

# Committed to Corporate Responsibility

2018 Corporate Responsibility Report



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# INTRODUCTION FROM OUR CHIEF EXECUTIVE OFFICER BRUCE MCCLELLAND



“Our leadership in corporate responsibility is critical to our success. Operating in a socially and environmentally responsible way is fundamental to our business ethos. Our customers recognize ARRIS as taking the lead in corporate responsibility and I am proud of what we have accomplished as our business grows.”

**Bruce McClelland**  
former CEO, ARRIS and  
current COO, CommScope

## Dear stakeholder,

I am delighted to present ARRIS's 2018 Corporate Responsibility Report.

In 2018, we completed our Ruckus integration and announced our next stage of growth in combination with CommScope.

As our business continues to transform, I am proud of ARRIS's increasing commitment to corporate responsibility, in everything we do. We are realizing our joint vision for a better-connected future, while delivering greater value to our customers, shareholders and employees, and ensuring a better world for everyone.

Our global society is evolving toward a smarter, more connected future. And behind every great wireless network is a great wired network. Now, as part of CommScope, we live at the intersection of these technologies and every major consumer touchpoint in the connected world.

Our innovation allows million of people to connect to the internet every day. Through our Ruckus Network business, ARRIS has been working hand-in-hand with Facebook and Google—in India, Mexico and Indonesia—to support the Next Billion Users initiative, bringing our vital technology to emerging markets. This is a great example of our continued support of the United Nations' (UN) Sustainable Development Goals (SDGs).

We have also been working hard with our customers and our innovation teams to extend our leadership in corporate responsibility.

- ARRIS was ranked in the top 5% of suppliers assessed by EcoVadis in all categories in 2018. This was our third consecutive Gold Corporate Social Responsibility rating.
- ARRIS has maintained full membership of the Responsible Business Alliance (RBA) for the third year.
- Our continued focus on energy efficiency and investment in renewable energy has enabled us to lower our customers' environmental impact, while exceeding our own Greenhouse gas (GHG) reduction goals. In 2018, ARRIS reduced its GHG emissions by 17.6 % compared to the 2013 baseline, exceeding our five-year goal of 10%, while 25% of our total energy came from electricity purchased via renewable energy contracts.
- More than 1,000 employees are now part of the ARRIS Women's Business Network (AWBN)—an increase of 35% since 2017. The AWBN continues to be an excellent resource for career development at ARRIS.

These are just a few examples of the important contributions we have made in 2018. I am already seeing this passion and enthusiasm continue to grow and contribute to positive change, now that we are part of CommScope. Through innovation, we are shaping the future of connectivity and sustainability. I hope you enjoy our 2018 Corporate Responsibility Report!

**Bruce McClelland**

former Chief Executive Officer, ARRIS and current Chief Operating Officer, CommScope

# ARRIS'S 2018 ENVIRONMENTAL, SOCIAL AND GOVERNANCE HIGHLIGHTS



## ENVIRONMENTAL

- Met five-year Greenhouse gas (GHG) reduction goal by reducing GHG emissions by 17.6% compared to 2013, exceeding our 2018 cumulative goal of 10%.
- Achieved 38.5% reduction in scope 1 and 2 market-based GHG emissions compared to 2013.
- 25.4% of our total energy came from electricity purchased via renewable energy contracts, compared to 16% in 2017.
- Significantly exceeded five-year landfill diversion goal of 10% improvement by diverting 68% of our waste from landfills.
- More than 99% of applicable ARRIS shipments complied with the US Set-top boxes (STB) energy efficiency voluntary agreement—exceeding the 90% target.
- Reduced the average CO<sub>2</sub>e in standby for US small network equipment by 9.8% in 2018 and 20.3% since 2016.
- Reduced the average CO<sub>2</sub>e for Set-Top Boxes by greater than 25% in the last two years.
- Continued to align our objectives with the SCTE Energy 2020 goals in order to help our Access Network and Edge Facility products achieve energy reductions.
- The ARRIS E6000® Converged Edge Router (CER) introduced new capabilities to support a Remote PHY Core on its existing Gen 2 platform. When operating in this mode, the E6000® CER power is reduced by more than 50% per Service Group compared to typical Integrated Converged Cable Access Platform (CCAP) operation.
- Maintained ISO 14001 certification at our Saltaire, UK, office and our Tijuana, Mexico, manufacturing site.




## SOCIAL

- Powered Google Station Wi-Fi hotspots in three emerging countries, helping to lower the barrier to entry for network connectivity and supporting Google's Next Billion Users initiative.
- Supported Facebook's Express Wi-Fi Technology Partner program, deploying hotspots in Africa, India and Indonesia to help connect the unconnected.
- Maintained OHSAS 18001 certification at our Tijuana manufacturing sites.
- Achieved global injury and illness rate—actual: 0.11, goal: 0.4 and industry average: 0.9 for NAICS 334220.
- Met or exceeded all applicable health and safety legal requirements in our operations and work with our stakeholders.
- Delivered health and safety training sessions to enhance employee awareness.
- Established EHS First AID, AED and AERO teams at ENBU sites in the US.
- Contributed more than \$582k in 2018 to meaningful and important organizations.
- The ARRIS Women's Business Network (AWBN) now has over 1,000 members in 22 countries, an increase of over 35% since 2017.
- Sponsored 19 high-potential female employees in various leadership development programs, a 10% increase from 2017.
- Continued growth of our global intern commitment. We increased our US intern classes from 39 interns in 2017 to 52 interns in 2018; our international intern classes increased from 30 interns in 2017 to 48 interns in 2018.



## ETHICS & GOVERNANCE

- Achieved our third consecutive EcoVadis Gold Corporate Social Responsibility (CSR) rating—top 5% of suppliers assessed by EcoVadis in all categories. 
- Maintained full membership of the Responsible Business Alliance (RBA) for a third year, in line with the revised full membership criteria.
- Maintained our corporate responsibility performance in targeted external scorecards—EcoVadis, the Carbon Disclosure Project (CDP), the RBA Supplier Self-Assessment Questionnaire (SAQ) and QuEST Sustainability Assessor.
- All ARRIS manufacturing facilities continue to score 'Low Risk' in the RBA SAQ process.
- Achieved zero "major non-conformance" in third-party certification audits.
- Completed Ethics and compliance training at ARRIS global locations.
- ARRIS employees completed more than 84,248 training sessions.
- All 12 scheduled supply chain Corporate Responsibility (CR) audits were completed. These audits were conducted in China, the Philippines, Taiwan and the United States.
- Implemented the ARRIS Supplier Code of Conduct acknowledgment process. Suppliers are now required to acknowledge and sign the ARRIS Supplier Code of Conduct.
- Continued to align our current activity against the UN Sustainable Development Goals (SDGs).

# ARRIS AT A GLANCE IN 2018

## BRIDGING THE DIGITAL DIVIDE AND CONNECTING PEOPLE AROUND THE WORLD

ARRIS has a proud legacy of leadership in networking and entertainment technology. Throughout our history, we have pioneered innovative solutions across the globe. Our expanding portfolio of hardware, software and services is transforming the way millions of people stay constantly informed, entertained and connected. We enable our customers to deliver more bandwidth and better-connected experiences. Together with the world's leading companies and channels, we are redefining connectivity.

### ARRIS collaborates with its customers across three core business units:

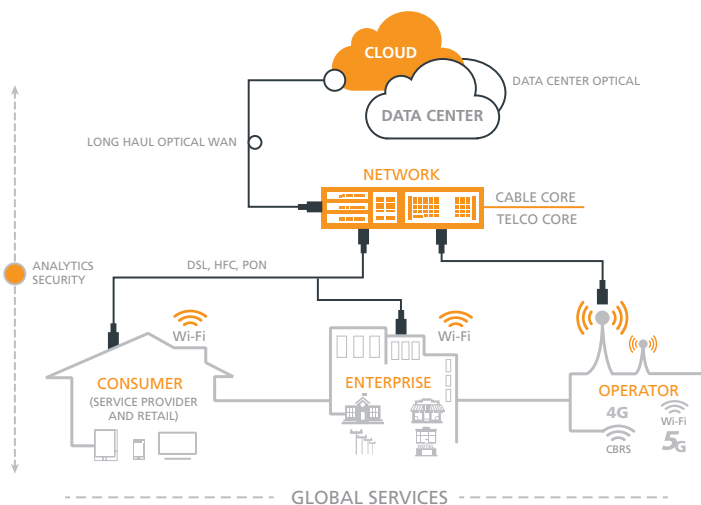
- Customer Premises Equipment (CPE), featuring access devices such as broadband modems, gateways and routers and video set-tops and gateways;
- Network & Cloud (N&C), combining broadband and video infrastructure with cloud-based software solutions including global professional services; and
- Enterprise Networks, incorporating the recently acquired Ruckus Wireless® and ICX Switch® businesses and focusing on wireless and wired connectivity, including Citizens Broadband Radio Service solutions.

ARRIS International plc (ARRIS) was a constituent of the National Association of Securities Dealers Automated Quotations (NASDAQ) global market.

In November 2018, ARRIS announced its intention to combine its business with CommScope to capitalize on the joint vision of a brighter, better-connected future, building upon our complementary products and services. CommScope and ARRIS share a deep commitment to technological excellence and corporate responsibility and see this as a perfect partnership to deliver even more to our customers.

### ARRIS solutions portfolio

End-to-end technology innovation and the experience to bring it all together



## ARRIS AT A GLANCE

- > 1,000 ARRIS customers served globally
- > 250 RUCKUS service provider customers
- > 10,000 RUCKUS active channel partners
- > 100,000 RUCKUS end customers

7,900 ARRIS employees

Suwanee, GA USA Headquarters

84 countries with ARRIS direct or indirect presence

38 countries with RUCKUS presence

\$6.7 ARRIS revenue FY 2018

> 5,000 patents approved or pending

# WE PUT CORPORATE RESPONSIBILITY AT THE HEART OF WHAT WE DO AND WE ARE GUIDED BY OUR CR POLICY AND PRINCIPLES

At ARRIS, corporate responsibility is about balancing our commercial objectives with our responsibilities to people, society and the environment.

It means implementing efficient ways of working, managing our operations and supply chain responsibly, designing environmentally conscious products and considering the impact of our work every single day.

Our business is founded on strong relationships built on trust, transparency and ethical practices. These values are essential to who we are and form the very pillars of our Company that guide our interactions with our customers, partners and suppliers.

To support our Corporate Responsibility (CR) program, we expect our employees and contractors to act in accordance with our policies and industry best practices. Our Corporate Responsibility program is driven by our CR Policy and CR Business Principles.

### **ARRIS International plc (ARRIS) Corporate Responsibility (CR) Policy and CR Business Principles**

ARRIS, including its worldwide subsidiaries, is committed to corporate responsibility that is based on and consistent with the Responsible Business Alliance (RBA) Code of Conduct, which establishes standards applicable to the lifecycle of the products and services we make, brand, buy or sell (directly or indirectly) from design to manufacturing, distribution and end-of-life management. These standards are designed to ensure that working conditions are safe, that workers are treated with respect and dignity, and that business operations are environmentally responsible and conducted ethically.

We enforce these commitments through our Policy on Business Ethics and Code of Conduct, our Environmental, Health and Safety Policy and our Human Rights Policy, which are applicable to all our employees and operations, and our Supplier Code of Conduct, which our business partners (including suppliers) are directed to comply with.

### **Our commitments include:**

- meeting or exceeding requirements for responsibility set out in the RBA Code of Conduct;
- complying with applicable laws, regulations and customer requirements related to our operations and products;
- requiring business partners to operate under our Supplier Code of Conduct and communicate these requirements to their business partners; and
- continuously evaluating and improving CR performance.

At ARRIS, our Corporate Responsibility Business Principles govern our business practices globally.

### **Q: Do you see ethical business as being core to our strategy?**

**A:** "We have built our reputation on doing business ethically and with integrity. Our Corporate Responsibility program helps us build great relationships with our stakeholders and reinforces our ongoing commitment to conducting business to the highest standards."

**Bruce McClelland**, former CEO, ARRIS and current COO, CommScope

### **Q: How are our stakeholders driving corporate responsibility across the business?**

**A:** "Awareness of corporate responsibility is increasing across the world. Our customers, investors and employees are expecting more from us and we are taking the lead to make sure we continue to meet their expectations. At ARRIS we continue to improve our Corporate Responsibility program and remain committed to corporate responsibility in every part of our business."

**Livia Nascimento**, Vice President, Compliance

## CR Business Principles

We create products that advance the way the world connects. We are guided by our Policy on Business Ethics and Code of Conduct, which is based on our value of doing the right thing all the time. These principles guide our actions:

- **Innovative products, customer delight and quality**—We create innovative products and solutions with quality and performance that meet or exceed our customers' expectations.
- **Ethics and transparency**—We operate with transparency and according to high standards of ethics and law in directing and managing the Company for all stakeholders.
- **Environmental quality**—We encourage sustainable use of the earth's resources in our products and operations, and we strive to design environmentally conscious products.
- **Diversity and inclusion**—We create an engaged workforce that can contribute its full potential in an inclusive work environment.
- **Safe and healthy workforce**—In co-operation with our employees, we work to maintain a safe and healthy workplace and support employees' work-life balance.
- **Economic opportunities and growth**—We work to create wealth, economic opportunities and growth in regions where we do business, through our products, services, relationships and operations.
- **Supplier relationships**—We set expectations for our suppliers and work with them to conduct their operations in compliance with applicable laws and accepted standards of fairness and human decency. We create a diverse supplier base.
- **Community support**—We consider and support educational, environmental and social needs in the communities where we have significant operations.
- **Shareholder value**—We strive to achieve strong financial results and long-term success through sustained profitable growth, technological innovation and market leadership.
- **Privacy and security**—We value and protect our employees' and customers' data and privacy and we strive to design products which adhere to or exceed the related legal requirements.



## Leadership

Corporate responsibility leadership is closely aligned with the overall leadership structure and is sponsored by the Chief Executive Officer (CEO).

The CEO is directly supported by:

- Senior Vice President, Supply Chain, Quality and Operations
- Senior Vice President, General Counsel
- Vice President, Compliance
- Vice President, Lead Counsel, Corporate and Regulatory
- Senior Vice President, Human Resources

In addition, three key leadership roles are responsible for delivering our corporate responsibility initiatives:

- **Director, Corporate Responsibility:** responsible for CR strategy development, deployment and reporting, including supply chain, products, operations and governance improvement programs.
- **Director, Product Compliance:** responsible for product compliance to safety, environmental, energy and accessibility requirements.
- **Director, EHS and Compliance:** responsible for environment and health and safety (EHS) compliance where ARRIS operates.

The ARRIS CR program is built on teamwork, innovation and dedication and would not be a success without the leadership of our Global CR Champions.

- **Our Operations:** Senior EHS Consultant.
- **Our Products:** Senior Product Compliance Consultant.
- **Our Products:** Engineering Fellow.
- **Our People:** VP Human Resources.
- **Our Supply Chain:** Senior Manager EHS.



## Business Ethics Policy

We run our business in full compliance with the law and in accordance with the highest principles of business ethics and conduct.

Our Policy on Business Ethics and Code of Conduct sets out the core guidelines that ARRIS – including our worldwide subsidiaries – expects its officers, directors, management, other employees, contractors and agents to follow.

We adhere to this policy when dealing on behalf of the Company – with Governmental entities, the public, the Company's customers, creditors, suppliers and competitors, and with fellow ARRIS employees.

## Whistleblowing

We have a clear Whistleblowing Policy and accompanying procedure for individuals to file a report in instances where they believe violations of policies or standards might occur or have occurred.

Fundamental to our professional integrity, this policy applies to all our operating companies and individuals working at all levels of ARRIS – irrespective of their geographic location.

The key aim is to encourage people to report any fraud, risk, unethical matter, malpractice or wrongdoing of which they are aware, and to be able to do this in confidence.

To facilitate this, an anonymous ethics hotline and website service allow employees to speak in confidence in multiple languages 24 hours a day, 365 days a year.

## Raising awareness

We ask all employees and contractors to review our policies and complete a short online ethics survey. Non-employees and contingent workers – such as temporary employees, independent contractors, outside Services Providers and agents – are also expected to complete the ethics survey.

In 2018, ARRIS continued to roll out its ethics and legal compliance training program to the organization. Depending on an employee's specific job function, the training included one or more of the following courses: ethics, preventing workplace harassment, anti-bullying, equal opportunity employment, corruption and bribery, Government contracts, understanding anti-trust law, environment, health and safety, quality management systems and modern slavery.

