Learning System to ensure all recertifications are completed in line with our policy. During 2020, we engaged with employees who joined Ribbon from ECI Telecom and completed their training and certification against our Code of Conduct.

In addition, we provide compliance training to employees throughout the year, with a strong focus on anti-discrimination, anti-harassment, and anti-bribery and anti-corruption. We also maintain a hotline for reporting of suspected breaches of our Code of Conduct, managed through a third party, and we encourage reporting by employees without fear of retaliation.

In 2019, Ribbon was not subject to any fines or sanctions relating to anti-corruption and there were no reports of suspected or actual breaches of our anti-corruption policies.

Ribbon also publishes an annual **Slavery and Human Trafficking Statement** in line with applicable laws. In 2020, Ribbon did not receive any employee or supplier reports alleging slavery or human trafficking in Ribbon's workplace or supply chain.

"We do our utmost to encourage awareness of the Code of Conduct with posters in all offices, enhancing awareness through emails, reminders of the dos and don'ts around gifts and gratuities over holiday periods, as well as with training. We also maintain a gift tracker, requiring gift reporting for gifts given and received of a certain value. We aim to make the Code of Conduct a living framework, something that we all use and reference in the day-to-day situations that we encounter as we aim to deliver our mission at Ribbon."

Daryl Prichard, Senior Vice President, Deputy General Counsel, Ribbon

RISK MANAGEMENT

At Ribbon, we believe that innovation and leadership require a certain level of risk tolerance. However, we also recognize that we must appropriately identify and mitigate risks to protect value creation for all our stakeholders. The Board of Directors is responsible for assessing the company's approach to risk management and overseeing management's execution of its responsibility to identify and manage risk. The Board exercises its responsibilities through discussions in Board meetings and also through its Committees, each of which examines various components of enterprise risk. In 2020, a specific focus on

assessing and mitigating the risks presented by the COVID-19 pandemic were considered by the Board. This allows risk and resourcing to be reviewed by our Board to confirm that we allocate the appropriate resources in the necessary areas.

In our annual risk assessment process, we review the business impact of risks and assign likelihood and impact scores to rank risks from different areas of our business; environmental risk, business continuity, security risk, privacy risks, data access risk, health and safety risks, etc.

In 2020, we implemented a new risk tracking tool to store all corporate risks in a single location and rank the risks using the same methodology – this allows risk and resourcing to be reviewed by our Board and confirm that we allocate the correct resources in the correct areas.

BUSINESS CONTINUITY

Ribbon actively maintains a Business Continuity Management System (BCMS) to ensure stability of all global operations following a potential disruption or catastrophic event, such as a natural disaster, pandemic, cyber-attack, or other similar events within the supply chain. Equally as important, our business continuity allows our customers the peace of mind that they will also be able to continue to function during a disruptive event. The plans within the BCMS define procedures to limit the impact from the loss of key service and product delivery. Our BCMS is mandated by Ribbon's Executive Management Team and aligns with the requirements of the ISO 22301 Standard. Each year we perform Business Impact Assessments (BIA) and each quarter, business continuity drill exercises based on catastrophe or disaster scenarios.

In 2019, for example, we simulated an event causing major water damage to our site in India, an extreme snow situation in the U.S., a severe network outage in the UK and a flu outbreak in Kuala Lumpur. Learnings from these drills help improve the robustness of our business continuity plans (and specifically, helped us prepare for the COVID-19 pandemic in 2020). An annual management review is held to keep the business leaders abreast of the action, progress, resourcing requirements, certification status and ongoing responsibilities of different teams within the organization.

DATA PROTECTION

At Ribbon, we are committed to protecting the personal data of our customers, partners, suppliers, affiliates and employees wherever we conduct business around the globe. This commitment is underpinned by implementation of industry best practices for information security and data protection practices supportive of Ribbon's ongoing compliance with applicable global privacy laws (including the EU GDPR). Ribbon maintains an active data protection program and is a corporate member of the International Association of Privacy Professionals (**IAPP**), the largest and most comprehensive global information privacy community and resource. Ribbon and several of its affiliated U.S. companies remain **self-certified** under the EU-US Privacy Shield and Swiss-US Privacy Shield programs. For more information, see our **Privacy Policy**.

Platinum Plus for Sustainability in Israel's Business for Social Responsibility ("Ma'ale") Ranking: We have regularly participated in the Israeli annual CSR ranking for local businesses, and in 2019, again achieved Platinum Plus, the highest possible ranking for the 11th consecutive year. The Ma'ale ranking covers the spectrum of sustainability practices including ethical conduct, human rights, responsible employment, environmental stewardship and social impact and contribution.
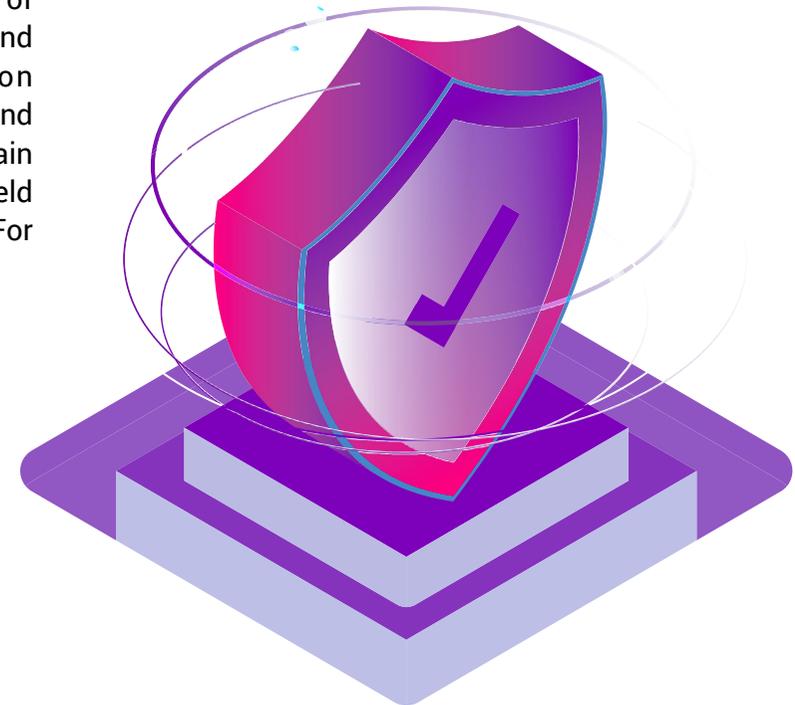
CLIMATE RESILIENCE