## Stakeholder Engagement

Our approach to stakeholder engagement ensures that we create meaningful dialogue with our stakeholders and gain insight into critical issues and risks, as well as opportunities. This dialogue also ensures that we continue to prioritize issues and develop our CR strategy and programs.

Our stakeholders include shareholders, investors, customers, employees, suppliers and partners, local communities and the Government.

We regularly engage with our stakeholders on a wide range of issues, including product energy performance, circular economy, performance satisfaction, human rights and other corporate responsibility goals. The key topics are discussed internally and integrated into our materiality assessment process.

| STAKEHOLDER GROUPS   | ENGAGEMENT FORUMS   |
|--|---|
| <ul style="list-style-type: none"><li>• Shareholders and investors</li><li>• Customers</li><li>• Employees</li><li>• Suppliers and partners</li><li>• Local communities and the Government</li></ul> | <ul style="list-style-type: none"><li>• Supplier conferences</li><li>• Channel partner forum</li><li>• Customer satisfaction survey</li><li>• Investor relations</li><li>• Social media—ARRIS Everywhere, Twitter, LinkedIn</li><li>• RBA Conference</li><li>• Ethics hotline</li><li>• Product regulatory and voluntary agreements committees</li><li>• Employee satisfaction meetings</li><li>• ARRIS all-hands meetings</li><li>• Annual internal leadership forum</li></ul> |



# Materiality Assessment

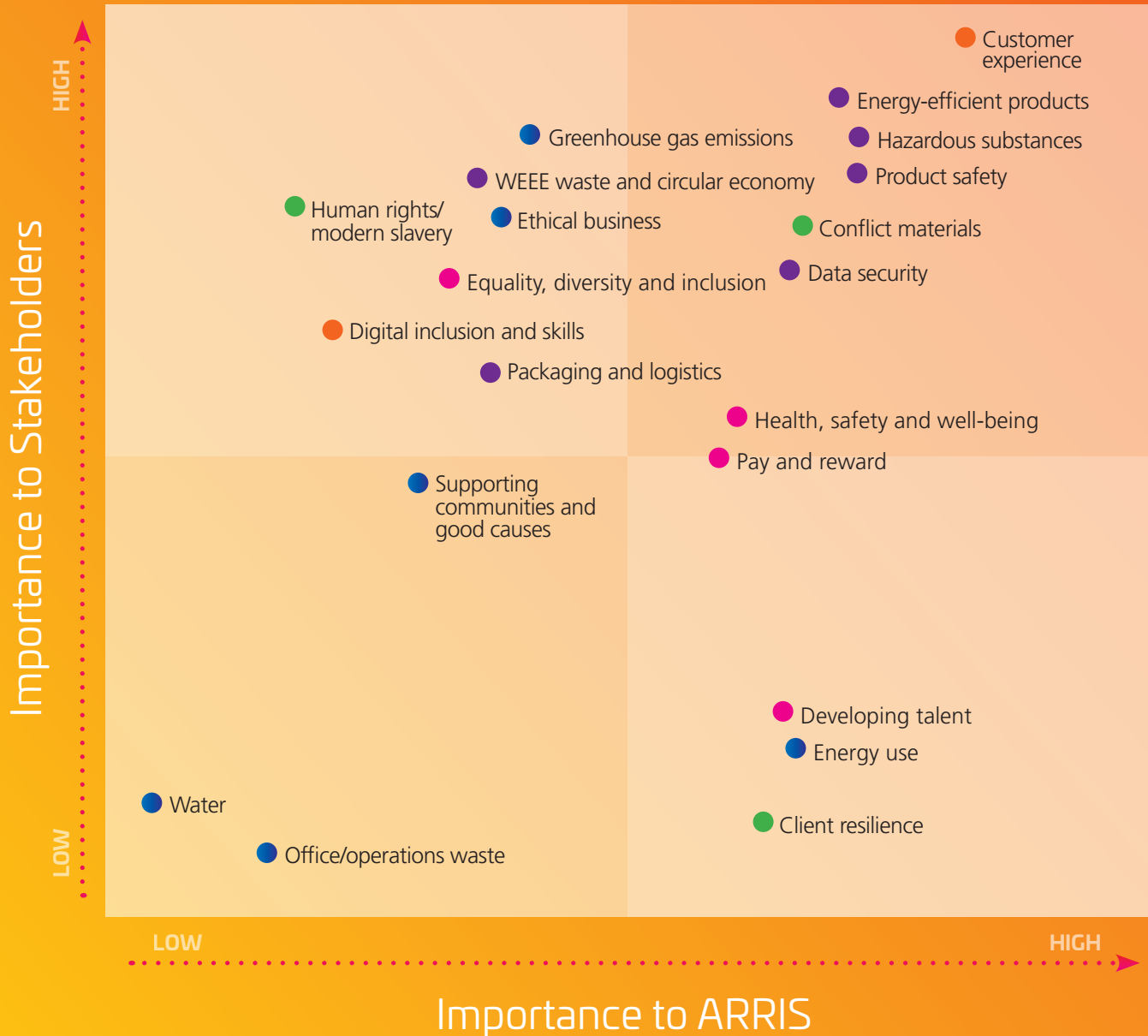
ARRIS's first Corporate Responsibility Report was launched in 2016 following the completion of a materiality assessment to understand the issues most important to us and our stakeholders.

Throughout 2018 we have continued to make progress against these important issues and by mapping our actions against the United Nations (UN) Sustainable Development Goals (SDGs) and the Global Reporting Initiative (GRI) we are able to monitor our progress and continually improve.

## Materiality progress

| Materiality finding (2016)   | Progress in 2018   |
|--|--|
| Our corporate responsibility activities are important to our customers and their buying decisions. Product energy efficiency is particularly important.    | We built on our position as a driving force in advancing energy efficiency voluntary agreements for Set-Top Boxes (STB) and Small Network Equipment (SNE) products in the US, the EU and Canada. We continued to align our internal objectives with the Society of Cable Telecommunications Engineers (SCTE) Energy 2020 goals in order to help Access Networks and Edge Facility products achieve energy reductions.  |
| Our customers expect us to go beyond compliance and integrate sustainability aspects into our products, such as reducing energy consumption.               | <p>Since 2016, we have reduced the carbon emissions in Small Network Equipment in the US by 20% and by over 25% for STBs.</p> <p>After signing KPN's Circular Manifesto in 2017, we have continued to ensure that products supplied to KPN support its 100% circular by 2025 goal—meaning that almost all the materials used should be reusable or recyclable.</p>   |
| It is important for ARRIS to manage the impact of long-term change on its business; this includes climate change risks to its operations and supply chain. | <p>In 2018, ARRIS maintained its status as a full member of the RBA in line with the revised 2018 Version 6.0 membership criteria. This is the highest level of membership in the RBA.</p> <p>Our Supplier Code of Conduct encourages suppliers to meet internationally recognized standards and best practices to advance social and environmental responsibility, as well as business ethics.</p> <p>In 2018, we met our five-year GHG reduction goal by reducing GHG emissions by 17.6% compared to 2013, exceeding our 2018 cumulative goal of 10%.</p>  |
| Our stakeholders would like us to build a Corporate Responsibility program that responds to global challenges.   | <p>In 2018, we mapped our key activities against the UN SDGs to ensure we remain globally focused in our CR efforts.</p> <p>Through its Enterprise Networks, in 2018 ARRIS worked with Facebook and Google to install hundreds of Wi-Fi installations in India, Mexico and Indonesia. Connecting the next billion humans to each other—via the internet—one of the largest and most important endeavours of our time. Providing connectivity, communication, entertainment, information and help is both vital and momentous. Through this we directly contribute to SDGs 9 and 11, providing basic services which enable improved education and healthcare and tackle the rising issue of loneliness.</p> |
| Building trust in business and supporting a goal to deliver sustainable, profitable growth is good for people, the environment and our business.           | <p>Ensuring that our own business, including our suppliers, continues to exceed the high expectations of our stakeholders remains a priority at ARRIS.</p> <p>ARRIS was ranked in the top 5% of suppliers assessed by independent corporate responsibility assessors EcoVadis in all categories in 2018. This was our third consecutive Gold Corporate Responsibility rating.</p> <p>Further to this, in 2018 over 95% of applicable ARRIS products complied with the EU and US STB and SNE energy efficiency voluntary agreements—exceeding our 90% target.</p>   |

# MATERIALITY MATRIX



## Materiality assessment matrix

The environmental performance of our products and the services they enable continue to be the two primary areas of importance to our stakeholders. Building on previous years, we will continue to focus on five key areas: products, supply chain, operations, people and governance. This addresses our most significant impacts while also aligning with the needs of our customers and stakeholders.

- Delivering purpose
- Our products
- Our operations
- Our people
- Our supply chain

### Q: What value is generated by our CR activities?

A: "Our Corporate Responsibility program continues to deliver significant benefit for ARRIS and its stakeholders. During 2018, our work with Google, Facebook and many other customers showed how our products are making a difference as they experience first-hand the positive impact ARRIS products are having on global issues. Being recognized by our customers as leaders in corporate responsibility is a testament to the great work we are doing."

**Damien O'Sullivan**, Director,  
Corporate Responsibility

## Objectives and Targets

Performance against our 2018 objectives and targets is detailed below.

| CR focus area           | Strategic objective   | 2018 objectives and targets  | Status                  |
|-------------------------|---|--|-------------------------|
| <b>Governance</b>       | Embed CR into the heart of our business decisions.                  | Integrate Ruckus into the scope of the CR program.   | Achieved                |
|                         |   | Continue to update the CR Report to align with global reporting standards.   | In progress             |
|                         |   | Upgrade certified sites to ISO 14001:2015.   | Achieved                |
| <b>Our products</b>     | Develop the best products with the lowest environmental impact.     | CPE—Products in scope to comply with the applicable industry energy efficiency voluntary agreements (STB and SNE).   | Achieved                |
|                         |   | Continue to provide leadership in the development of global energy efficiency voluntary agreements.  | Achieved                |
|                         |   | CPE—Develop a suitable “Design for Environment” strategy that drives a reduction in the environmental impacts of our products as part of our design processes. | In progress             |
|                         |   | N&C – Continue to provide leadership in driving the SCTE’s Energy 2020 goals and standards development for network energy efficiency.                          | Achieved                |
| <b>Our supply chain</b> | Maintain high standards in our supply chain, minimizing CR risks.   | Update our policies and procedures to align with the RBA Code of Conduct V6.   | Achieved                |
|                         |   | Continue to track major partners and suppliers as part of the ARRIS partner scorecard process.   | Achieved                |
|                         |   | 100% of identified suppliers to complete third-party RBA audits.   | Achieved                |
|                         |   | Maintain RBA full membership.  | Achieved                |
| <b>Our operations</b>   | Minimize the environmental impact of our operations.                | Reduce our 2013 GHG emissions by 2% per year by the end of 2018 (10% in 2018).   | Achieved                |
|                         |   | Reduce our 2013 energy consumption by 2% per year by the end of 2018 (10% in 2018).  | 9.2% reduction achieved |
|                         |   | Implement employee awareness and engagement of the operational sustainability program.   | Achieved                |
|                         |   | Manage water use to Leadership in Energy and Environmental Design (LEED) v4 Guidelines for indoor, outdoor and cooling tower efficiencies.                     | Achieved                |
|                         |   | Improve our 2013 landfill diversion rate by 10% by the end of 2018.  | Achieved                |
|                         |   | Continue to drive the use of electricity generated from renewable sources in 2018.   | Achieved                |
| <b>Our people</b>       | Ensure ethical and responsible business success through our people. | Create and continue to leverage new and innovative management and executive development activities globally.   | Achieved                |
|                         |   | Continue to ensure remuneration and benefits plans evolve with the changing marketplace.   | Achieved                |
|                         |   | Continue to attract and retain critical talent and skillsets for the future.   | Achieved                |
|                         |   | Continue to scale our global intern program to support our evolving business.  | Achieved                |

# OUR PRODUCTS ARE POWERING A SMARTER, SIMPLER AND MORE CONNECTED WORLD

## Innovating to Forge a New Era of Connectivity

At ARRIS, we continue our strong history of industry leadership and innovation, from the invention of digital TV to the unveiling of the first wireless broadband gateway. With over 5,000 patents approved or pending we are proud to still be redefining connectivity for consumers and businesses across the globe.

We develop products across three primary business segments: Network & Cloud (N&C), which includes our network infrastructure products; Customer Premises Equipment (CPE), which includes products such as our Set-Top Boxes and residential gateways; and Enterprise Networks, incorporating the Ruckus Wireless and ICX Switch businesses—focusing on wireless and wired connectivity.

We continue to be a global market leader in the IP, video and broadband industry. Our ongoing innovation ensures that our products are sustainable with regards to their energy consumption, materials and waste. Product energy efficiency remains our largest sustainability opportunity and is of great importance to our customers.

## Prioritizing Energy Reduction for Our Customers

The energy our products use is one of our most significant environmental impacts, with 90–95% of the lifecycle impact occurring during normal operation. As such, we actively participate in a broad array of energy efficiency initiatives worldwide (see Appendix A.2 for full list) and, for the first time in 2018, we have measured our product scope 3 GHG emissions (energy emissions from product in use).

Using 2016 as our baseline year and measured in accordance with the US voluntary agreement for Small Network Equipment we have reduced the GHG emissions of Small Network Equipment in the US from an average baseline of 60 kgCO<sub>2</sub>e per product in standby to 53 kgCO<sub>2</sub>e in 2017, a reduction of 11.6%, and to 48 kgCO<sub>2</sub>e in 2018, a total reduction of over 20% since 2016. The reduction in average GHG annual emissions per product is despite an increase in performance of the newer products. Performance increases include the migration from Data Over Cable Service Interface Specification (DOCSIS) 3.0 to DOCSIS 3.1 and Wi-Fi from Institute of Electrical and Electronics Engineers (IEEE) 802.11n to IEEE 802.11ac.

| Product group                      | 2016 baseline average (kgCO <sub>2</sub> e) | 2017 average (kgCO <sub>2</sub> e) | 2017 % reduction | 2018 average (kgCO <sub>2</sub> e) | 2018 % reduction | 2016 baseline to 2018 % reduction |
|------------------------------------|---|------------------------------------|------------------|------------------------------------|------------------|-----------------------------------|
| STB (EU, US, Canada and Australia) | 45.59                                       | 40.23                              | 11.70%           | 33.65                              | 16.30%           | 26.20%                            |
| SNE (US only)                      | 60.00                                       | 52.99                              | 11.60%           | 47.79                              | 9.80%            | 20.30%                            |

Our STBs have also achieved significant energy reductions. In 2018, our average kgCO<sub>2</sub>e per product reduced by 16.3% compared to 2017 and 26.2% when compared to our 2016 baseline year. This is when measured in accordance with the relevant voluntary agreements in the US, Canada, the EU and Australia, and includes both the standby power and “on” power with an industry-wide standardized duty cycle. Again, the absolute reduction in GHG emissions is despite an increase in features with newer STBs incorporating more features including higher-performance Wi-Fi and 4k ultra high definition (HD) video processing.

**In July 2018, the Consumer Technology Association (CTA) and The Internet & Television Association (NCTA) announced a four year extension** to their landmark agreement to improve energy efficiency guidelines for Small Network Equipment (SNE) in the United States. SNE includes common devices like modems, Wi-Fi routers and broadband gateways.

ARRIS reaffirmed its commitment to energy efficiency by being an early supporter of the agreement, which originated in 2015. Since then, ARRIS has been a driving force in advancing its technical guidelines and energy efficiency targets.



## Enabling the Transition to a Circular Economy

As technology evolves, we are designing higher-performance products which use fewer raw materials and consume less energy. We can design products that benefit from developing technologies, such as the use of plastics derived from recycled materials, while ensuring that the properties of the plastics are appropriate to meeting the products' requirements.

To improve the lifecycle of our products, we design them so that new features can be added by updating the software remotely without user intervention. This approach has been used to add new features as well as improve energy efficiency by reducing the energy used in standby mode. We have been proactively upgrading and enhancing products for more than 20 years, with little or no impact on the end user.

We continue to work closely with KPN, one of our major EU customers, on a circular economy initiative to develop a product that will minimize impacts at each stage of the product's lifecycle.