We believe that it is our duty to support global efforts to mitigate climate change which is now seen to be the most significant risk to our long-term survival on the planet. In 2019, we published an **Environmental Policy,** with the support of our Board of Directors. The policy sets our goals for our global business operations to conserve natural resources and minimize negative impacts that our activities, products and services may have on the global and local environment though our entire value chain.

Ribbon is committed to:

- Protecting the environment and preventing pollution within our products' lifecycle with responsible product design and by requiring our suppliers to adhere to sustainable practices.

- Fulfilling our compliance obligations by complying with all applicable environmental legislation and other requirements.

- Continually improving our Environmental Management System (EMS) to enhance environmental performance.

- Utilizing environmental awareness education and implementing administrative controls to assess our compliance obligations, processes and practices, and to identify opportunities for reductions in energy usage, carbon emissions and waste.

In early 2020, we conducted 10 internal EMS audits in Europe and North America, in conformance with ISO14001. These audits resulted in 10 minor corrective actions relating to risk documentation and targets and training updates.

In 2019/2020, we counted several global achievements that improved our impact on climate change, in addition to day-to-day incremental improvements in performance.

- Our network transformation solutions enabled lower carbon footprints in large service providers networks, reducing power consumption by 70% and real estate by 85% compared to the legacy systems they replaced.

- We consolidated many of our R&D labs, reducing our footprint and overall power demand as well as recycling over 140,000 lbs. of electronic hardware. We also drove electricity efficiencies though equipment replacements and movement of data storage to the cloud.

- We reduced overall waste generated and increased our recycled share of waste to 31% from 25% in 2018.

- At our sites, we completed LED lighting upgrades at four facilities, installed electricity auto-shutoffs in two sites, added a new waste-stream management program to increase recycling capabilities, performed upgrades and maintenance such as roof replacement with reinforced insulation and more.

In 2019, we achieved a reduction of 2% in greenhouse gas emissions on a per employee basis across Ribbon operations.

Greenhouse Gas Emissions (Scope 1&2)
Tons CO_{2e} per employee

5.02	6.25	6.14
2017	**2018**	**2019**
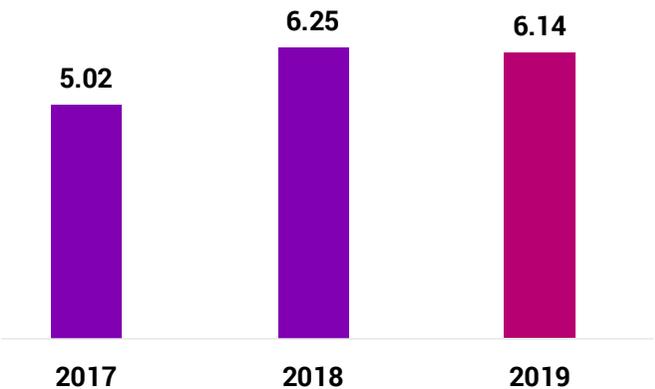
IMPROVING SUPPLY CHAIN EFFICIENCIES

We aim to minimize the environmental impact of our logistics including delivery of components to customer premises through our supply chain. Our focus includes reducing travel distance between warehouse locations and customer premises and increasing the proportion of ground deliveries rather than air shipments. We collaborate with our customer base and sales operations teams for accurate and early forecasting so that logistics and freight rely on sustainable ocean and overland freight in lieu of just-in-time air freight. Further, we procure recycled, repurposed and reused packaging materials and promote a zero-waste manufacturing model of closed-loop repair and return services through our contract manufacturers.

A DECADE OF LABORATORY CONSOLIDATION AND EFFICIENCIES

Over the years, Ribbon has closely driven the efficiencies of our global laboratory operations through rigorous monitoring of space/power consumption and a program of laboratory consolidation to reduce overall laboratory storage space and minimize the electricity consumption needed to support the equipment housed in each location. Through redeployment and recycling of equipment, we have been able to gain significant efficiencies and drive down the number of locations that need power-intensive support and maintenance. From 21 separate storage locations in 2010, we have consolidated our laboratory operations at 13 sites in 2019, with a corresponding 42% reduction in floor space and resulting power consumption reductions over 10 years (6% reduction in 2019 versus 2018).

MAKING OUR PRODUCTS MORE POWER EFFICIENT FOR OUR CUSTOMERS

In addition to optimizing power utilization at our own sites, we have continuously been improving the power/space efficiency of servers that are housed at our customers' premises. Over the past 10 years, we have reduced the overall power consumption of our servers through higher-efficiency processors and other components, so that they require fewer power nodes to deliver the same data storage and transport capacity. In 2019, with the introduction of our next generation processor, we reduced the overall power node requirement from 26 (in 2011) to just 4 in 2019. This means that customers are able to accommodate more traffic and more software applications to support the services they provide to their markets, with substantially lower power consumption.

ETHICAL SUPPLY CHAIN

We seek to maintain an ethical supply chain that contributes to a positive and inclusive business environment for everyone involved in our operations and we prioritize treating others with respect for human rights. We view our contract manufacturers and suppliers as an extension of our own business and partners in our shared success and therefore hold them accountable to the same standards we apply in our own operations.

Ribbon's global supply chain is supported by reliable and trustworthy contract manufacturers with whom we have long-standing relationships. A number of our software products are deployed on appliances. Where our products contain an appliance element, we utilize contract manufacturers to source and assemble these components. Our contract manufacturers provide comprehensive manufacturing services, including assembly and testing of our products and procurement of component materials on our behalf.

We believe that outsourcing the manufacturing of any necessary appliance enables us to preserve working capital, allows for greater flexibility in meeting changes in demand and enables us to be more responsive in delivering diverse product offerings to our customers.

As of December 31, 2019, we outsourced the manufacturing of our appliance products to four manufacturers, two upon which we primarily rely. We and our contract manufacturers purchase several key components of our appliance products, including commercial digital signal processors, from single or limited sources to a value of approximately $70 million in 2019. Wherever possible, we aim to source components locally, in the country of the assembly operations, to minimize our inventory and carbon footprint through optimized logistics.

OUR SUPPLIER CODE OF CONDUCT

At Ribbon Communications, the message for each supplier is clear: any success that is not achieved lawfully and ethically is no success at all. At Ribbon, we comply with applicable laws and regulations and strive to hold ourselves to the highest ethical standards, and we expect the same of all our suppliers. Ribbon's supply chain integrity is reinforced by our practice of conducting quarterly business reviews with our key suppliers.

Ribbon's Supplier Code of Conduct mirrors many of the principles set forth in our own Code of Conduct. All of Ribbon's suppliers are required to agree to abide by our Supplier Code of Conduct which contains provisions governing human rights and labor, health and safety, environment, and business conduct and ethics. For more information, see our **Supplier Code of Conduct**.

❝ Following the merger of Ribbon and ECI, we are now looking to align our supply chain in a seamlessly global system with synergies that will benefit our customers and ensure outstanding service in all the countries in which we operate. We need to be mindful of the unique technical capabilities required to serve customers of our different products and so we must plan our way forward in detail. During the COVID-19 pandemic, we have been able to convert much of our service support to customers to remote service platforms, especially platform upgrades and program updates, and this results in operational efficiencies for Ribbon and improved use of resources for our customers. ❞

Yaal Shain, Executive Vice President, Operations

 In 2019, ECI achieved an A- rating in CDP's Supplier Engagement Rating, placing ECI in the top 25% of leadership among peer companies for supplier engagement. In this program, organizations are evaluated on their supplier engagement through their responses to questions in four key areas of the CDP climate change questionnaire related to governance, ambition, management (Scope 3) and supplier engagement.

EMPLOYEE ENGAGEMENT

Engaging employees at Ribbon includes aligning with our values and providing a workplace that is respectful, inclusive and empowering, and one in which we all work to shared objectives that contribute to a better world and a better society. We also engage employees by providing opportunities for personal and professional growth and maintaining a culture of open communications where everyone receives constructive performance feedback and is encouraged to offer new ideas about any aspect of our work and ways of doing things.

At the end of 2019 our total consolidated Ribbon workforce totalled 3,964 employees of whom 21% identified as female.

Ribbon Employees in 2019

LATAM, 3%
ASIA, 36%
North America, 31%
EMEA, 30%
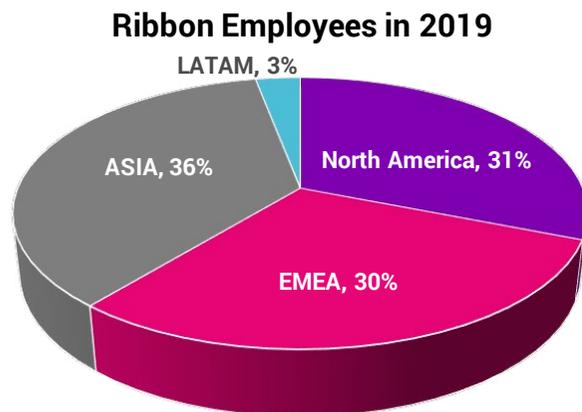
Petrena Ferguson, Ribbon's Senior Vice President for Human Resources, shares her perspectives:

What are the biggest challenges facing Human Resources (HR) Management at Ribbon?

I think one of the most significant challenges we face as a company, is that we are constantly growing through acquisition and we find we are consistently needing to onboard new employee teams and find ways of integrating cultures and practices that benefit everyone. In the past five years, we have accommodated six transactions, and each brings its own set of considerations. While this means that we have to revisit many of our programs/processes and adapt them to the new combined organization, it also provides opportunities to look at things through a different lens, so I feel we benefit from this, even if it is challenging at times.

How do you manage HR decision-making with such a diverse, global workforce?