We also are actively working with many of our customers to eliminate or reduce the use of single-use plastics in our packaging, either by substituting plastics with a more sustainable solution or by redesigning the product so that protective plastic is not required.

With the recent launch of the European Union's (EU) Circular Economy Package (four legislative proposals on waste) and the UK Government's Resource and Waste Strategy for England, which promotes resource efficiency and a move towards a circular economy, it is likely that this subject will become more prevalent for our customers and suppliers.

## Customer Premises Equipment (CPE)

ARRIS helps to shape voluntary agreements in the US, Canada, Europe and Australia (see Appendix A.2 for full list); the independent monitoring of these voluntary agreements (VA) verifies the accuracy of our efficiency claims.

ARRIS is proud to have always been compliant with the relevant STB and SNE energy efficiency voluntary agreements and to have facilitated its customers' compliance, where we have a reporting responsibility. This can be attributed to our robust design controls, which ensure that when products are tested they are fully representative of our products when shipped.

During 2018, we led the proposals for new voluntary agreements in the EU to reduce and reshape the energy allowances for STBs while, in the US, we continued to be a key technical advisor for both the STB and SNE voluntary agreements. The target of these agreements is to minimize the energy consumed, while not adversely affecting either our direct customers (the Service Providers) or the end consumers.

### What is the circular economy?

The circular economy is an alternative to today's linear take-make-dispose economy, where products are discarded after their perceived value is used, losing the value of all resources utilized in production. At ARRIS, we are increasingly looking at how to achieve a circular economy, realizing that resources are finite, yet demand is rising.

### KPN and ARRIS Circular Economy Case Study

During 2017, ARRIS signed KPN's Circular Manifesto. The manifesto aims to reduce the material impact of KPN products and services by 2025. As such, all ARRIS products supplied to KPN should be close to 100% circular by 2025—meaning that almost all the materials used should be reusable or recyclable. ARRIS continues to work with KPN to deliver products that fulfill the Circular Manifesto.



We also jointly led negotiations to include non-energy aspects in the EU voluntary agreement for STBs. This world first in our industry is intended to minimize some of the wider environmental impacts of STBs while not adversely impacting the product cost. The agreement now includes the voluntary ban on some materials that are more harmful to the environment such as brominated flame retardants (BFR) and chlorinated flame retardants (CFR) in plastics and encouraging the use of both post-consumer recycled materials in packaging and products and the use of bio-based plastics.

We have two independently accredited laboratories, in Saltaire and Horsham. Both laboratories provide independent measurement and accredited energy efficiency compliance verification to the ENERGY STAR specification for STBs and, when appropriate, to the Canadian Energy Efficiency Voluntary Agreement for STBs.

### **International Energy Agency (IEA) Connected Devices Alliance—Network Zero Challenge:**

Robert Turner, Senior Product Compliance Consultant at ARRIS, is working with the IEA's Network Zero Challenge team to investigate the feasibility of developing devices with net-zero energy for the network interfaces. This is comparatively easy for simple sensors but is significantly more challenging for high bandwidth video-capable devices; we have helped the IEA to understand the technical challenges and helped them to target their efforts so that a wider group of stakeholders are involved to increase the opportunity for this initiative to succeed.



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### **CPE: KEY ACHIEVEMENTS IN 2018**

- Continued to lead the STB industry in negotiations with the European Commission to tighten the allowances in the European voluntary agreement for STBs.
- More than 99% of applicable ARRIS shipments comply with the US SNE voluntary agreement.
- More than 95% of all applicable shipments comply with the Canadian STB voluntary agreement (CEEVA).
- All applicable ARRIS products complied with the EU STB energy efficiency voluntary agreement, exceeding the VA target of 90%.
- 50% of all SNE models listed on the US EPA ENERGY STAR program (V1) are manufactured by ARRIS.
- Participated, and provided key technical input, in the extension of the US voluntary agreements for STBs and SNE.
- Provided input to consultants and regulators on the proposed tightening of the EU standby regulations to keep new limits aggressive but achievable.
- Provided input to the California Energy Commission on the proposed roadmap for standby power and power factor correction.
- Continued to implement further software updates to our products, with energy efficiency measures embedded—resulting in significant energy savings for our end users.



## Network & Cloud

Products from the ARRIS Network & Cloud (N&C) group are used throughout a Service Provider's infrastructure. Our engineers are constantly working to increase the capacity and functionality of our N&C products while minimizing energy consumption and increasing space efficiency.

The ARRIS N&C group continues to align its product development in support of SCTE Energy 2020, a multi-year campaign, through the SCTE Energy Management program. ARRIS participates in this program which aims to provide cable system operators with energy management standards, technology innovation, organizational solutions and training to help the industry plan and control its energy future. The campaign's mission is to unify the cable multiple system operator (MSO) communities and their technology suppliers, to enable cable network capacity growth through innovative energy solutions. Recently, SCTE/ISBE was awarded its first ever patent based on work from the Adaptive Power Systems Interface Specification (APSYS) group within the Energy Management Subcommittee (EMS). This included contributions from operators and vendors including ARRIS. The patent covers energy consumption management in broadband telecommunications networks via adaptive power management.

ARRIS is helping its customers to meet the goals set by the SCTE EMS working group for its Energy 2020 program. This

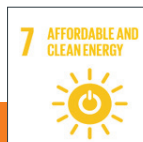
includes reducing power consumption per unit by 20% and energy costs by 25% on a unit basis. ARRIS N&C teams have continued to reduce energy consumption and increased the functional density of our products to help operators achieve these two goals. The E6000® CER and Access Network products demonstrate how ARRIS is keeping operators on track to meet these goals.

### At the October 2018 SCTE Expo, ARRIS demonstrated:

- New Remote physical layer (PHY) Distributed Access Architecture (DAA) solutions for headends and outside plants that dramatically lowers space and power in the headends and expedites facility consolidations.
- One fiber node platform, with support for today and tomorrow's architectures—all using a higher-efficiency power supply.
- Enhanced performance transmitters to reach long-distance subscribers more cost effectively to power efficiently and to enable consolidation of facilities.
- A new generation of even higher-density, multi-wavelength optical transmitters.
- A preview of multiple, innovative technologies that will continue the roadmap to higher capacities with improved energy efficiencies into the next decade.

### How ARRIS N&C products have helped our Service Provider customers to meet their 2018 energy and facility goals:

- A key ARRIS customer found that the new Remote PHY solution from ARRIS could help it meet many of its goals. The headend space and power saving, along with potential facilities' consolidation, were very important to it. The cost associated with maintaining its headends and hubs is a considerable part of its OPEX and energy consumption. The operator was looking to both downsize headends and remove processing equipment from local communities. A clear benefit of this approach is that active equipment could be consolidated to fewer headends, reducing the customers overall energy footprint.
- ARRIS has continued to reduce per unit power for outside plant equipment and it has also taken the lead in new power-efficient architectures. These new Fiber Deep architectures could consume up to 50% less power than today's traditional HFC plants, while enabling a ten-fold increase in network capacity. The operator also benefits from a reduction in the number of active components in the system, which increases reliability and leads to a reduction in maintenance requirements. This also means a lower carbon footprint.
- ARRIS is the industry leader in offering Fiber Deep HFC solutions and provides the products for both outside plant and optics at the headend (HE) or hub. ARRIS has made consistent improvements on its HE/hub equipment. This includes TX/RX optic module density and the power consumed per optic module. In 2018, ARRIS introduced additional quad TX modules to go with its quad RX introduced previously. The HT3580H quad TX module has improved power per optical port by 40% over its predecessor dual density modules. We expect further improvements over time with additional R&D investments.
- The ARRIS E6000® Converged Edge Router (CER) eCore solution resulted in a 75% reduction in headend space for the customer. Its associated headend power was cut by more than half. The DAA solution also dramatically reduced operational complexity. This allows the operator to effectively grow its network and customer offering without any truck rolls or field work, furthering reducing energy impacts.





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## N&C: key achievements in 2018

- We continued to align our objectives with the SCTE Energy 2020 goals to help our Access Network and Edge Facility products achieve energy reductions—while also providing a roadmap to a ten-fold increase in capacity—in roughly the same footprint.
- We introduced an industry leading Distributed Access Architecture (DAA) solution based on a DOCSIS Remote PHY system. This will allow our customers to dramatically reduce headend space and power while extending their reach. This will result in the consolidation of many headend and hub facilities for significant savings.
- The ARRIS E6000® Converged Edge Router (CER) introduced new capabilities to support a Remote PHY Core on its existing Gen 2 platform. When operating in this mode, the E6000® CER power is reduced by more than 50% per Service Group compared to typical Integrated CCAP operation.
- The ARRIS E6000® Converged Edge Router (CER) also introduced new optimized CCAP Core Modules for Remote PHY Core operation that reduces the E6000® CER power by more than 66% per Service Group compared to typical Integrated CCAP operation.
- New Access Technology products for the headend, such as the HT3580H quad TX module, continue to improve performance and functionality while reducing the power per port. For example, the HT3580H quad TX module has improved power per port by 40% over its predecessor dual density modules.
- Continued roll-out of Fiber Deep HFC architectures which can reduce power by up to 50% while providing a path to a ten-fold increase in network capacity.

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## Enterprise Networks

### **Enterprise Networks, incorporating the recently acquired Ruckus Wireless® and ICX Switch® businesses**

Innovating and bringing the best connectivity solutions to market

Ruckus has a strong legacy history of pioneering technology and building the best-performing products that are remarkably easy for people to deploy, manage and scale. Performance and simplicity form the foundation of everything we do and stand for, and it is what separates us from competitors. That has been true from the beginning and it gave us a firm foundation to keep our footing.

We develop products across two primary businesses: “Wireless”, which includes our wireless access points, software and software as a service (SAAS); and “Wired”, which includes our switching portfolio of products. We are focused on delivering seamless connectivity to various market segments including hospitality, primary education, higher education, Service Providers, the US Federal Government, retail, multi-dwelling units (MDUs), public venues and smart cities.

We are a leading provider of networking equipment outperforming competition. We continue to innovate and invest in the best radio frequency (RF) and connectivity technologies to ensure the best possible performance. We are committed to ensuring our products are sustainable with regards to their energy consumption, materials and waste. Energy efficiency remains one of our largest sustainability opportunities.

“The positive impact of connectivity is shaping the evolution of future life-changing applications. ARRIS products and innovations are enabling the future of connectivity and, together with our customers, we are improving the quality of life for millions of people around the world. The impact of ARRIS innovations in areas such as education, smart cities and infrastructure will only continue to grow and benefit more and more people.”  
Ian Whiting, President, Ruckus Networks, an ARRIS company

## Connecting the next billion

Connecting the next billion humans to each other—via the internet—is one of the largest and most important endeavors of our time. Providing connectivity, communication, entertainment, information and help is both vital and momentous. ARRIS—teaming up with both Facebook and Google—is on the leading edge of this global campaign.

ARRIS, through its Ruckus Networks, has been doing amazing work with Facebook's Express Wi-Fi initiative and is continuing this effort by joining the Express Wi-Fi Certified program. Together with Facebook, we are working to bring fast, reliable Wi-Fi connectivity to emerging economies in Africa, India, Indonesia and Latin America.

The Express Wi-Fi hotspots follow on from our relationship with Google Station as a favored supplier for Wi-Fi installations in developing countries including India, Mexico and Indonesia. Google Station is a huge project delivering free Wi-Fi to public spaces, stations, schools and airports

and currently services millions of people on a global scale. ARRIS has installed hundreds of Wi-Fi hotspots as part of these initiatives and expects to create thousands of more hotspots over the next few years.

Our contribution to these initiatives not only brings affordable and dependable internet to developing countries but additionally fosters the creation of new global markets for entrepreneurs, enhancing development cooperation through connected technologies. Facebook partners with local internet providers to give Express Wi-Fi to local entrepreneur retailers who then sell pre-paid connectivity to residents, creating entirely new markets.

Our participation in these initiatives demonstrates our continued commitment to closing the digital divide and improving connectivity in remote global locations.



## Lowering the cost per connection and environmental footprint for our customers

We believe in developing the best innovative products that will ultimately lower the total cost per connection for our customers. We develop access points (APs) that support the same volume of users and traffic that other suppliers would require two APs to support. Additionally, we have developed an "all-in-one" WLAN that requires no additional network elements and thus gives a lower carbon footprint. We also offer chassis-less, software-upgradeable switches that power more power-over-Ethernet nodes and allow costs to grow in step with capacity. Our common switches and APs, suitable for a variety of architectures, also reduce costs and IT training requirements.

We have reduced the energy consumption of our wireless products and by doing so lowered the total cost per connection for network solutions. Ultimately, this helps lower the overall energy consumption required for a complete network deployment.

## Wireless products

Ruckus is a global innovator in networking technology. We have continually worked to transform the experience of connectivity for millions of people around the world. Ruckus is dedicated to the success of its customers, bringing a passion for invention that has fueled its history.

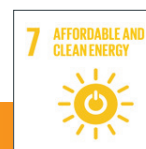
We continue to invest in the best RF technologies to ensure all products are optimized for the highest performance, delivering the best throughput in high-density environments. We also develop products that are backward compatible with previous software versions and can support existing generations of APs and controllers. This eliminates the need for customers with Ruckus Wi-Fi deployments to have to "rip and replace" existing hardware, reducing the impact on the environment.

Ruckus is also evaluating packaging options, including bundling access points in five or ten packs to eliminate excessive packaging. Also, multiple inserts and notices will be eliminated, reducing paper use.

## Smart cities—improving social value

We are exploring how cities leverage smart technology to enhance citizens' lifestyles, including improvements to health care units, increasing economic growth and improving efficiency. This will be done by utilizing the latest technologies such as 802.11ax/ay Wi-Fi and smart cells and the promise of reliable 5G.

We now power the world's largest outdoor Wi-Fi deployments, building a comprehensive ecosystem of partners and experience to both enable and deploy the smart solutions that cities desire. Our expertise streamlines the implementation process resulting in faster time to market and lower deployment costs. Our Wi-Fi solutions will be progressively important for cities in the bid to become "smart".



## Wired products

Ruckus innovates across wired technologies to enable better customer experiences. The Ruckus ICX family of fixed form factor switches work together to simplify network set-up and management, enhance security, minimize troubleshooting, and make upgrades easy. Our low-latency, non-blocking architecture ensures excellent throughput for the most demanding applications. Ruckus switches leverage decades of expertise, from Foundry and Brocade, to deliver the best performance, with flexibility and investment protection.

ICX switches work seamlessly with Ruckus Wi-Fi access points and Ruckus SmartZone™ network controllers to deliver

the most cost-effective, unified wired and wireless access solutions on the market today.

We strive to make all Ruckus ICX switches as environmentally friendly as possible. Accessories shipped with each ICX switch are optimized, with minimal accessories that would typically be scrapped by the customer, including power supplies and cords. Excluding these accessories contributes to less scrapping, ultimately benefiting the environment. We also use ethically sourced components, supporting many customer requirements to ensure environmentally friendly products and packaging.

## Enterprise Networks: key achievements in 2018

- Powered Google Station Wi-Fi hotspots in three emerging countries, helping to lower the barrier to entry for network connectivity and supporting Google's Next Billion Users initiative.
- Supported Facebook's Express Wi-Fi Technology Partner program, deploying hotspots in Africa, India and Indonesia to help connect the unconnected.
- First to market with Internet of Things (IoT) and LTE-ready 802.11ax (Wi-Fi 6) access point (AP) for stadiums, public venues, train stations and schools to support connectivity for more devices and applications with a single AP. Reducing carbon footprint with a single AP to deliver better power-to-performance efficiencies by up to 2.5x compared to older generation 802.11ac APs.
- Introduced the first unified controller-based system for wired and wireless management. SmartZone™ enables a single network element to control and manage Ruckus wireless access points (APs) and switches. SmartZone™ network controller eliminates the need for multiple computer screens and improves overall energy efficiency.
- Provided more coverage with fewer APs with faster, more reliable connectivity.
- Ruckus switching portfolio reduced the overall total cost of ownership (TCO) by reducing campus network acquisition, power and cooling by approximately 35%.
- Over 5 million US households with school-aged children do not have access to the internet. Ruckus is helping bridge the digital divide with free public Wi-Fi that helps school-aged children connect to the internet to complete their homework and class assignments.

## Ruckus donates and installs wireless technology to support California Wildfire Relief

Considered both the deadliest and most destructive wildfire in Californian history, the California fires that broke out on 8 November 2018 killed a total of 89 people and destroyed 20,447 structures, leaving thousands of people homeless.

In response, Ruckus donated and helped install wireless access points (APs), switches and controllers across multiple sites hosting fire relief efforts across Northern and Southern California. This helped establish reliable wireless network connectivity for firefighters, aid groups and evacuees.

Our flexible and adaptable "modularized kits" proved particularly useful, allowing them to be quickly deployed in the affected areas. These kits contained a range of Ruckus networking equipment including indoor and outdoor access points, PTP bridges to deliver connectivity, and easy access to our remote management vSZ platform.



## Ruckus changes the world of indigenous communities in Taiwan

Taiwan is one of the most networked countries on earth. However, indigenous communities living on remote islands or mountainous areas, such as the Lalauran and Calavi communities in Taitung and Yayo Village in Lanyu, have had serious challenges gaining access to wireless internet and the services delivered across it. With fewer job opportunities, in addition to a lack of access to educational and medical resources, young people tend to leave their home towns to work on the main island of Taiwan, leading to a deepening divide between urban and rural areas.

In response, the Council of Indigenous Peoples, launched a program named i-Tribe in 2015 to address some of these issues, utilizing Ruckus' outdoor Wi-Fi access points (APs) as the solution. Consequently, since 2015, over 400 Ruckus ZoneFlex T300 802.11ac Wave 2 smart access points have been deployed across 69 indigenous communities around the country's remote areas.

As a result, local communities immediately felt the benefit of high-quality, reliable wireless networks, and locals have continually appreciated the sensitive way in which the APs have been fitted into the local areas. Alongside supporting local education and the tourism industry, boosting the local economy, the addition of the network has significantly improved quality of life.

"Network outages are no longer an issue when Lanyu is hit by strong typhoons in the summer. Mobile medical vehicles can access digital health records or X-ray images remotely over wireless networks, and that boosts medical service efficiency and people's quality of life." Syaman Manezeh, a local in Yayo Village, Lanyu.



## Product Safety and Hazardous Substances

ARRIS remains committed to full product compliance, often going beyond minimum legal requirements for each country. We comply with, or exceed, all applicable safety, electromagnetic compatibility (EMC), wireless and environmental requirements for each country to which we ship. For those countries where there are no specific regulations, we apply a minimum internal standard equivalent to either the European Union or North American safety standards.

Our externally accredited safety laboratory in the UK continues to verify the compliance of our products during the design cycle. In addition, our products are either formally tested in our accredited laboratory or tested by an independent accredited third-party laboratory (e.g. TUV, Underwriters Laboratories (UL)).

Many of our products incorporate high-power lasers for the efficient transmission of large volumes of data, over long distances. These products are registered with the US Food and Drug Administration (FDA), which regulates the sale and use of lasers in the US. Where additional sales opportunities are identified, they are first reviewed with our Compliance team to ensure that the design specifications will satisfy all requirements in the new markets. We also monitor legislation worldwide to ensure any new or proposed legislation or standards are adhered to.

### Hazardous substances

ARRIS products are developed to meet or exceed all regulatory requirements in their intended markets, including the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive (RoHS) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) requirements.

ARRIS bans or limits key hazardous materials on a Company-wide basis. To manage this, we operate a "full material disclosure" process that requires our suppliers to declare the materials used in their components, providing transparency in the value chain. As part of the regular supplier auditing process, we verify that traceability exists for restricted substances.

# Waste Management

## WEEE/packaging/battery recycling

ARRIS expanded its WEEE compliance and battery recycling during 2018 to four new countries with registered schemes and it continued to monitor and respond to the changing RoHS mandatory requirements.

Under the European Waste Electrical and Electronic Equipment (WEEE) Regulations, brand owners, importers and distributors of electrical and electronic equipment are required to finance the collection, treatment, recovery and appropriate disposal of electrical and electronic equipment (EEE) at its end of life. The primary responsibility for the collection and recycling of WEEE rests with the “producer” of electrical and electronic equipment. In some countries, the definition of the term “producer” includes those who import equipment on a professional basis. In some cases, our customers (i.e. the Service Providers) take full responsibility for WEEE compliance.

Where ARRIS has the “producer” obligation, we utilize membership of recognized compliance schemes, e.g. VALPAK in the UK, Ecologic in France and the European

Recycling Platform in Germany. Participation in these schemes ensures that ARRIS fulfills its obligations under the WEEE Regulations.

Various countries also have requirements for the collection and recycling of batteries; usually, as with WEEE, the responsibility lies with the producer or professional importer. However, in some countries, our customers take responsibility for battery recycling. Where we have an obligation, we are members of a recognized recycling scheme (e.g. Call2Recycle, covering the US and Canada).

Where ARRIS takes responsibility for packaging, ARRIS and the European Recycling Platform (ERP) work together to ensure multi-national compliance by registering and managing the relationships with compliance schemes, and then reporting its packaging volumes to local authorities.

## Single-use plastics (SUP), packaging and logistics

Our packaging materials comply with local and international legal requirements, including the EU Packaging Directive. Where we can, we use packaging that is 100% recyclable.

In 2018, we launched an internal initiative to address the use of single-use plastics (SUP) in international CPE products. Where possible, we eliminate single-use plastics and packaging completely or, if elimination is not possible, we replace packaging with more sustainable solutions. Internally, our design control techniques ensure that packaging content is minimized and that new product designs require minimal protective plastic packaging, whilst ensuring that they reach the customer undamaged.

We recognize that our position in the CPE market allows us to take a lead on SUP initiatives and to offer a route to compliance. We are working closely with several customers to design products that are inherently SUP free. For example, for multiple products we have replaced plastic bags with a biodegradable polylactic acid bag.

Our products are manufactured in large numbers for global distribution. Reducing a few grams of material from an individual STB, and its packaging, can save tons of material

in production. Reducing material has a positive impact on the environment, production costs and transportation. We continue to use a range of different techniques to reduce the impact of transport from our manufacturing sites to the end customer. This ranges from locating factories near to the customers’ markets, to using sea freight whenever possible and, where the customer agrees, using plain multi-pack shipping cartons to maximize the packing density and reduce the amount of packaging to be discarded or recycled by the customer.





## Removing single-use plastics

During 2018, we worked closely with our customers to develop products that are SUP free from the start of development. In one example we developed products free from polyethylene protection. Instead, the product surfaces are designed to be more robust and resilient, with any high-gloss features recessed into the mouldings for added protection against transit and handling scuffing. In addition, to replace the polyethylene protection, the accessories are compartmentalized in the packaging to distance themselves from the product and one another to further avoid the risk of damage.

In a second example, we removed all polybags from the product and accessories, adding paper bags to the more fragile components to prevent transit damage in replacement of self-cling protective film. We also replaced plastic twist ties with paper alternatives, ensuring the cable coils would keep intact, and substituted the cellophane sealing tape that would seal the shipping carton with sustainably sourced paper.



## Advancing Accessibility

At ARRIS, we believe that all people should have equal access to television, the internet and communications. Our technologies and products are used to provide many services, such as entertainment, education, home security, emergency information and much more. These services should be accessible and easy to use by all individuals, regardless of abilities or disabilities. We believe that technology should be used to enhance our lives and make daily tasks easier and more enjoyable. However, if not carefully considered, new technologies can inadvertently create unsurpassable obstacles for individuals with disabilities. Therefore, our products are designed with the goal of providing accessible services to all individuals, including people with disabilities.

There are many ways in which we improve accessibility of our products to people with disabilities. Members of our product teams continually conduct research to understand how individuals use our products, including use with assistive technologies. Throughout the year, we attended conferences and webinars, to learn about new developments in accessibility. We spread knowledge and understanding within ARRIS by providing training to our employees. We continued to contribute to industry working groups to develop standards and best practices for accessible technology.

### Achievements and goals for advancing accessibility

- ARRIS worked with Service Providers and programming guide software vendors to ensure ARRIS STBs fully support all accessibility improvement features, such as closed captions, video description, and audible programming guides. Over the past several years, many Service Providers have launched new or updated services, utilizing ARRIS products, to improve user experience and increase accessibility for their customers.
- ARRIS SURFboard® Manager and HomeAssure™ mobile applications have been further developed to ensure that it is easier for consumers to set up and manage their home Wi-Fi network. These applications are intended to be compatible with accessibility features built into mobile devices and are designed to simplify the process of adding and managing Wi-Fi-connected devices. Many SURFboard® products sold in retail products have a QR code on the product label, allowing the user to simply point their mobile device at the product label rather than needing to read network SSID names and passcodes.
- We continue to work on improvements to the accessibility of all ARRIS websites. Our intention is that all customers will find our websites useful to find the information or help needed. Our goal is that all websites will be compliant with the Web Content Accessibility Guidelines (WCAG 2.1) of the World Wide Web Consortium Web Accessibility Initiative (W3C WAI).

# OUR GROWING SUPPLY CHAIN PROVIDES AN OPPORTUNITY FOR CORPORATE RESPONSIBILITY LEADERSHIP

ARRIS buys a significant volume of component parts from a global network of suppliers. We expect our suppliers to adhere to the same values and legislative requirements as we do and we include these requirements and expectations as conditions in our procurement contracts.

The materiality assessment confirmed our understanding that corporate responsibility plays an important role in our supply chain. The assessment particularly highlighted the importance of sourcing responsibly, eradicating the use of conflict minerals and modern slavery, ensuring our supply chain is resilient and improving the corporate responsibility performance of our suppliers.

## Our Supply Chain

Our supply chain covers many countries and regions including Brazil, China, Hong Kong, Israel, Malaysia, Malta, Mexico, the Philippines, Singapore, South Africa, Taiwan, Thailand, the UK and the US. With the recent acquisition of Ruckus our supply chain has grown considerably within many of our existing countries.

### Supply chain controls

In 2018, ARRIS maintained its status as a full member of the Responsible Business Alliance (RBA) in line with the revised 2018 Version 6.0 membership criteria. This is the highest level of membership in the RBA and a testament to the great work done by our Supply Chain CR team.

We are committed to the same Code of Conduct and ongoing improvement in social, environmental and ethical responsibility as other members.

Our supply chain policies, including the Supplier Code of Conduct, Conflict Minerals Policy and Modern Slavery Policy, describe the corporate responsibility requirements for our third-party suppliers and stipulate that they must operate in full conformance with the laws, rules and regulations of the countries in which they operate. The ARRIS RBA commitment letter is available on the Corporate Responsibility section of our website.

Proactive supplier engagement is important to ARRIS. We regularly meet with our suppliers to communicate our expectations. We also continue to utilize our Supplier

Performance Scorecard. The scorecard, published internally on a quarterly basis, drives improvements across all areas of supplier engagement, including corporate responsibility, operations, procurement, business continuity, quality and delivery. Corporate responsibility accounts for 10% of the overall score and is designed to escalate critical issues that require urgent action.

Close collaboration with our suppliers helps reduce risks to our business and allows us to meet our business goals.

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### OUR SUPPLY CHAIN: KEY ACHIEVEMENTS IN 2018

- Maintained full membership of the Responsible Business Alliance (RBA) for a third year, in line with the revised full membership criteria.
- All scheduled supply chain CR audits were completed. These audits were conducted in China, the Philippines, Taiwan and the United States.
- All our major component and manufacturing suppliers completed the Responsible Business Alliance Self-Assessment Questionnaire.
- We implemented the ARRIS Supplier Code of Conduct acknowledgment process. Suppliers are now required to acknowledge and sign the ARRIS Supplier Code of Conduct.

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To manage and monitor supply chain performance, we have developed the ARRIS Supply Chain Due Diligence Process, which is presented below.

Our Supplier Code of Conduct encourages suppliers to meet internationally recognized standards and best practices to advance social and environmental responsibility, as well as business ethics. It challenges our suppliers to ensure that working conditions throughout their operations are safe, that workers are treated with respect and dignity, and that business operations are environmentally responsible and conducted ethically.

In addition to our Supplier Code of Conduct, we have in place a Supplier Diversity program and Supplier Diversity Sourcing Council to ensure that a variety of suppliers are included in our selection process.



To ensure that our suppliers clearly understand and are committed to adhering to the various regulations and legal obligations required by ARRIS, our global terms and conditions refer to the ARRIS Supplier Code of Conduct, including a requirement to report in line with our obligations (e.g. our conflict minerals and hazardous material reporting requirements).

To monitor our suppliers, ARRIS maintains a risk register and conducts risk assessments using the RBA Self-Assessment Questionnaire (SAQ), on-site audits, the CDP score and the RBA risk tool.

### Supply chain audits

In 2018, we continued to complete CR audits at high-risk suppliers to ensure that they met our standards. Our average audit scores have improved significantly in 2018 compared with 2016, with the average number of findings per audit reduced. High-risk suppliers were selected based on the following criteria: the RBA Self-Assessment Questionnaire; on-site audit; risk profile; customer focus; location; media attention; policies and procedures; and spend analysis.

The audits were conducted according to the RBA Code of Conduct and Validated Audit Process (VAP). Actions were tracked by our Corporate Responsibility team and operational updates were shared to capture best practices. We report and track our findings using the RBA-ON

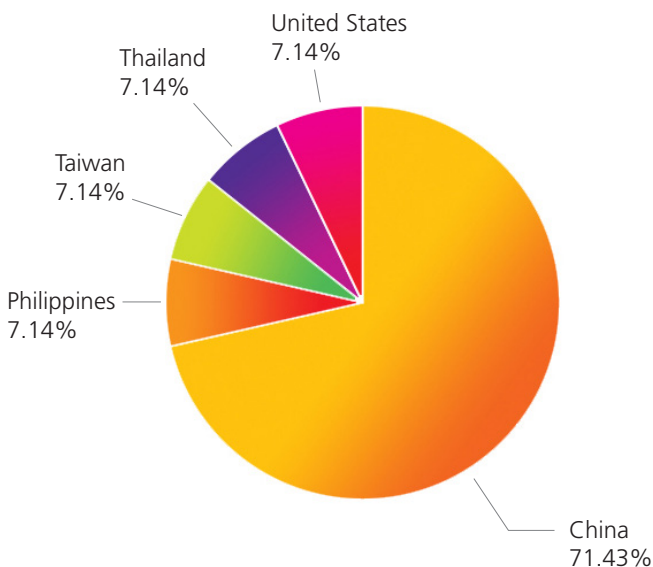
### ARRIS Supply Chain Due Diligence Process



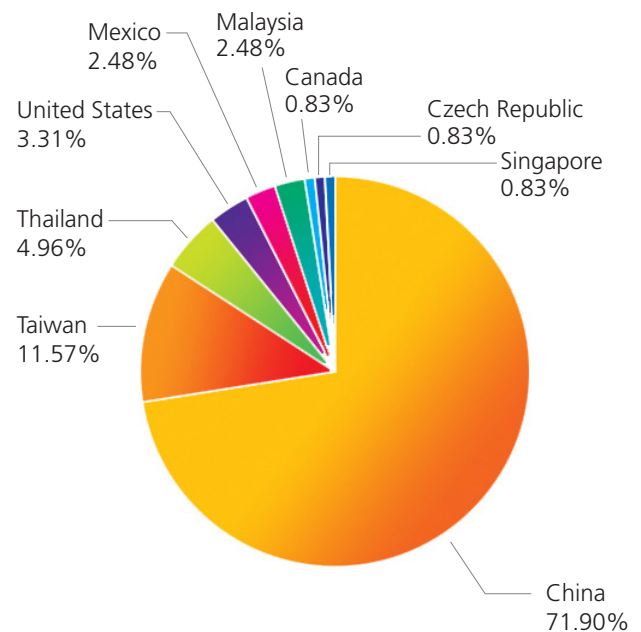
platform and our own internal database. As part of this process our top 80% of suppliers by spend are required to complete the RBA SAQ, with all targeted suppliers completing the questionnaire in 2018. Additionally, Ruckus suppliers were also included in our 2018 audit program.

The ARRIS Executive Leadership team is regularly briefed on the performance of the CR program during operations reviews. This year our top three findings were related to working hours, occupational safety and emergency preparedness. We will continue to work with our supply chain to ensure that our principles and policies are being adhered to and that open findings are addressed.