One of the achievements I am most proud of that enables us to be in control of our workforce data and support real-time decision making on all aspects of HR Management is the fact that we have a centralized HR Information System using Workday. It was a heavy lift to put that in place, but now, all our HR processes from hiring, training, benefits management and more are in our one central place of record. This means we can take data-based decisions, and also, onboard new companies and individuals as they join the Ribbon family in an efficient and orderly manner.
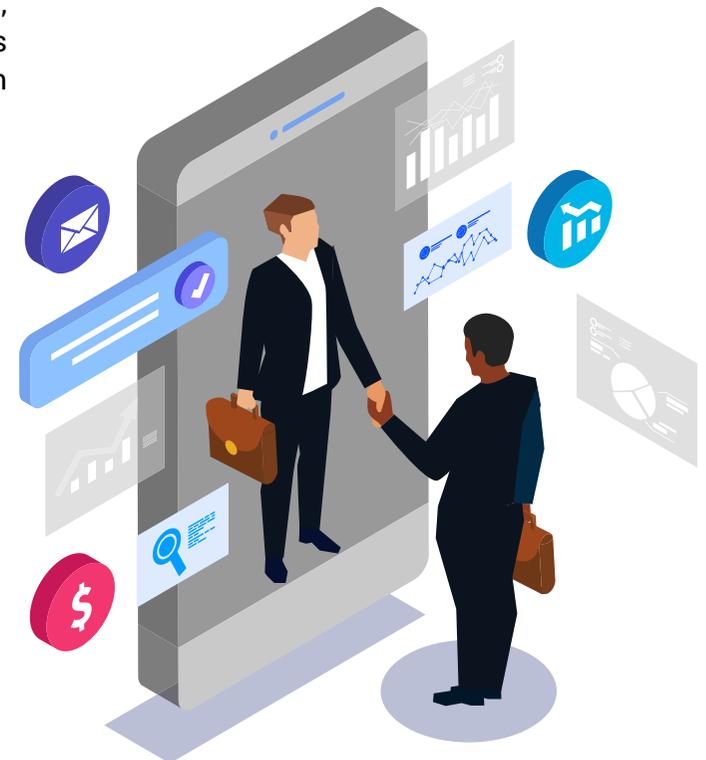
EMPLOYEE BENEFITS

We believe in fairly and competitively rewarding our employees for their efforts. We maintain a program of benefits tailored to local market norms in each region to support employees with medical insurance, paid leave and other non-salary benefits.

In the U.S.and EMEA, we also maintain a Real Time Rewards program to enable recognition of employee achievements and contributions. The program is managed online and enables anyone to nominate a coworker for monetary or non-monetary recognition. We see that this particularly encourages cross-functional teams, providing a way of acknowledging team members who are not part of regular organic teams.

In 2019, almost 2,800 Real Time Rewards were proposed and delivered to employees who received a cash benefit of between $25 and $100, or other non-monetary recognition through e-cards. In addition, more than 2,000 employees received automated service awards through the Real Time Rewards program.

TRAINING AND DEVELOPMENT

We believe in investing in our employees' professional development so that they can perform their current role effectively and prepare for roles of greater responsibility in the future. Our training programs include core modules, some of which are mandatory, relating to products and services, safety, ethical conduct, human rights and anti-corruption, and additional tailored programs are provided for leadership, management, project management and competency development.

Training is delivered both in person and through an extensive library of online modules that employees can select. Targeted training needs are discussed at annual performance reviews and employees are invited to complete specific training modules. Through our online Learning Management System, we are able to track completion of training and plan further development for managers and employees.

In 2019, we delivered 10.78 training hours per employee across our workforce.
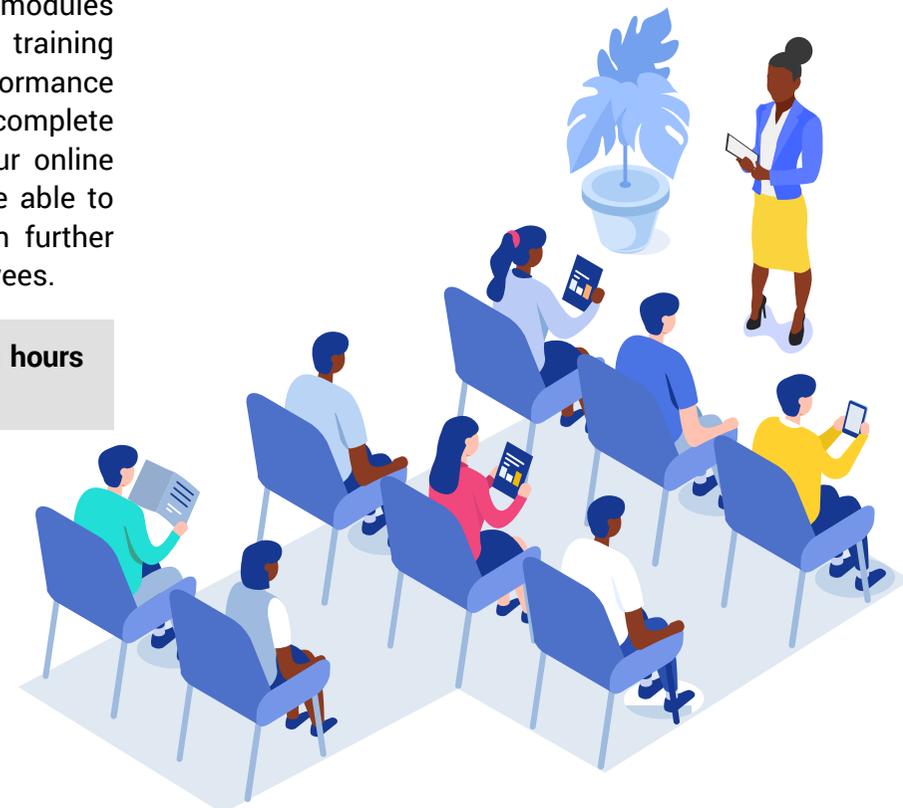
SAFETY, HEALTH AND WELLBEING

We believe that safe and healthy employees contribute not only to a healthy business but also to a healthy community and society. We therefore invest in supporting a culture in which employees can look after their own wellbeing and receive support where it is needed.