Supplier Audits by Country in 2018



Supplier Audits by Country in 2012-2018



## Modern Slavery and Human Rights

Aligning with the requirements of the UK Modern Slavery Act, the ARRIS Supplier Code of Conduct requires that its suppliers do not use forced, bonded, child or involuntary prison labor when producing products. To support the Supplier Code of Conduct, ARRIS audits its product supply chain to evaluate and address risks of human trafficking and slavery. ARRIS recognizes that modern slavery is a risk to its industry. As such, our Supply Chain Due Diligence Process addresses this issue directly. We also developed the ARRIS Modern Slavery Statement, which provides an overview of this due diligence process. Furthermore, we have updated our existing Supplier Code of Conduct to reflect the requirements of the Act.

We support the UN Universal Declaration of Human Rights, as per our ARRIS Human Rights Policy, and have developed

a process to verify, evaluate and address risks of slavery and human trafficking in our supply chain. We also have in place systems to encourage the reporting of concerns and the protection of whistleblowers in relation to modern slavery and human trafficking issues.

To ensure there is a strong level of understanding of the risks of modern slavery and human trafficking in our supply chain and our business operations, we provide training to all relevant ARRIS employees as part of the annual ethics and compliance training. The training emphasizes our requirement that suppliers and those working on our behalf must comply with our Supplier Code of Conduct.

## Conflict Minerals

ARRIS is committed to the advancement of human rights and, as part of this commitment, we are continually working towards being conflict mineral free in our products and within our supply chain. Our Conflict Minerals program is now fully integrated across all three of our core business units, including Ruckus Enterprises, and we continue to support the RBA's efforts to drive the elimination of all conflict minerals. In doing so, we ensure that our Conflict Minerals Policy closely aligns with the RBA guidance and reflects recent business growth.

ARRIS continues to implement a Due Diligence program to identify and trace the 3TG (tin, tungsten, tantalum and gold) minerals in our supply chain, based on the procedures and tools provided by the RBA and the Organization for Economic Co-operation and Development (OECD). Our current Due Diligence program involves tracing 3TG through our supply chain by using the Responsible Minerals Initiative (RMI) and the Conflict Minerals Reporting Template (CMRT) and identifying any smelters in our supply chain.

ARRIS also requires all its suppliers to adhere to the OECD Due Diligence Guidance for responsible supply chains of minerals from conflict-affected and high-risk areas in addition to Dodd-Frank compliance.

In the US, the Dodd-Frank Act requires companies to file annual reports with the US SEC indicating whether they are using 3TG originating from the Democratic Republic of the Congo or adjoining countries. ARRIS is compliant with the SEC reporting requirements.

To date we have detected no incidents of illegal 3TG within our supply chain; however, we will continue to monitor the development of other conflict minerals regulations in our global markets and ensure that ARRIS is always fully compliant.

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### **ARRIS is a member of the RMI, and we participate in three RMI working groups:**

- the CMRT team, which is responsible for updates to the industry-standard reporting template;
  - the Due Diligence Practices team, which develops and publishes standard practices and guidance for the industry in meeting the US Securities and Exchange Commission (SEC) and OECD requirements; and
  - the Smelter Engagement team, which investigates newly identified smelters and refiners for eligibility and performs outreach to engage eligible smelters in the Responsible Minerals Assurance Process (RMAP), formerly the Conflict-Free Smelter program.
-

# OUR PEOPLE ARE THE DRIVING FORCE BEHIND OUR CORPORATE RESPONSIBILITY ACTIVITIES

The people of ARRIS are key to our past and future successes. We strive to attract, retain, and develop a strong and diverse global workforce and believe that our focus, investment and commitment to talent will help us achieve our ambitious goals.

Over the past few years, ARRIS has put in place new and streamlined systems, tools and processes to dramatically improve how we hire, develop and reward talent.

These include:

- focused diversity recruiting;
- expanding our intern and apprenticeship programs; and
- implementing management and employee development training strategies.

At ARRIS, we believe that the best way to be a market leader is by attracting and hiring the best talent. In 2018, we hired 887 people, 49 of whom were conversions from our temporary workforce in the United States.

We believe that a friendly atmosphere helps everyone do a better job. As such, our strong team spirit has been a major factor in our success and rapid growth. We are a growth-oriented and dynamic technology company that provides great career opportunities.

To assist our people in their orientation and throughout their employment with ARRIS, we have developed an employee handbook that acts as a guide to employment issues. The handbook details our Human Rights and Business Ethics Policies, both of which are consistent with the International Labor Organization Conventions and the UN Universal Declaration of Human Rights.

Our policies also cover anti-discrimination, freely chosen employment, child labor laws, fair working hours, wages and benefits, freedom of association and collective bargaining, healthy and safe working conditions, no hard or inhumane treatment, and reporting resources like whistleblowing.

ARRIS encourages all employees to voice concerns when they arise. The Leadership team then works to resolve problems as quickly and effectively as possible. At all times, we expect employees to act responsibly to maintain a proper work environment.

## OUR PEOPLE: KEY ACHIEVEMENTS IN 2018

- The ARRIS Women's Business Network (AWBN) now has over 1,000 members in 22 countries, an increase of over 35% since 2017.
- Sponsored 19 high-potential female employees in various leadership development programs, a 10% increase from 2017
- Contributed more than \$582k in 2018 to meaningful and important organizations, such as Boys & Girls Club, the Cystic Fibrosis Foundation, the Red Cross and the Walter Kaitz Foundation.
- Continued growth of our global intern commitment, with almost 50% international internships. We increased our US intern classes from 39 interns in 2017 to 52 interns in 2018; our international intern classes increased from 30 interns in 2017 to 48 interns in 2018.
- Passed all OHSAS 18001 annual surveillance audits.
- ARRIS employees completed over 84,248 training sessions.

### ARRIS Tijuana honors distinguished students

During 2018, ARRIS Tijuana hosted its fourth annual event honoring distinguished students of employees. 92 students from elementary to high school age were celebrated for having achieved outstanding academic performance during the previous school year. This year had the largest group of students so far.

The objective of this event is to encourage the children of our employees in Tijuana to continue studying and to strive for academic excellence, and to develop ARRIS employees of the future. Students received a guided tour of the Tijuana plant and learned about the products and work their parents perform.



## Inclusive Workplace

In our experience, strong communication leads to great results. Therefore, we employ a variety of communication strategies, programs and channels to reach as many employees as possible, and as regularly as possible. Each quarter, our CEO conducts a global town hall meeting to share with employees our financial status, priorities, business updates, customer wins, employee recognition and other important information. These meetings are hosted in various locations and are also recorded for those unable to attend.

Our Executive Leadership team also holds regular town hall meetings, roundtable conversations and skip-level meetings to role model effective communications for employees. In addition, our leaders use technology to post short video messages and share their thoughts on the business and latest developments and to express their thanks for a job well done.

ARRIS faces a common industry challenge of attracting and retaining a diverse workforce. We leverage a variety of best practices to attract a diverse mix of candidates and new hires globally. Another key resource we rely on for ensuring this business imperative is met is through the ARRIS Women's Business Network (AWBN).

### ARRIS Women's Business Network

Now more than 1,000 employee members strong, the ARRIS Women's Business Network continues to be a resource for career development at ARRIS, for both women and men, doubling in participation since its launch.

#### Purpose

To positively impact our business results and reputation by fostering meaningful diversity and inclusion at all levels of the organization. We do this by developing ARRIS women, providing opportunities to connect, learn, and lead and positioning them to advance their careers at ARRIS.

#### Strategy:

To focus on developing the talents of our female employees, we:

- help ARRIS retain and attract talented women;
- create network and mentoring connections across the business and globe;
- provide leadership and development opportunities;
- share best practices in managing a successful career, providing inspiration and building confidence; and
- enable senior management awareness of high-potential female talent

This year, the AWBN has been working closely with organizations to promote STEM education and careers, particularly to young women and girls. This has included partnering with and supporting organizations such as Girls Who Code and Girls Inc (North America) and the Time to Code pilot scheme (Europe).

In India, the AWBN have created a scholarship program to encourage more girls to pursue an education in STEM-related subjects by supporting applicants from poorer communities. More than 80 students have now enrolled in this program.

In 2018 alone, it is estimated that AWBN engaged with more than 3,000 students about education and careers in STEM. This included the Horsham AWBN hosting students from the Hatboro-Horsham High School's Girls Who Code club, teaching them the real-life applications of coding in ARRIS cable and internet products and how cable and internet are transmitted into their homes.



#### 2018 Workforce by Gender

|        |       |
|--------|-------|
| Male   | 5,859 |
| Female | 2,114 |

#### 2018 Executive Team by Gender

|        |    |
|--------|----|
| Male   | 10 |
| Female | 2  |

#### 2018 Non-executive board of directors by Gender

|        |   |
|--------|---|
| Male   | 9 |
| Female | 2 |

## Intern and diversity hiring programs

We continue to invest in hiring the talent of tomorrow through our global intern and apprentice programs. Each year we hire undergraduate and master's-level students into our summer internships and apprenticeships across our business units, engineering teams and corporate functions globally. Our leadership is dedicated to growing these programs around the world to infuse new energy, skills and diversity of thought into our organization and business, and to leverage this incredible talent pool into future ARRIS hires.

- US intern program—ARRIS welcomed 52 interns to join us for a twelve-week summer internship. This program was focused on strengthening our talent pipeline, especially in the disciplines of engineering and supply chain. We engaged with key universities and diversity organizations, near our major facilities, to recruit bright minds and talented young leaders.
- India intern program—In India, we provided an internship program for eleven students who are pursuing their bachelor's and master's degrees. The duration of the internship varies from six months to one year and the interns were given an opportunity to work in a quality assurance or development function within the engineering domain.
- EMEA intern program—In 2018, we welcomed 18 students to join us for an internship. We partner with universities in several locations (the UK, Northern Ireland and Sweden) to offer career development opportunities to students. Typically, placements are in finance, supply chain and engineering and last up to twelve months.
- Emma L. Bowen Foundation—ARRIS is proud of our active partnership with the Emma L. Bowen Foundation. Founded in 1989, the foundation attracts, selects, mentors and places promising students of color in opportunities at top media and technology companies, such as CBS, NBC Universal, HBO, Comcast, and Charter Communications, to name a few. We continue to support the foundation to build a stronger and more diverse talent pipeline for our Company and industry.
- Veteran hiring—Hiring veterans is not only the right thing to do, it has strategic value for our Company and industry. Veterans have strong leadership, teamwork, ethics, integrity and learning skills, and are a component of our existing workforce, as well as our future talent pool. ARRIS continues to focus on hiring efforts around veteran-specific job fairs, outreach and specific job posting sites to attract and hire this great talent. We also have an enhanced employee referral bonus to incentivize our employees to refer a great veteran hire.
- Since its inception in 2015, ARRIS has participated in the development of an important cross-industry US-based initiative called "Mission Media". The goal of Mission Media is to unify the industry's veteran outreach in the marketplace and promote our industry as a welcoming "best place to work" environment for military veterans.

## Remuneration and Rewards

ARRIS maintains a range of benefits programs that are flexible enough to meet the individual needs of employees while being competitive in the local and country markets in which ARRIS operates.

ARRIS maintains a pay-for-performance compensation philosophy. We offer a total compensation program that attracts and retains skilled and high-performing individuals, pays a base salary that is competitive in our industry and, in each country in which we operate, provides short-term and long-term incentives tied to employee and Company performance, and offers competitive health and well-being benefits, paid time off and retirement programs. We benchmark pay and benefits to individual markets, on an annual basis, and adjust as necessary to remain competitive.

Equality in pay is a significant issue in our industry and the global marketplace. ARRIS employs broad, market-based salary ranges by country to enable fair and equitable pay based on the job being performed, relative experience and performance. We strive to ensure that our compensation practices support equality in pay, regardless of gender, national origin and disability status. As with any responsible company, it is our mission to close pay equality gaps as thoughtfully and quickly as possible.

Our STAR award process enables real-time monetary recognition for overachievement. Frequently, employees of ARRIS will perform above and beyond their expected level to get the job done. In these cases, we have a global STAR Award Policy of rewarding the employee with a cash reward and a certificate. Such awards are proposed by a manager or leader, noting the exceptional performance and behavior, and approved by the appropriate levels of management. STAR awards for significant achievement and impact are visible to our Executive Leadership team. This policy is an important real-time way to acknowledge our employees with tangible recognition.



## Developing Talent

Our Company, our customers and the industry are constantly changing, as is the case across the technology sector. We are committed to developing the talents of all our employees. Our career development and learning philosophy is based on the belief that employees learn best through a combination of work experience, coaching, feedback, training and education.

At ARRIS, we believe that development is:

- key to employee satisfaction and engagement;
- instrumental in driving innovation and business success;
- focused on both long-term career goals and short-term actions;
- an ongoing continuous process; and
- a personal journey, that must be driven by the employee with coaching and support from their manager and the Company.

### Performance management

Our guiding values and core competencies set a common framework for our performance management approach and define what is expected of each employee as they perform their role. At ARRIS we are committed to building the strongest team in the industry by developing the talents of all our employees. We believe that effective performance development is a partnership between managers and employees with ongoing real-time performance coaching and feedback. As such we are all accountable. We provide training on our performance management system as well as easy-to-use guides to make the performance management process as streamlined and efficient as possible.

#### Support for free learning center in rural areas and Community Development program

ARRIS is working with an NGO called the "Surabhi Foundation Trust" to support rural learning centers that provide additional educational support to students from disadvantaged families. These centers provide quality education after school hours in rural areas, prepare and train rural children for Government-sponsored opportunities and competitive exams, build interest in cultural activities and improve health awareness. The ARRIS CSR team also provides the teaching accessories for these centers.



### ARRIS Academy

We continue to offer "ARRIS Academy", an online learning management system that provides technical and non-technical e-Learning opportunities through courses, recorded webinars, e-books and other resources. ARRIS Academy is also used to provide a curriculum of mandatory ethics and compliance training in areas such as corporate corruption and bribery, information security awareness, sexual harassment and equal opportunity employment. We are partnering with Pluralsight to provide additional technical training for our employees.

#### Training statistics:

- ARRIS offers more than 1,700 training courses through ARRIS Academy. Training curriculum offerings range across product and technology, sales and services, ethics and compliance, environmental health and safety, communications skills and strategies, finance and accounting, trade compliance, interpersonal skills, personal growth and family support and leadership and management training.
- In 2018, ARRIS employees completed more than 84,248 training sessions.

#### Library and laboratory for school for underprivileged students

Subodha High School caters for underprivileged children in Puttur Taluk, about 200 miles from Bangalore. It supports over 100 students from vulnerable sections of society. ARRIS is supporting this institution with infrastructure needs so these children have a fully functioning library and laboratory to aid in their studies.



## Management and leadership development

Management and leadership development has been a key focus in 2018. Our global management essentials curriculum within ARRIS Academy, is a self-paced, year-long program focused on core management topics. While targeted to new supervisors and managers, it can also be used by experienced managers to enhance their skills.

This year we significantly invested in the growth and development of our managers and supervisors globally with the creation and launch of EMPOWER, our new Management Development Training program designed to help supervisors and managers develop and hone their people management skills. EMPOWER is a six month program with various learning components including pre-assessments, individual development plans, leadership webinars, face-to-face training sessions, and learning cohort groups. In 2018 we launched programs in Horsham, PA; Sunnyvale, CA; Suwanee, GA; Bangalore, India; and Saltair, UK.

Additionally, we offered webinars on management tools and resources to acquaint managers with the various learning and organizational development tools they have available to them. Various articles, ideas and information are posted on Manager Yammer and All Employee Yammer on a weekly basis.

In June, EMEA piloted a Virtual Talent Coaching program with 28 participants participating over six months. The program is aimed at key talent and high potentials at various management and individual contributor levels. Following the initial launch of this program in 2017, it has been expanded globally due to excellent feedback from participants and the businesses.

The international CPE business has partnered with an external vendor to deliver leadership development training for vice presidents, directors and senior directors. The focus of this training has been building a shared sense of purpose, developing trust, engagement and collaboration, managing

transitions, and engaging hearts and minds to generate the best solutions.

Additionally, selected leaders participated in the Tuck Executive Leadership program, which was designed to enhance the business and leadership skills of engineering and operations professionals from the cable industry.

In 2018, commitment to the development of talented female leaders continued through the ongoing sponsorship and participation in the following leadership development programs:

- the Half the Sky and Quattro programs, which focus on leadership skills for high-potential female leaders, managers and individual contributors;
- the Women in Cable Technologies (WICT) Betsy Magness program, which focuses on core leadership competencies, including communication effectiveness and organizational influence, driving and implementing change, creating engagement, driving results and executing organizational vision;
- the Leader's Edge and Women Unlimited LEAD programs, which focus on leadership development, coaching, mentoring and networking; and
- the Women's TechConnect Mentoring program, which targets high-potential women in the technology industry. ARRIS has been a participant for the past several years.

In addition to professional development, ARRIS continues to support the ongoing development of its employees through its global Education Assistance program. This program has been designed to encourage and assist employees who wish to pursue a formal college, university or higher learning degree by offsetting a portion of the costs. Currently, we have 52 employees actively enrolled in this program.



### Educational assistance for girls

The India CSR team (AASHA) is collaborating with a non-governmental organization (NGO) called RockFund on an initiative to support deserving and underprivileged girls in their journey to obtain a quality education and empower them to lead an independent and productive life.

We currently support 95 girls for 2018–19, ranging from Class VI to Class XII. We support the selected students year on year until they achieve a level of education and skill that enables them to succeed in their chosen careers. ARRIS provides monetary assistance in the form of tuition fees, mentorship and counseling via the AWBN Mentor Group and inspiration and career guidance through our STEM programs.





## Health, Safety and Well-Being

The ARRIS Health and Safety Policy sets out our commitment to conducting business in a healthy and safe manner. ARRIS is committed to reducing occupational injury and illness risk and promoting employee health and well-being. To drive this policy, we have set goals and encourage continuous improvement through our health and safety management system.

ARRIS has an established Health and Safety team. The team is made up of health and safety representatives from our sites, a designated Director of EHS, and other people with expert knowledge who review health and safety concerns.

We meet or exceed all applicable health and safety legal requirements in our operations and work with our stakeholders (employees, contractors, suppliers and customers) to maintain a healthy and safe workplace.

### Health and safety training

Health and safety training is provided via multiple tools including our online learning management system, ARRIS Academy. We ensure information, instruction and training are provided where applicable and in a timely and appropriate manner. Our Health and Safety Training program covers (but is not limited to): emergency response, evacuation, fire, back safety, hazardous communication, chemical management, personal protective equipment (PPE), e-waste, lead exposure prevention, laser safety, safety housekeeping, electrical safety, lockout tagout, radio frequency awareness and ergonomics.

Depending on the job function, additional training is provided. Examples include; emergency response team membership, handling hazardous waste, working in a chemical laboratory and forklift training.

### Injury and illness summary

As health and safety is paramount for ARRIS, we continuously evaluate our health and safety performance to drive improvements. Our Occupational Safety & Health Administration (OSHA) recordable incident rate (or incident rate\*) is calculated by multiplying the number of recordable cases by 200,000 and then dividing that number by the number of full-time employee (FTE) labor hours at the company. In 2018, our incident rate went down from 0.22 to 0.11 which is significantly below the industry average of 0.9 for our NAICS code.

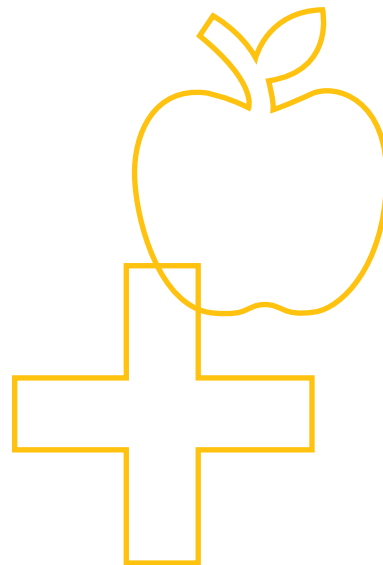
\* The incident rate represents a mathematical calculation that describes the number of employees per 100 full-time employees that have been involved in a recordable injury or illness.

### ARRIS Horsham: putting health and wellness on the radar for 2018

During February, the team in Horsham put on an event inspired by an employee who suggested a stronger focus on health and wellness on campus. Employees were invited to the Horsham Fitness Center to meet co-workers and share their tips and ideas about just ONE thing they could do to make health and wellness a priority in 2018.

The event included:

- a mini de-stress session run by Amy Dinning;
- health checks by staff from Abington Jefferson Health including blood pressure and discussing new blood pressure guidelines, nutritional information, fat content in food and when to dial 9-1-1; and
- the healthy food competition, which was won by Connie Borges for her Hawaiian chicken bites.



## ARRIS in the Community

Our commitment to supporting charitable and non-profit organizations remains strong through a variety of corporate sponsorships. In 2018, we contributed over \$582k to meaningful and important organizations, such as the Boys & Girls Club, the Cystic Fibrosis Foundation, the Red Cross and the Walter Kaitz Foundation. In addition to our corporate sponsorships, we support employee giving through our charitable donations, matching gifts to more than 60 charity and non-profit organizations. The ARRIS Charitable Contribution program is guided by its Charitable Contribution Policy. The policy describes the process by which employees can apply for and receive ARRIS funds to support charitable contributions. The policy ensures that all ARRIS donations, sponsorships, Company volunteer activities and in-kind services are coordinated and aligned with Corporate Responsibility strategy and business goals and are within budget and resource limitations.

In the wake of the wildfires that devastated communities in California in November 2018, ARRIS expanded its disaster relief campaign with the American Red Cross to support the emergency response. For every dollar employees contributed worldwide, ARRIS matched this dollar for dollar.

Our employees also give their time through our Community Outreach program. To that end, a community service project is a core component of our US Summer Intern Program. Through a variety of great organizations and programs, ARRIS continues to help and support the underprivileged and positively influence science, technology, engineering and mathematics (STEM) education across the communities in which we live and operate.

### Bangalore holds "Environment Day" to educate and collaborate

In 2018, ARRIS Bangalore held "Environment Day" to focus on ways that employees can reduce their impact on the environment, with a focus on water and GHG emissions.

Some tips from Ravindra Karnad, founder of Prudent Eco Systems and host for the day, included:

- avoid rain water getting mixed into drainage or sewage;
- invest in a rain water harvesting pit or tank;
- promote water recycling to reduce fresh water usage;
- use natural light and air and reduce the use of AC and power-consuming lights;
- reduce power usage and carbon footprint per citizen;
- promote the use of public transportation, instead of using individual transportation, and
- promote eco-friendly food waste composting techniques.



### Publicly available Wi-Fi network for East Side Union High School District

East Side Union High School District (ESUHSD) is in San Jose, California, and administers 19 high schools with a combined enrollment of approximately 24,500 students, where up to 40% of these students do not have access to broadband internet at home.

We have supported ESUHSD and the City of San Jose with a unique solution in building one of the nation's first school district-funded municipal Wi-Fi infrastructures, utilizing the 197 Ruckus T300 outdoor wireless access points. These can easily be deployed on city assets like streetlights and buildings, leading to fast, free public Wi-Fi throughput

in residential neighborhoods where most households previously had no broadband access.

Consequently, low-income students can take full advantage of a digital curriculum and school-provided Chromebooks, encouraging inclusivity and equal academic progression. This has already had a major impact on the lives of approximately 1,700 ESUHSD students.



# OUR OPERATIONS PRESENT THE BIGGEST OPPORTUNITY TO REDUCE OUR ENVIRONMENTAL IMPACT

ARRIS has more than 30 key facilities globally; these are design, engineering, manufacturing, operations, distribution, service and sales office locations.

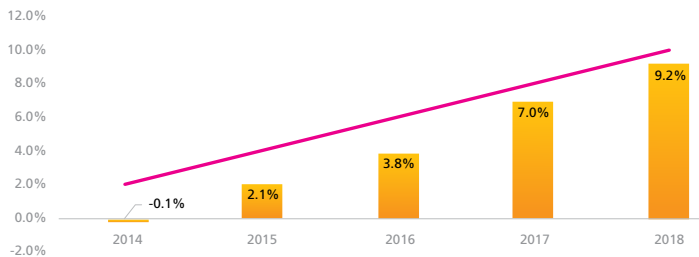
## OUR OPERATIONS: KEY ACHIEVEMENTS IN 2018

- Met our five-year GHG reduction goal by reducing GHG emissions by 17.6% compared to 2013, exceeding our 2018 cumulative goal of 10%.
- Significantly exceeded five-year landfill diversion goal of 10% improvement by diverting 68% of our waste from landfills.
- Suwanee site achieved zero waste to landfill and Horsham site achieved 68% diversion.
- Energy-saving, continuous building commissioning systems installed in our Lowell and Horsham locations.
- 25.4% of the portfolio's scope 1 and scope 2 emissions were offset by purchases of renewable energy (via RECs).

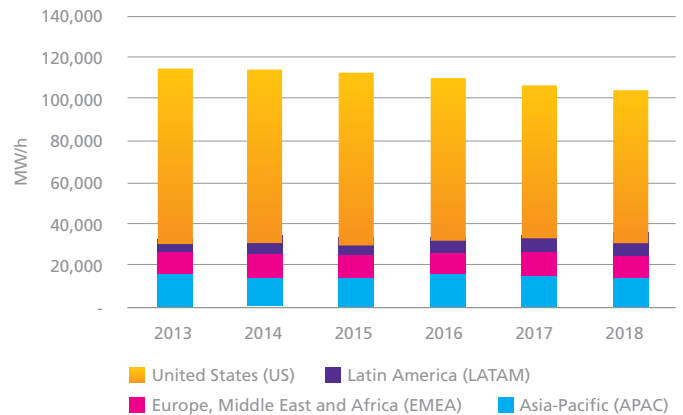
## ENERGY CONSUMPTION

Long-term goal: reduce our 2013 energy consumption by 2% per year by the end of 2018 (cumulative goal: 10%).

**Total Energy Reduction—Actual vs. Goal (2014–2018)**



**Total Energy Consumption by Region (megawatt hours [MWh])**



Due to the integration of Ruckus into the ARRIS business in 2017, we have re-baselined our energy usage back to 2013 to ensure we are showing an accurate picture of energy usage and reduction across our entire portfolio. We have done this by collecting historical data from newly integrated sites. Where actual data is unavailable, we have used monthly consumption data to extrapolate back for the same months in the years 2013–2016.

Most of our energy is consumed by research and development laboratory activities, manufacturing process lines, IT data storage and heating and cooling of premises. As part of our CR goals, we committed to reducing our 2013 energy consumption by 2% every year until 2018.

Following the sale of our manufacturing facility in Taiwan to Pegatron, we have recalculated energy consumption back to 2013 without this facility to ensure we show a fair and accurate year on year reduction. This is based on the guidance of the

GHG Protocol which stipulates that significant structural changes, such as divestments, should trigger the recalculation of base year emissions. Due to the Taiwan facility being a strong driver in our global energy reduction efforts we now fall behind our annual energy reduction targets and in 2018 have achieved a cumulative reduction of 9.2%, just short of our 10% target. ARRIS has, however, still delivered a significant reduction in energy consumption since 2013 and its total reduction stands at over 10,500 MWh – the equivalent energy usage of approximately 980 homes in the US for a whole year .

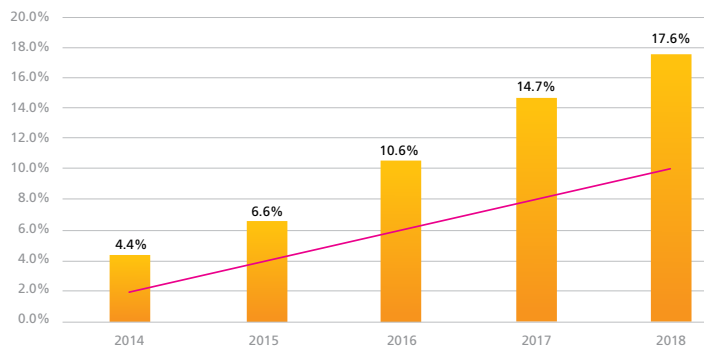
In 2018, ARRIS consumed 104,230 MWh of energy (including electricity and natural gas used in its facilities). This equates to a reduction of 9.2% compared to the baseline year 2013 (2013: 114,792 MWh). This reduction was achieved through our energy reduction initiatives principally using “no cost” and “low cost” energy reduction strategies.

In 2018, 25.4% of our total energy came from electricity purchased via renewable energy contracts. ARRIS has these contracts in place at three of our sites: Horsham, PA (US), Lisle, IL (US), and Cork (Ireland).

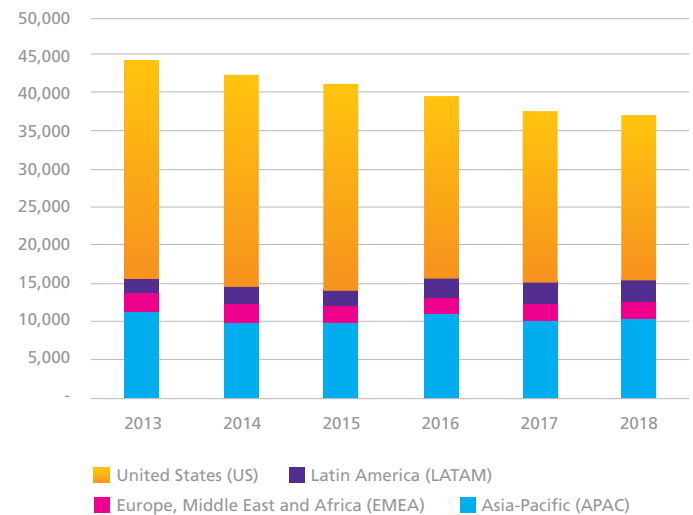
## GREENHOUSE GAS EMISSIONS

Long-term goal: reduce our 2013 GHG emissions (scope 1 and 2) by 2% per year by the end of 2018 (cumulative goal: 10%).

### GHG Emissions Reduction—Actual vs. Goal (2014-2018)



### Location-based Scope 1 and 2 GHG Emissions by Region (metric tons of carbon dioxide equivalent [CO<sub>2</sub>e])



#### Our Ruckus Sunnyvale site utilizes high-efficiency cooling for operational improvements

The use of evaporative cooling as opposed to traditional mechanical cooling at the new 3,100 square feet Ruckus data center in Sunnyvale, California, has enabled a significant reduction in cooling-related energy consumption. This was achieved through implementing hot aisle/cold aisle containment. This interstitial structure provided support for the rooftop equipment (evaporative coolers and exhaust fans), ductwork, power, ladder rack, and aisle containment. The result is a saving of over 24.8 metric tons CO<sub>2</sub>e each year.



In 2013, ARRIS set an objective to reduce its location-based GHG emissions by 2% per year by the end of 2018 (cumulative goal: 10%). This objective focuses on GHG scope 1 and 2 emissions where ARRIS has a billing relationship with the energy provider and excludes upstream leased assets. As described in the energy consumption section, we have undertaken a re-baselining exercise to incorporate the integration of Ruckus and the sale of our manufacturing facility in Taiwan. We are happy to report, following the re-baselining, that during 2018 we exceeded our cumulative goal (2018 goal: 10% GHG reduction).

In 2018, our scope 1 and 2 emissions decreased by 18% to 36,326 metric tons CO<sub>2</sub>e compared to our baseline year, 2013 (2013: 44,070 metric tons CO<sub>2</sub>e). To achieve this target, we developed a comprehensive system to monitor energy consumption and GHG emissions. We set annual goals to reduce our consumption, evaluated and implemented energy conservation measures, amalgamated sites, and tracked overall improvements. Where possible, in deregulated markets (the US and Canada), we have used market-based carbon emissions factors to ensure we are accounting for the residual mix of renewable energy in the grid supply.

**Scope 1**—When compared to 2017 GHG, scope 1 emissions showed a negligible increase to 1,034 metric tons CO<sub>2</sub>e (2017: 1,020 metric tons CO<sub>2</sub>e), principally resulting from changes in our site portfolio and improving our reporting accuracy.

**Scope 2**—In 2018, total scope 2 location-based GHG emissions have decreased by 3% during the period. This is in line with increased energy efficiencies observed in various parts of our business as well as the changes in our site portfolio. The use of renewable energy, for the second year in a row, has helped deliver a continued reduction in market-based scope 2 emissions.

**Scope 3**—Total scope 3 emissions include upstream leased assets and business travel (flights and rented cars). In 2018, total GHG emissions from upstream leased assets and business travel totaled 4,031 metric tons CO<sub>2</sub>e and 16,772 metric tons CO<sub>2</sub>e respectively. Upstream leased assets have decreased in 2018 due to site portfolio changes. Business travel has increased slightly due to additional travel relating to ongoing business activities.