Safety Management

We aim for a workplace that is free of hazards for our employees and consultants to conduct their work. We take care to comply with applicable safety regulations. We have a strong track record for safety and we reinforce safety awareness and safety risk management through regular training modules at all of our operating locations.

A New Wellness Month

In 2020, especially in the light of the restrictions on movement and new levels of stress experienced through the COVID-19 pandemic, we kicked off an inaugural "Better Together" wellness month that aimed to promote mental and physical wellbeing, allow employees from around the world to get to know each other, and have fun! Overall, nearly 1,300 employees representing every region participated in the program, and we achieved our objectives, including:

- Connecting and energizing our employees through a memorable Work from Home joint experience

- Introducing an efficient, scalable program to engage employees

- Increasing employee awareness of the importance of mental and physical wellbeing

- Helping employees adapt and stay healthier during these unique times

- Connecting our global team with each other

The success of the Wellness Month was largely attributable to the use of a personal wellness coaching App that we adopted to enable round-the-clock access in all time zones for our teams in different regions, from any device. The App included a range of topics relating to health and nutrition, sport, WFH support such as stress management, mindfulness, resilience and parenting during COVID -19 and financial wellness. Employees posted their activities in the App and inspired others to get engaged as well. The positive feedback was phenomenal!

BETTER TOGETHER HIGHLIGHTS – BY THE NUMBERS

Participation rate in India of nearly **40%** - the highest around the Ribbon world

Over **11,000** tasks were completed by participants
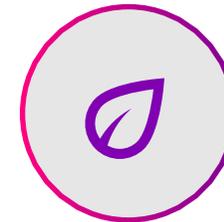
More than **700 team members** participated in live wellness sessions

More than **400 team members** viewed recordings of wellness sessions

CONTINUING BETTER TOGETHER

❝❝ Implementing the Better Together Program and supporting the wellness App during the pandemic was a huge task. We had to collaborate virtually across global teams to create a model that would engage and be available to everyone. This was a tremendous undertaking but was worth it! It was very important for the planning team to deliver something that would help our employees and their families get through the pandemic and emerge re-energized and ready to take on new challenges. We are all one family; we need to take care of each other. ❞❞

Eynat Rotfeld, CSR & Employee Experience Manager

We expect that Wellness Month will continue to feature on our annual calendar, and look forward to more employees feeling healthier, more energized and more connected. Similarly, we are considering ways to expand our programs to engage employees in other activities such as onboarding, training and personal and professional development.
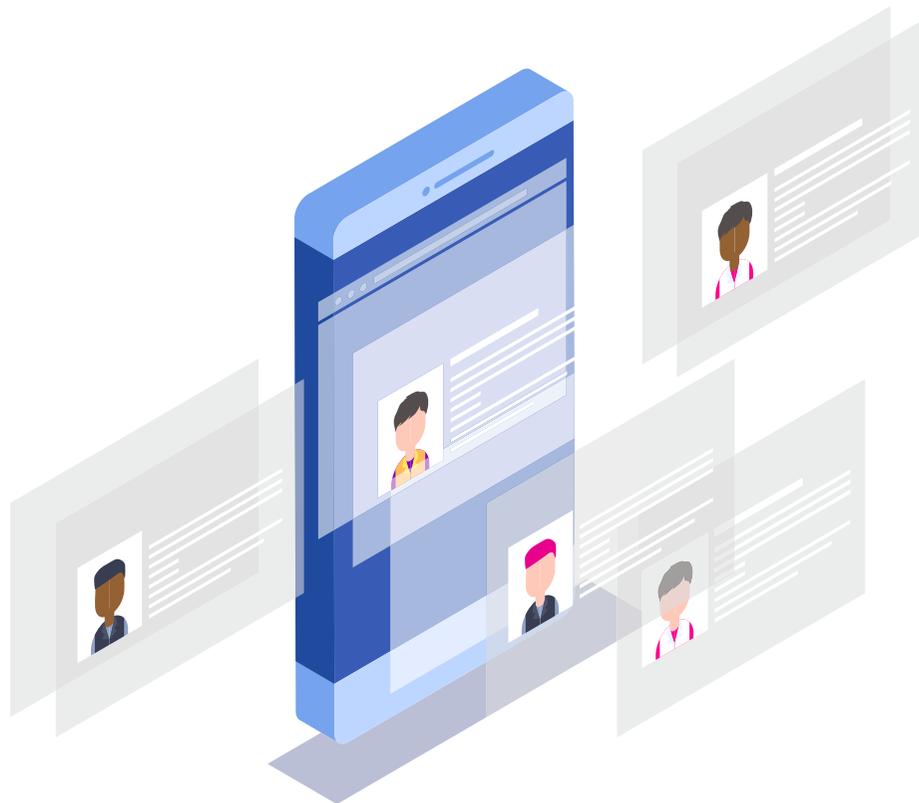
COMMUNITY INVESTMENT

We value the communities in which we work and believe we share a common objective: to achieve a positive standard of living and inclusive access to opportunity. We encourage a service mindset among our employees wherever they are, and support community involvement and engagement.

RIBBON DAY: OUR GLOBAL DAY OF SERVICE

Since 2010, Ribbon has provided a day of paid time for all employees to participate in our Global Day of Service during which they volunteer and contribute to local nonprofits in their communities. Our teams support a wide variety of local social and environmental causes, including:

- Park, nature reserve and beach cleanups
- Charity runs for fundraising
- Blanket making for women's shelters
- Food preparation for school breakfast, lunch and after school programs for children in need, and at homeless shelters
- Visits with the elderly at nursing homes
- Animal shelter support and activities
- Volunteering at Paralympic events

The success of Ribbon Day is in part due to the fact that employees are free to select the cause that most inspires them and engages their passions. Our Chief Executive Officer and senior management lead by example and volunteer in Ribbon Day alongside employees and their families around the world.

RIBBON DAY 2019

4,400	17	60
volunteer hours donated by employees	countries in which employees volunteered	charitable organizations supported - 50% more than in 2018

EXAMPLES OF ACTIVITIES FROM AROUND THE WORLD

Israel

We created a sales fair for employees to purchase specialty foods, books and gifts donated by our employees. More than 150 employees participated in this event, racking up 600 volunteer hours, with proceeds in excess of $12,000 donated to the Make a Wish Foundation.

Spain

Ribbon teams supported the **Gil Gayarre Foundation**, a nonprofit that helps children with special needs, working with students and upgrading a children's playground.

UK

A team of 40 Ribbon staff helped plant 500 trees in South Oxfordshire following a rehabilitation plan approved by the town council. The team also got busy with litter picking and shrub pruning to provide the best environment for tree growth.

Brazil

Our staff volunteered at Lar Batista Esperança (LBE), a nonprofit that supports children in need. We spent time with the children and planted organic vegetables for the children supported by LBE.

Canada

Our team supported the The Ottawa Community Housing Project, that provides affordable housing to local residents, painting the hallways in 12 floors of one of their local buildings.

❝❝ The thing about Ribbon Day that is so amazing to me is the wide array of causes that my colleagues support. Whether it is volunteering at animal shelters, helping out at food pantries, cleaning up beaches and parks, working with children with disabilities, spending time with the elderly, or knitting blankets that will be used to help the needy get through the cold winter months – all of these organizations are benefiting from the generosity of Ribbon employees around the world. ❞❞

Petrena Ferguson, Senior Vice President of Human Resources

GRI CONTENT INDEX

GRI Standard	Disclosure	Page reference or response
102-1	Name of the organization	5
102-2	Activities, products, and services	5
102-3	Location of headquarters	5
102-4	Location of operations	5
102-5	Ownership and legal form	5
102-6	Markets served	5
102-7	Scale of the organization	5
102-8	Information on employees	30
102-9	Supply chain	20
102-10	Significant changes	This is our first Report.
102-11	Precautionary Principle	We support the precautionary approach, first introduced in the United Nations in Principle 15 of "The Rio Declaration on Environment and Development," and act to protect against environmental degradation where full scientific certainty does not exist. See p.18 - Cliimate Reslience.
102-12	External initiatives	14, 17
102-13	Membership of associations	Telecommunications Industry Association, International Association of Privacy Professionals
102-14	Statement from senior manager	4
102-16	Values, principles, standards	6
102-18	Governance structure	15

GRI Standard	Disclosure	Page reference or response
102-40	List of stakeholder groups	32
102-41	Collective bargaining agreements	32
102-42	Identifying and selecting stakeholders	32
102-43	Stakeholder engagement	32
102-44	Key topics and concerns raised	32
102-45	Entities included	3
102-46	Report content and topic Boundaries	3
102-47	List of material topics	10
102-48	Restatements of information	This is our first Report.
102-49	Changes in reporting	This is our first Report.
102-50	Reporting period	3
102-51	Date of most recent report	This is our first Report.
102-52	Reporting cycle	3
102-53	Contact point	3
102-54	Reporting in accordance with the GRI Standards	3
102-55	GRI content index	27
102-56	External assurance	3

Material priority	GRI Standard (2016)	Management Approach, Standard 101-1, 101-2, 101-3, page references	Specific GRI Disclosures	Page	Omissions
Universal access to communications Technology innovation Communications security	GRI 203: Indirect economic impacts	11-12	203-2: Significant indirect economic impacts	13-14	
Employee development, safety and wellbeing	GRI 401: Employment	21	401-1: New employee hires and turnover	37	
	GRI 404: Training and Education	21	404-1: Average hours of training per employee	38	See notes to 404-1
			404-3: Employees receiving performance reviews	38	
	GRI 403: Occupational Health and Safety	23	403-2: Types of injury and rates of injury, occupational diseases, lost days, absenteeism, and fatalities	38	See notes to 403-2
Community partnerships	GRI 413: Local Communities	24	413-1: Operations with local community engagement	100% of our global operations are included in our annual Ribbon Day, see page 25.	
Climate change	GRI 302: Energy	18	302-5: Reductions in energy requirements of products and services	19	
			302-1: Energy consumption within the organization	33	
			302-3: Energy intensity	33	
	GRI 305: Emissions	18	305-1: Direct (Scope 1) GHG emissions	34	
			305-2: Energy indirect (Scope 2) GHG emissions	34	
			305-3: Other indirect (Scope 3) GHG emissions	34	
			305-4: GHG emissions intensity	34	
Water	GRI 303: Water		303-1: Water withdrawal by source	35	
Reducing waste	GRI 306: Effluents and Waste	19	306-2: Waste by type and disposal method	36	
Ethical conduct	GRI 205: Anti-Corruption	15	205-3: Confirmed incidents of corruption and actions taken	No incidents	
Human rights	GRI 406: Non-discrimination	15	406-1: Incidents of discrimination and corrective actions taken	No incidents	
Responsible supply chain	GRI 414: Supplier Social Assessment	20	414-1: New suppliers that were screened using social criteria	100% of new Tier 1 strategic global suppliers	