In recognition of its action on reducing GHG emissions, ARRIS maintained its CDP (former Carbon Disclosure Project) C score in 2018. This is greater than both the CDP program and industry average.

To support standardization, we are aligning with the GHG Protocol Corporate Accounting and Reporting Standard as the basis for our scope 1, 2 and 3 calculations. In 2018, scope 1 and 2 reported emissions and total energy consumption have been adjusted to reflect the latest changes in the ARRIS property portfolio.

**Q: How is ARRIS taking responsibility for reducing its operational environmental impacts?**

**A:** “Our commitment to improving our operational environmental footprint continues to make great progress. Our focus on energy efficiency, renewable energy, waste and water continues and I am delighted that we are achieving great things.”

**David Troszak, senior director, Real Estate**

“As part of JLL’s integrated facility management of ARRIS’s real estate, it is our mission to minimize our environmental impact by striving to implement business operations that are environmentally responsible. Therefore, JLL has devoted an Energy and Sustainability Management team to drive energy and GHG reduction, improve water efficiency and divert waste from landfills across ARRIS’s global operations. Since the team’s inception in 2014, our efforts have resulted in 18% reduction in GHG emissions, 9% reduction in energy use and improved landfill diversion from 25% to 68%.”

**Zach Hively, JLL Account Director Real Estate & Workplace Services**



| KPI   | FY13      | FY14      | FY15      | FY16      | FY17      | FY18      |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Total GHG emissions: scope 1—metric tons CO <sub>2</sub> e                          | 1,411.31  | 1,206.66  | 1,063.92  | 1,037.99  | 1,020.43  | 1,034.49  |
| Total GHG emissions: scope 2—location, metric tons CO <sub>2</sub> e                | 42,658.76 | 40,931.41 | 40,109.38 | 38,373.93 | 36,558.60 | 35,291.68 |
| Total GHG emissions: scope 2—market, metric tons CO <sub>2</sub> e                  | 42,658.76 | 40,931.41 | 40,109.38 | 38,373.93 | 27,045.44 | 26,076.47 |
| Total GHG emissions: scope 3—metric tons CO <sub>2</sub> e – travel                 | –         | –         | 10,327.00 | 10,348.00 | 10,614.00 | 16,772.78 |
| Total GHG emissions: scope 3—metric tons CO <sub>2</sub> e – upstream leased assets | 21,101.00 | 28,876.00 | 24,770.00 | 23,622.00 | 21,854.00 | 4,031.64  |
| Total GHG emissions: scope 1 and 2—location, metric tons CO <sub>2</sub> e          | 44,070.07 | 42,138.07 | 41,173.30 | 39,411.92 | 37,579.03 | 36,326.17 |
| Total GHG emissions: scope 1 and 2—market, metric tons CO <sub>2</sub> e            | 44,070.07 | 42,138.07 | 41,173.30 | 39,411.92 | 28,065.87 | 27,110.96 |
| % progress against long-term GHG reduction goal 1 (GHG)                             | 0.0%      | 4.4%      | 6.6%      | 10.6%     | 14.7%     | 17.6%     |
| % reduction GHG Emissions—market  | 0.0%      | 4.4%      | 6.6%      | 10.6%     | 36.3%     | 38.5%     |
| Scope 1&2 GHG emissions normalized per \$ million annual turnover.                  | 7.24      | 5.31      | 5.84      | 5.77      | 5.68      | 5.39      |
| Scope 1&2 GHG emissions normalized per employee                                     | 4.88      | 4.58      | 4.83      | 5.60      | 4.36      | 4.56      |

Historical data often varies from previously reported values as we continue to refine our reporting process and data to ensure that we consider the impact of updating standards, business structure changes, including acquisitions and divestitures, changing emission factors, improved data accuracy or correction of any errors found during reviews. We will continue to standardize our measurement systems and metrics.

## Water

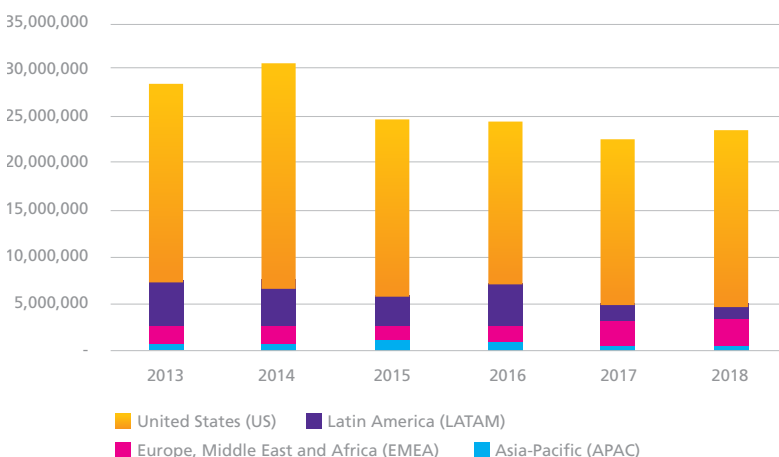
Goal: manage water use to LEED v4 Guidelines for indoor, outdoor and cooling tower water efficiencies.

We consume most of our water in our restrooms, showers and cafeterias/drink stations. Outside irrigation and chiller systems for air conditioning do not make up a significant portion of water use, but we monitor these uses and optimize when possible. During 2018, ARRIS consumed a total of 23,458 kGal of water (see Note 1).

Our target is to manage water use to the requirements of the LEED building certification scheme (v4 Guidelines for

indoor, outdoor and cooling tower water efficiencies). To support this objective, we implemented new measures to reduce water consumption including replacing existing equipment with more water efficient ones. We monitor water use continually to identify any leaks, and we have developed an inventory of all devices that consume water within our facilities. By analyzing this data, we can determine which areas are material to our business and set targeted goals for improvement. This data also informs our renovation improvement activities which ensure we use the best-in-class fixtures. All wastewater generated at ARRIS facilities is treated on site by permitted wastewater treatment facilities.

### Water Consumption by Region (kilogallon kGal)

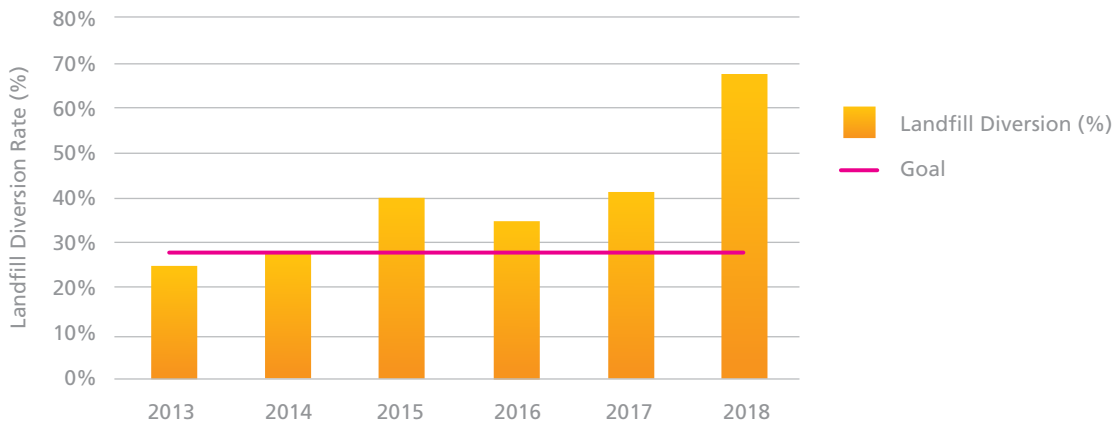




## Waste

Long-term goal: improve our 2013 landfill diversion rate by 10% by the end of 2018.

### Landfill Diversion—Actual vs. Goal (2014–2018)



During 2018, ARRIS produced a total of 636 metric tons of waste, of which 68% was diverted from landfill (see Note 2). Our target is to improve our landfill diversion rate by 10% by the end of 2018 compared to our 2013 rate; we are happy to report that we significantly outperformed our target for 2018.

To achieve its goal, ARRIS established a process to collect and evaluate waste management data at all facilities under its control. This enabled us to identify opportunities for improvement and push to achieve zero waste to landfill. During 2018, we revised our waste baseline due to the integration of Ruckus and the sale of our Taiwan facility. This has an impact on previously reported data.

Our key waste sources are summarized below. We endeavor to divert as much of our waste as possible from landfill to be recycled:

- Cafeteria waste: includes food waste, paper and plastic. We target most of our sites that do not have a cafeteria for zero waste to landfill.
- Office waste: mostly comprised of paper. An example of this was the great progress made at our Tijuana site improving the recycled paper process for the screen printer machines which won our internal Lean-X 2018 Award.
- Pallets: we use wood and plastic pallets to ship goods.
- Electronic waste: includes electronic scrap, circuit boards, batteries, screens and other types of electronic waste. This was demonstrated at our Manaus factory, where our engagement has led to a Green IT certificate.
- Hazardous materials: batteries, e-waste, PCBs and fluorescent light tubes.
- Other: we produce small amounts of plastic and glass waste, from bottles and other sources, which are recycled where possible.

*Note 1: Our water measure includes our largest manufacturing facilities and offices where we are responsible for water use payment. The tracked and reported water covers 88% of our total usable square footage.*

*Note 2: Waste diversion represents the amount of waste that is diverted from landfill. The waste diversion goal includes our largest manufacturing facilities and offices where ARRIS is responsible for both municipal waste and recycling. The tracked and reported waste covers 59% of our total usable square footage.*



ARRIS follows local regulations as applicable to the management of hazardous waste. It is our responsibility to ensure that hazardous waste is properly managed so that it does not pose any serious threat to human health and the environment. To achieve this, ARRIS has established an environment, health and safety management system framework for the proper management of hazardous waste.

We work to minimize the generation of hazardous waste materials whenever possible, and we recycle as permitted to avoid landfilling or incinerating hazardous waste. We only use qualified suppliers for the management of these materials.

### Zero waste to landfill

During 2018, we continued our journey towards zero waste and had two facilities, Horsham and Suwanee, achieve nearly 100% diversion from landfill. All municipal waste from our Suwanee facility is now taken to a local recycling center for sorting and recycling, where previously it would have gone to landfill. This had a significantly positive impact on achieving our goal to improve our landfill diversion rate by 10% by the end of 2018.

### Lean-X 2018 Award Winner

In Tijuana, ARRIS has made significant improvements to its in-house material usage by recycling and reusing paper in machines. Previously the paper rolls were disposed of after utilization. However, after developments in the recycling process, 100% of the paper rolls are now used as surface mount technology (SMT) wipes and clean solder paste residuals. This alteration has led to a 40% reduction in SMT wipe consumption and an annual saving of \$16,000.



### ARRIS Manaus factory receives Green IT certificate for green initiative

Our factory located in Manaus, Brazil, moved to a new location last year. In anticipation of the move, ARRIS negotiated with both the cabling vendor and service company at the new site to retain the existing cabling in the new building in return for credit from the vendor.

The local IT team's entrepreneurial endeavors were recognized and it was given a Green IT certificate as a gesture of appreciation for its environmental initiative in recycling old materials.

ARRIS employees Márcio Fronta, Marcos Lima and Higor Sodré managed the project.



### Horsham composting initiative

Our Horsham, PA, site has taken significant steps on its journey towards zero waste in 2018. An off-site composting program was implemented with clear and consistent signage combined with new waste containers, all of which have helped drive the push towards increased recycling across the campus. As a result, landfill diversion has increased from 39% in 2017 to 86% in 2018.



# APPENDIX

## A.1 Reporting Method

### A.1.1 Reporting boundary

This is the third Corporate Responsibility Report ARRIS has produced. Where we produced indicators in the past years, these can be used for comparison with this reporting year. This report covers the reporting period 1 January 2018 to 31 December 2018, which is in line with our financial reporting.

### A.1.2 Calculation of carbon emissions, water and waste

We have calculated our carbon emissions using the GHG Protocol Corporate Accounting and Reporting Standard principles. Our reporting boundary was defined using the “operational control approach”, where we accounted for carbon emissions from operations over which we have control, including emissions from the following sources:

**Scope 1:** direct emissions from combustion of natural gas at facilities where we manage the natural gas bills.

**Scope 2:** indirect emissions associated with the consumption of electricity at facilities where we manage the electricity bills.

**Scope 3:** indirect emissions associated with i) business flights, ii) rented cars and iii) energy consumption at sites where we do not manage the energy bills.

We have included all Kyoto gases in our calculations, and location-based emissions factors were taken from the US EPA's Emissions & Generation Resource Integrated Database. Market-based emissions factors have been sourced directly from our energy suppliers. Calculations of scope 1 and 2 emissions were completed using energy consumption data directly taken from our bills. Scope 3 business flight and rented car emissions were calculated using travel data provided by our travel agencies. Waste data includes sites where ARRIS manages its waste (both diverted from and sent to landfill) directly. Water data includes sites where we manage the water bills.

To support standardization, we are aligning with the GHG Protocol Corporate Accounting and Reporting Standard as the basis for our scope 1, 2 and 3 calculations. In 2018, scope 1 and 2 reported emissions and total energy consumption have been adjusted to reflect the latest changes in the ARRIS property portfolio. We will continue to standardize our measurement systems and metrics.

### A.1.3 Emission factor sources for 2018

Location-based emission factor sources:

US—eGRID region emission factors:

- 2013 source: eGRID2012
- 2014 source: eGRID2014v2
- 2015 source: eGRID2014v2
- 2016 source: eGRID2016
- 2017 source: eGRID2016 (latest year available)
- 2018 source: eGRID2016 (latest year available)

International—IEA country-specific emission factors:

- 2013: 2014 IEA Factors (earliest year available)
- 2014: 2014 IEA Factors
- 2015: 2015 IEA Factors
- 2016: 2016 IEA Factors
- 2017: 2016 IEA Factors (latest year available)
- 2018: 2016 IEA Factors (latest year available)

### A.1.4 Ruckus integration methodology

New sites (including integrations): If new sites are added to the portfolio, we collect the historical data going back to the base year. If historical data is unavailable, we use the first twelve months of actual data to fill in gaps prior to the first month of actuals going back to the 2013 baseline.

Missing data: We use the first twelve months of actual data to fill in gaps prior to the first month of actuals. We estimate missing data by taking the same month data from the previous year or the average of the two to three most recent months of data.