102-8 INFORMATION ON EMPLOYEES

Employees by region and gender - all Ribbon global operations	2017			2018			2019		
	Men	Women	All	Men	Women	All	Men	Women	All
North America	1,286	291	1,577	1,081	247	1,328	1,001	230	1,231
EMEA	943	273	1,216	854	241	1,095	895	278	1,173
ASIA	986	240	1,226	1,047	267	1,314	1,119	310	1,429
LATAM	103	12	115	114	13	127	118	13	131
All employees	3,318	816	4,134	3,096	768	3,864	3,133	831	3,964
Percentage women		20%			20%			21%	
Percentage full time contracts	99%	93%	98%	99%	94%	98%	99%	93%	98%
Percentage permanent contracts	80%	20%	95%	80%	20%	99%	79%	21%	99%

102-41 COLLECTIVE AGREEMENTS

Employees covered by collective agreements – all Ribbon global operations	2017	2018	2019
North America	1	1	1
EMEA	63	56	717
ASIA	0	0	0
LATAM	15	12	10
All employees	**79**	**69**	**728**
Percentage of total employees	**2%**	**2%**	**18%**

Notes:
Includes Ribbon and ECI legacy global operations.

102-42   **IDENTIFYING AND SELECTING STAKEHOLDERS**

102-43   **STAKEHOLDER ENGAGEMENT**

102-44   **KEY TOPICS AND CONCERNS RAISED**

We engage with primary stakeholder groups and individuals with whom we have a direct relationship.
We did not engage in specific consultation to prepare this report.

Stakeholder group	Engagement type	Key topics raised
Shareholders/ owners	Board of Directors reviews	Sustainable profitable growth, market presence, innovation, legal and ethical operations
Customers	Regular meetings, annual service survey and ongoing dialogue, business conferences and conventions	Innovation, outstanding service, reliability, product performance and reliability
Employees	Internal communications, team meetings and performance reviews	Job security, fair reward, opportunities to develop
Suppliers	Regular meetings, supplier audits	Fair dealings, involvement in innovation
Government	Participation in industry associations to advance public policy, technology consultations	Uphold the law, contribute to a sustainable economy
Communities	Partnerships with local NGOs to advance community wellbeing	Investment and involvement in local communities

302-1: ENERGY CONSUMPTION WITHIN THE ORGANIZATION

302-3: ENERGY INTENSITY

All Ribbon global operations		2017	2018	2019
Natural gas	GJ	11,923	16,762	20,103
Diesel	GJ	1,733	1,619	1,744
Gasoline	GJ	19,745	16,287	14,518
Fuels and gases	**GJ**	**33,400**	**34,667**	**36,365**
Purchased electricity	GJ	143,264	177,008	181,120
Total energy	**GJ**	**176,664**	**211,675**	**217,486**
Energy intensity	**GJ / employee**	**44.01**	**56.55**	**57.49**

Energy type		Ribbon legacy operations			ECI legacy operations		
		2017	2018	2019	2017	2018	2019
Natural gas	GJ	11,923	16,762	20,103	0	0	0
Diesel	GJ	1,733	1,619	1,744	0	0	0
Gasoline	GJ	0	0	0	19,745	16,287	14,518
Fuels and gases	**GJ**	**13,655**	**18,381**	**21,847**	**19,745**	**16,287**	**14,518**
Purchased electricity	GJ	81,449	115,251	118,374	61,815	61,758	62,747
Total energy	**GJ**	**95,104**	**133,631**	**140,221**	**81,560**	**78,044**	**77,265**
Energy intensity	GJ	**38.46**	**59.37**	**63.31**	**52.93**	**52.31**	**49.28**

Notes:

• Energy data covers Israel, India and China for ECI and all sites above 30 employees at Ribbon.
• Electricity is purchased from national grids in each country of operation. No energy consumption is from renewable sources.
• GJ = Gigajoules

305-1: DIRECT (SCOPE 1) GHG EMISSIONS
305-2: ENERGY INDIRECT (SCOPE 2) GHG EMISSIONS
305-3: OTHER INDIRECT (SCOPE 3) GHG EMISSIONS
305-4: GHG EMISSIONS INTENSITY

All Ribbon global operations		2017	2018	2019
GHG emissions Scope 1	tons CO_2e	2,322	2,448	2,590
GHG emissions Scope 2	tons CO_2e	20,143	23,405	23,222
GHG emissions Scope 3	tons CO_2e	3,676	3,343	3,353
Scope 1+2 emissions	**tons CO_2e**	**22,465**	**25,853**	**25,812**
Scope 1+2+3 emissions	**tons CO_2e**	**26,141**	**29,196**	**29,166**

GHG Emissions Intensity		2017	2018	2019
Scope 1+2	tons CO_2e /employee	5.02	6.25	6.14
Scope 3	tons CO_2e /employee	0.92	0.89	0.89

GHG Emissions by type		Ribbon legacy operations			ECI legacy operations		
		2017	2018	2019	2017	2018	2019
Scope 1	tons CO_2e	1,008	1,361	1,619	1,314	1,087	972
Scope 2	tons CO_2e	8,508	12,043	11,981	11,634	11,362	11,241
Scope 3	tons CO_2e	2,655	2,360	2,336	1,021	983	1,017
Scope 1+2	**tons CO_2e**	**9,517**	**13,404**	**13,600**	**12,948**	**12,449**	**12,213**
Scope 1+2+3	**tons CO_2e**	**12,171**	**15,764**	**15,936**	**13,969**	**13,432**	**13,230**

GHG Emissions Intensity		2017	2018	2019	2017	2018	2019
Scope 1+2	tons CO_2e / employee	3.44	5.35	5.41	7.55	7.62	7.17
Scope 3		1.07	1.05	1.05	1.15	1.21	1.19

Notes:

- Emissions data covers Israel, India and China for ECI and all sites above 30 employees at Ribbon. Some data for 2017 and 2018 has been estimated at Ribbon sites.

- CO_2e emissions for electricity use annual Israel Electric Company conversion factors in Israel publicly available data from carbonfootprint.com for other countries.

- Scope 3 data is for business flights. ECI data assume long-haul flights. Ribbon data is reported by travel service provider.

- Tons = metric tons

303-1: WATER WITHDRAWAL BY SOURCE

All Ribbon global operations		2017	2018	2019
Water withdrawal	m³	25,976	27,466	31,437
Water withdrawal intensity	m³/employee	6.5	7.3	8.3

Water use and intensity		Ribbon legacy operations			ECI legacy operations		
		2017	2018	2019	2017	2019	2019
Water withdrawal	m³	3,408	5,414	10,111	22,569	22,052	21,326
Water withdrawal intensity	m³ / employee	1.4	2.4	4.6	14.6	14.8	13.6

Notes:

- Water data covers Israel, India and China for ECI and all sites above 30 employees at Ribbon. Some data for 2017 and 2018 has been estimated at Ribbon sites.

- All water is withdrawn from municipal sources.

306-2: WASTE BY TYPE AND DISPOSAL METHOD

All Ribbon global operations		2017	2018	2019
Waste to landfill	Tons	176.73	166.40	150.54
Waste to recycling	Tons	29.77	54.21	67.56
Total waste	**Tons**	**207**	**221**	**218**
Waste recycled	%	14%	25%	31%
Waste intensity	Tons/employee	0.051	0.059	0.058

Waste		Ribbon legacy operations			ECI legacy operations		
		2017	2018	2019	2017	2018	2019
Waste to landfill	Tons	9.40	8.60	8.56	167.33	157.80	141.98
Waste to recycling	Tons	5.80	29.09	25.38	23.97	25.13	42.18
Total waste	**Tons**	**15**	**38**	**34**	**191**	**183**	**184**
Waste recycled	%	38%	77%	75%	13%	14%	23%
Waste intensity	Tons/employee	0.006	0.017	0.015	0.124	0.123	0.117

Notes:

- Waste data covers Israel, India and China for ECI and all sites above 30 employees at Ribbon. Some data for 2017 and 2018 has been estimated at Ribbon sites.
- More than 99% of all waste is non-hazardous.
- Tons = metric tons

401-1: EMPLOYEE NEW HIRES AND TURNOVER IN 2019

2019	Men <30	Men 30-50	Men >50	Women <30	Women 30-50	Women >50	All Men	All Women	Total
New hire rates: Ribbon Global employees									
North America	0.6%	0.8%	0.8%	0.1%	0.4%	0.2%	2.2%	0.7%	2.8%
EMEA	0.9%	1.4%	0.3%	0.4%	0.5%	0.0%	2.6%	0.9%	3.5%
ASIA	2.7%	1.7%	0.0%	1.5%	0.3%	0.0%	4.5%	1.7%	6.2%
LATAM	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Total	**4.3%**	**4.1%**	**1.1%**	**1.9%**	**1.2%**	**0.2%**	**9.5%**	**3.3%**	**12.8%**
Leavers rates: Ribbon legacy employees									
North America	0.7%	2.8%	4.2%	0.2%	0.7%	0.9%	7.6%	1.8%	9.4%
EMEA	0.1%	0.9%	0.5%	0.2%	0.1%	0.0%	1.5%	0.3%	1.9%
ASIA	1.4%	1.2%	0.1%	0.7%	0.1%	0.0%	2.7%	0.9%	3.6%
LATAM	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.7%
Total turnover	**2.3%**	**5.4%**	**4.9%**	**1.2%**	**0.9%**	**0.9%**	**12.5%**	**3.0%**	**15.5%**

Notes:

New hire rates refer to Ribbon global operations including Ribbon and ECI legacy new hires in 2019.
Leavers rates and turnover are for Ribbon legacy operations only and rates are calculated on the basis of Ribbon headcount.

403-2: TYPES OF INJURY AND RATES OF INJURY

Combined Ribbon and ECI legacy operations	2017	2018	2019
Injury frequency rate			
Number of injuries	7	6	2
Injury frequency rate	0.787	0.739	0.234
Injury severity rate			
Lost days due to injury	114	57	27
Lost day rate	12.809	7.020	3.158

Notes: Rate calculated on the basis of 200,000 working hours per person per year.

Omissions: Injuries by gender or for contractors is not available for all global operations. Absenteeism is not recorded.

404-1: AVERAGE HOURS OF TRAINING PER EMPLOYEE

Combined Ribbon and ECI legacy operations	2018			2019		
	Men	**Women**	**All**	**Men**	**Women**	**All**
Managers	17,275	3,734	**21,009**	8,131	2,962	**11,093**
Non-managers	32,167	6,927	**39,093**	40,939	14,563	**55,502**
All employees	49,442	10,661	**60,103**	49,070	17,525	**66,595**
Average training hours per employee per year	10.01	9.05	**9.83**	9.97	13.93	**10.78**

404-3: EMPLOYEES RECEIVING PERFORMANCE REVIEWS

Employees who participated in a formal performance review - all Ribbon global employees	2018		2019	
	Men	**Women**	**Men**	**Women**
Management	96%	98%	92%	100%
Non-management	74%	95%	100%	99%
Total	**94%**		**99%**	

About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers global communications software and packet and optical network solutions to service providers, enterprises and critical infrastructure sectors. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge IP solutions, cloud-native offers, leading-edge software security and analytics tools, as well as 5G-ready packet and optical networking solutions acquired via our recent merger with ECI Telecom. To learn more about Ribbon visit **rbbn.com**