## A.2 ARRIS Voluntary Agreements

| Region               | Voluntary agreement   | Comment   |
|----------------------|---|---|
| <b>North America</b> | Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of STBs.                                   | Inaugural signatory in 2012 and ongoing provider of technical input – 50% of models listed are designed and developed by ARRIS.   |
|                      | Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of SNEs.                                   | Inaugural signatory in 2015 and ongoing provider of technical input – more than 16% of all products listed are made by ARRIS and over 40% of models supplied to Service Providers are made by ARRIS. Compliance with this voluntary agreement is demonstrated by testing to the ANSI/CTA standard CTA2029; ARRIS chaired the committee that developed this standard and provided significant technical input to the standard. |
|                      | ENERGY STAR program for SNE.  | Early signatory with more than 50% of all listings.   |
|                      | Canada PayTV STB Energy Efficiency Voluntary Agreement (CEEVA).   | Inaugural signatory in 2016 and ongoing provider of technical input – 55% of ARRIS products are listed under CEEVA.   |
| <b>Europe</b>        | Voluntary industry agreement to improve the energy consumption of complex STBs within the EU.                   | Inaugural signatory in 2010 – ARRIS was the author of the technical annexes and is an ongoing provider of significant technical input.  |
|                      | Code of Conduct on energy efficiency of digital TV service systems.   | Inaugural signatory in 1998 – ARRIS authored the technical annex and is an ongoing provider of technical input.   |
| <b>Australia</b>     | Subscription television industry voluntary code for improving the energy efficiency of conditional access STBs. | Inaugural signatory – the test methods are based on documents written by ARRIS. Most products covered are made by ARRIS.  |

## A.3 Global Reporting Initiative (GRI) Index

ARRIS has made use of the Global Reporting Initiative (GRI) Sustainability Reporting Standards in the development of the 2018 ARRIS Corporate Responsibility Report.

| Disclosure  | Location (boundary)  |
|---|--|
| <b>GRI 102: General disclosures</b>                                 |  |
| <b>Organizational profile</b>                                       |  |
| 102-1 Name of the organization                                      | Introduction and overview  |
| 102-2 Activities, brands, products, and services                    | Introduction and overview  |
| 102-3 Location of headquarters                                      | Introduction and overview  |
| 102-4 Location of operations  | Introduction and overview  |
| 102-5 Ownership and legal form                                      | 2018 ARRIS Annual Report – 10-k                                      |
| 102-6 Markets served  | 2018 ARRIS Annual Report – 10-k                                      |
| 102-7 Scale of the organization                                     | 2018 ARRIS Annual Report – 10-k                                      |
| 102-8 Information on employees and other workers                    | 2018 ARRIS Annual Report – 10-k                                      |
| 102-9 Supply chain  | Our Supply Chain   |
| 102-10 Significant changes to the organization and its supply chain | 2018 ARRIS Annual Report – 10-k                                      |
| 102-11 Precautionary principle or approach                          | Governance, ARRIS.com/Corporate Responsibility, Annual Report – 10-k |
| 102-12 External initiatives   | ARRIS.com/Corporate Responsibility                                   |
| 102-13 Membership of associations                                   | ARRIS.com/Corporate Responsibility                                   |
| <b>Strategy</b>   |  |
| 102-14 Statement from senior decision maker                         | An introduction from our CEO   |
| <b>Ethics and integrity</b>   |  |
| 102-16 Values, principles, standards, and norms of behavior         | ARRIS.com/Corporate Responsibility                                   |
| <b>Governance</b>   |  |
| 102-18 Governance structure   | Governance   |
| <b>Stakeholder engagement</b>                                       |  |
| 102-40 List of stakeholder groups                                   | Governance   |
| 102-41 Collective bargaining agreements                             | Governance   |
| 102-42 Identifying and selecting stakeholders                       | Governance   |
| 102-43 Approach to stakeholder engagement                           | Governance   |
| 102-44 Key topics and concerns raised                               | Governance   |
| <b>Reporting practice</b>   |  |
| 102-45 Entities included in the consolidated financial statements   | 2018 ARRIS Annual Report – 10-k                                      |
| 102-46 Defining report content and topic boundaries                 | Governance   |
| 102-47 List of material topics                                      | Governance   |
| 102-48 Restatements of information                                  | No major changes   |
| 102-49 Changes in reporting   | Includes Ruckus in the scope of reporting                            |
| 102-50 Reporting period   | 1 Jan 2018– 31 Dec 2018  |
| 102-51 Date of most recent report                                   | April 2019   |
| 102-52 Reporting cycle  | Annual   |
| 102-53 Contact point for questions regarding the report             | Appendix   |

| Disclosure   | Location (boundary)   |
|--|---|
| 102-54 Claims of reporting in accordance with the GRI Standards                | ARRIS has made use of the GRI Sustainability Reporting Standards in the development of 2018 ARRIS Corporate Responsibility Report |
| 102-55 GRI content index   | Appendix  |
| 102-56 External assurance  | Appendix  |
| <b>Material topics</b>   |   |
| <b>GRI 200: Economic Standards series</b>                                      |   |
| <b>GRI 201: Economic performance</b>   |   |
| Management approach and boundary   | 2018 ARRIS Annual Report – 10-k   |
| 201-1 Direct economic value generated and distributed                          | 2018 ARRIS Annual Report – 10-k   |
| <b>GRI 205: Anti-corruption</b>  |   |
| Management approach and boundary   | ARRIS Operations (interactions with suppliers, business partners, contractors and customers)                                      |
| 205-2 Communication and training about anti-corruption policies and procedures | Governance  |
| <b>GRI 300: Environmental Standards series</b>                                 |   |
| <b>GRI 301: Materials</b>  |   |
| Management approach and boundary   | Our Products  |
| 301-1 Materials used by weight or volume                                       | In progress   |
| <b>GRI 302: Energy</b>   |   |
| Management approach and boundary   | Our Operations  |
| 302-1 Energy consumption within the organization                               | Our Operations  |
| 302-4 Reduction of energy consumption  | Our Operations  |
| <b>GRI 305: Emissions</b>  |   |
| Management approach and boundary   | Our Operations  |
| 305-1 Direct (scope 1) GHG emissions   | Our Operations  |
| 305-2 Energy indirect (scope 2) GHG emissions                                  | Our Operations  |
| 305-3 Other indirect (scope 3) GHG emissions                                   | Our Operations  |
| 305-4 GHG emissions intensity  | Our Operations  |
| 305-5 Reduction of GHG emissions   | Our Operations  |
| <b>GRI 307: Environmental compliance</b>                                       |   |
| Management approach and boundary   | Our Operations  |
| 307-1 Non-compliance with environmental laws and regulations                   | ARRIS has not incurred any environmental fines.   |
| <b>GRI 308: Supplier environmental assessment</b>                              |   |
| Management approach and boundary   | Our Supply Chain  |
| 308-1 New suppliers that were screened using environmental criteria            | Our Supply Chain  |

| Disclosure  | Location (boundary)                                     |
|---|---|
| <b>GRI 400: Social Standards series</b>   |   |
| <b>GRI 401: Employment</b>  |   |
| Management approach and boundary  | Our People  |
| 401-1 New employee hires and employee turnover  | In progress   |
| <b>GRI 403: Occupational health and safety</b>  |   |
| Management approach and boundary  | Our People  |
| 403-1 Occupational health and safety management system  | Our People  |
| 403-4 Worker participation, consultation, and communication on occupational health and safety       | Our People  |
| 403-5 Worker training on occupational health and safety   | Our People  |
| 403-6 Promotion of worker health  | Our People  |
| <b>GRI 404: Training and education</b>  |   |
| Management approach and boundary  | Our People  |
| 404-1 Average hours of training per year per employee   | Our People  |
| 404-3 Percentage of employees receiving regular performance and career development reviews          | Our People  |
| <b>GRI 405: Diversity and equal opportunity</b>   |   |
| Management approach and boundary  | Our People  |
| 405-1 Diversity of governance bodies and employees  | Our People  |
| <b>GRI 412: Human rights assessment</b>   |   |
| Management approach and boundary  | Our People  |
| 412-1 Operations that have been subject to human rights reviews or impact assessments               | Our People  |
| <b>GRI 414: Supplier social assessment</b>  |   |
| Management approach and boundary  | Our Supply Chain  |
| 414-1 New suppliers that were screened using social criteria  | Our Supply Chain  |
| <b>GRI 416: Customer health and safety</b>  |   |
| Management approach and boundary  | Our Products  |
| 416-2 Incidents of non-compliance concerning the health and safety impacts of products and services | No identified non-compliance with regulations reported. |



## A.4 United Nations Sustainable Development Goals

In September 2015, world leaders adopted the 2030 Agenda for Sustainable Development, spearheaded by the United Nations, which includes a set of 17 Sustainable Development Goals (SDGs). Our materiality assessment, carried out in 2016, identified the importance of aligning our corporate responsibility initiatives with the SDGs. In response to these findings, we have undertaken a high-level mapping exercise against all 17 goals to review how our current activities align with the SDGs and to identify the goals where ARRIS has the most influence. It is unlikely that any company will be able to directly influence all 17 of the SDGs and therefore in future CR Reports we will likely focus on those SDGs where ARRIS can make a direct contribution to their success

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| <p><b>1</b> NO POVERTY</p>                                 | <p><b>Goal 1:</b> End poverty in all its forms everywhere</p> <p>Impact: Direct – high</p> <p>See section: <b>Our People</b></p>  | <p><b>2</b> ZERO HUNGER</p>                            | <p><b>Goal 2:</b> End Hunger security and improved nutrition and promote sustainable agriculture</p> <p>Impact: Indirect – low</p>  | <p><b>3</b> GOOD HEALTH AND WELL-BEING</p>                 | <p><b>Goal 3:</b> Ensure healthy lives and promote well-being for all at all ages.</p> <p>Impact: Direct – high</p> <p>See sections: <b>Our Products, Our People</b></p>  |
| <p><b>4</b> QUALITY EDUCATION</p>                          | <p><b>Goal 4:</b> Ensure inclusive and quality education for all and promote lifelong learning</p> <p>Impact: Direct – high</p> <p>See section: <b>Our People</b></p>     | <p><b>5</b> GENDER EQUALITY</p>                        | <p><b>Goal 5:</b> Achieve gender equality and empower all women and girls</p> <p>Impact: Direct – high</p> <p>See section: <b>Our People</b></p>  | <p><b>6</b> CLEAN WATER AND SANITATION</p>                 | <p><b>Goal 6:</b> Ensure access to water and sanitation for all</p> <p>Impact: Direct – medium</p> <p>See section: <b>Our Operations</b></p>  |
| <p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>               | <p><b>Goal 7:</b> Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>Impact: Direct – high</p> <p>See section: <b>Our Operations</b></p> | <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>       | <p><b>Goal 8:</b> Promote inclusive and sustainable economic growth, employment and decent work for all</p> <p>Impact: Direct – high</p> <p>See sections: <b>Our Products, Our Operations</b></p> | <p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>   | <p><b>Goal 9:</b> Build resilient infrastructure, promote sustainable industrialization and foster innovation</p> <p>Impact: Direct – high</p> <p>See sections: <b>Our Products, Our Operations</b></p>         |
| <p><b>10</b> REDUCED INEQUALITIES</p>                    | <p><b>Goal 10:</b> Reduce inequality within and among countries</p> <p>Impact: Direct – high</p> <p>See section: <b>Our People</b></p>                                    | <p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>  | <p><b>Goal 11:</b> Make cities inclusive, safe, resilient and sustainable</p> <p>Impact: Direct – medium</p> <p>See sections: <b>Our Products, Our Operations</b></p>                             | <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>  | <p><b>Goal 12:</b> Ensure sustainable consumption and production patterns</p> <p>Impact: Direct – high</p> <p>See sections: <b>Our Products, Our Operations</b></p>   |
| <p><b>13</b> CLIMATE ACTION</p>                          | <p><b>Goal 13:</b> Take urgent action to combat climate change and its impacts</p> <p>Impact: Indirect – low</p> <p>See section: <b>Our Operations</b></p>                | <p><b>14</b> LIFE BELOW WATER</p>                    | <p><b>Goal 14:</b> Conserve and sustainably use the oceans, seas and marine resource</p> <p>Impact: Indirect – low</p> <p>See sections: <b>Our Products, Our Operations</b></p>                   | <p><b>15</b> LIFE ON LAND</p>                            | <p><b>Goal 15:</b> Sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss</p> <p>Impact: Indirect – low</p> <p>See section: <b>Our Operations</b></p> |
| <p><b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS</p>  | <p><b>Goal 16:</b> Promote just, peaceful and inclusive societies</p> <p>Impact: Direct – high</p> <p>See section: <b>Our People</b></p>                                  | <p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>          | <p><b>Goal 17:</b> Revitalize the global partnership for sustainable development</p> <p>Impact: Direct – high</p> <p>See section: <b>Our Business</b></p>   |    |   |

## A.5 Community

### Annual foundations and charities

- Caribbean and Latin America (CALA) student program—every year, our employees in Mexico can nominate their children for recognition of their outstanding academic achievements. Students are invited, along with their parents, to an event at an ARRIS site or another local venue. All recognized students receive a certificate and other prizes. The students and their family members are invited on a tour of the ARRIS site where they can see where their parents work. This year, the event in Monterrey was held at a local museum where 27 students and their families were later invited to spend the rest of the day enjoying the exhibits. Our Tijuana site hosted 92 students from elementary school through to high school, and their families.
- T. Howard Foundation—placing minority interns at telecoms and content companies.
- Canary Challenge—the Ruckus Networks team raised over \$10,000 for early cancer detection research as part of the Canary Challenge fundraising event held on 29 September in Palo Alto, California. It was a beautiful day for a bike ride and we thoroughly enjoyed raising money for a great cause!
- Adaptive Spirit—industry fundraiser for the US Paralympic ski and snowboard teams.
- Walter Kaitz Foundation—umbrella charity organization that funds Women in Cable Technology (WICT), the National Association for Multi-ethnicity in Communications (NAMIC) and the Emma Bowen Foundation.
- National Association for Multi-ethnicity in Communications (NAMIC) and NAMIC Carolinas—provides support and opportunities for multi-ethnic candidates in telecommunications.
- Cork, Ireland—we held a coffee break onsite to help raise funds for cancer services in Cork as part of Cork's Giving for Living Radiothon. There was a great array of delicious cakes, biscuits and bread for all to enjoy on the day. The employee's donations raised €240, which was coupled with a matching Company donation for this worthy cause.
- For Inspiration and Recognition of Science and Technology (FIRST) Robotics—sponsorship of four high school teams in the US.
- Ruckus provides needed school supplies—A Precious Child, a 501(c)(3) non-profit organization, empowers disadvantaged children to achieve their full academic potential. Each year, A Precious Child hosts the Fill a Backpack drive to collect grade-appropriate school supplies. The Westminster, Colorado, office sponsored the drive this year, pulling together over 20 fully stocked backpacks (~\$50 each to assemble) and over 600 individual school supply items to donate.

<sup>2</sup> A 501(c)(3) organization is a corporation, trust, unincorporated association, or other type of organization exempt from federal income tax.

## A.6 Assurance Statement

### Scope and Objectives

WSP was commissioned to conduct a review of ARRIS' activities and processes used to prepare its 2018 Corporate Responsibility (CR) Report. We have provided a Type 1 Assurance Statement using the AA1000 AS (2008) assurance principles of Inclusivity, Materiality and Responsiveness as the evaluation criteria, namely:

- **Inclusivity**—an assessment as to whether the organization has included its stakeholders in developing and achieving an accountable and strategic response to sustainability.
- **Materiality**—an assessment as to whether the organization has included in its report the material information and data required by its stakeholders to make informed judgments, decisions and actions.
- **Responsiveness**—an assessment is made as to whether the organization has responded to stakeholder concerns, policies and relevant standards and communicated these in its report.

### Assurance level, responsibilities and limitations

Our assurance team has the appropriate experience and competency to complete this assurance engagement. WSP has a Quality Management System (QMS) which is certified to BS EN ISO 9001 under which all our work is managed.

Our assurance took place in January and February 2019 and we have provided a moderate level of assurance. However, we would like to state the following:

- ARRIS is solely responsible for providing all the information included in the CR Report.
- WSP's scope of work included the compilation of the CR report. Therefore, our assurance was strictly limited to the processes of data and information gathering that support the disclosure in this report.
- Our involvement in stakeholder engagement was limited to reviewing external and internal stakeholder engagement processes and outcomes only.

The intended users of this statement are the readers of the ARRIS CR Report 2018.

### Methodology

Our assurance work included:

- A review of the processes and documentation in place to collect CR data.
- Discussions and interviews with data owners and staff at ARRIS to determine the quality of the processes, systems and procedures used to manage the corporate responsibility issues and collect data.
- Reviewing the materiality of the information provided against the sustainability strategy.

### Opinion

Our assurance work found that the CR Report meets the principles, content and quality requirements of AA1000 AS (2008) for a Type 1 Moderate Level of Assurance. We have made the following findings and conclusions.

### Inclusivity

ARRIS has developed a Corporate Responsibility Stakeholder Matrix which analyses stakeholders in terms of their level of interest and influence in the ARRIS CR program. This is used to help guide the strategy for engagement with stakeholders which is maintained in the ARRIS Stakeholder Awareness/Engagement Plan. The plan also identifies the main person responsible for overseeing the engagement process and a timeline for actions.

During 2018, the acquisition of the Ruckus business and the divestiture of the Taiwanese manufacturing site have been accounted for in the reporting of the CR issues for the business.

### Materiality

Informal review of the 2016 materiality assessment was undertaken during 2018 to check that the relevant issues continue to be addressed in the ARRIS CR report. A more formal questionnaire was developed with the intention of gaining a wider perspective on material issues from internal and external stakeholders but this has not yet been implemented due to potential impending change in the business structure.

The strategic plan which was developed following the 2016 materiality assessment continues to be implemented and progress against the CR targets developed under each of the CR pillars is regularly reviewed. No material changes have been made to the ARRIS CR Strategic Plan during 2018 and hence no material changes have been needed to the information reported in the 2018 CR report.

### Responsiveness

The 2018 ARRIS CR Report presents an external response to progress against implementation of the CR Strategic Plan and has taken account of acquisition and divestiture of sites within the business. The report provides stakeholders with a clear explanation of progress on all the key material issues.



Rachel Jones  
Technical Director  
London, February 2019



# Committed to Corporate Responsibility



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