ERICSSON

TECHNOLOGY FOR GOOD

Ericsson Sustainability and Corporate Responsibility Report 2014

ABOUT ERICSSON

Ericsson is a driving force behind the Networked Society – a world leader in communications technology and services. The Company's long-term relationships with every major telecom operator in the world allow people, businesses and societies to fulfill their potential and create a more sustainable future. Ericsson's services, software and infrastructure – especially in mobility, broadband and the cloud – are enabling the telecom industry and other sectors to do better business, increase efficiency, improve the user experience and capture new opportunities. With more than 115,000 professionals and customers in more than 180 countries, Ericsson combines global scale with technology and services leadership. Investments in research and development ensure that Ericsson's solutions – and its customers – stay in the forefront. The Company provides support for networks with more than 2.5 billion subscribers. Approximately 40% of the world's mobile traffic is carried through networks delivered by Ericsson. Founded in 1876, Ericsson has its headquarters in Stockholm, Sweden. The Ericsson share is listed on Nasdaq Stockholm and NASDAQ New York.

Cover photo: Myanmar, a country undergoing democratic and social reform, has one of world's lowest levels of mobile broadband penetration. ICT can play a huge role in boosting socio-economic development. In 2014, Ericsson began serving customers in Myanmar, and also joined the UK Department for International Development to support girls' education in the country.

ABOUT THIS REPORT

This report, together with additional information available online, summarizes our 2014 sustainability and corporate responsibility (CR) performance.

Sustainability and CR are central to Ericsson's core business and our commitment to the triple bottom line of responsible financial and environmental performance and socio-economic development. Our aim is to create positive impacts for our stakeholders and our business while managing environmental, social and ethical risks. Conducting business responsibly is a top priority, and we take a full value chain perspective.

We believe this approach delivers new business opportunities, greater efficiency, less risk, greater brand value, market leadership employer attractiveness, and boosts long-term competitiveness.

UN Global Compact Advanced
Ericsson is reporting for the third year in a row according to the UN Global Compact (UNGC) Advanced Level criteria.

UN Guiding Principles Reporting Framework
With this report, Ericsson is the first in the ICT sector to report according to the new UN Guiding Principles (UNGP) on Business and Human Rights Reporting Framework launched in February 2015.

Report Boundaries
Unless otherwise stated, all information and data pertains to activities undertaken from January 1, 2014, to December 31, 2014. The report covers the Ericsson Group, i.e. Telefonaktiebolaget LM

Ericsson and its subsidiaries. The Ericsson Annual Report 2014 provides information on Ericsson's structure, nature of ownership and legal form, subsidiaries, as well as changes regarding size, structure and financial performance.

Global Reporting Initiative (GRI) Index 3.0
A GRI index for our performance in 2014 is on p. 54.

Technology for Good™
By 2020, 90% of the world's population will be covered by mobile broadband networks. This scale brings unprecedented opportunity to address global sustainable development challenges. In the Networked Society, Ericsson is the leading advocate of Technology for Good™. It is a concept we work with every day, and is the overarching theme of this report.

External Assurance and GRI Application Level A+

This Report has been assured by PricewaterhouseCoopers, see Assurance Statement on p. 56. The scope of the assurance by external auditor PwC includes an audit on Ericsson's own CO_2 emissions. The GRI G3 guidelines have been used in compiling this Report and a complete GRI compilation appears online.

Ericsson's Sustainability and Corporate Responsibility Report 2014 has achieved an A+ application level, which means the Report has been externally assured, and that the application level has been checked by a third party, PricewaterhouseCoopers.

pwc

AA1000
Licensed Assurance Provider
000-150

For reporting of suspected violations of laws or the Ericsson Code of Business Ethics, please email: **reporting.violations@ericsson.com**

To help us improve reporting and ensure transparency, we welcome your feedback and questions on our report and performance, please email: **corporate.responsibility@ericsson.com**

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LETTER FROM THE CEO

> "Any future vision of sustainable development must be linked to technology transformation."

Hans Vestberg
President and CEO

Welcome to our 2014 report.
Never in human history have we been more connected. In a few years, 90% of the world's population will have access to mobile communications. That's a staggering development, changing every aspect of our lives.

In the Networked Society, everyone and everything will be connected in real time. As a leading ICT company, our role is to drive this transformation, opening up new ways to innovate, to collaborate and to empower people, business and society. We want to ensure that connectivity paves the way for environmentally sustainable and equitable social and economic development.

Driving positive change
Our ambition at Ericsson is to be a responsible and relevant driver of positive change in the Networked Society. From climate change and poverty reduction to urbanization, the major challenges confronting our world require transformative, not incremental, solutions. Small steps forward won't deliver the necessary scale to find effective solutions to pressing global issues. The global community is charged with carrying on the work of the Millennium Development Goals beyond 2015. Any future vision of sustainable development must be linked to technology transformation.

As chair of the Working Group for Sustainable Development and the Post-2015 Development Agenda of the Broadband Commission for Digital Development, during 2014 I led the work on a new report "Means of Transformation." Our aim is to spur the international community to act swiftly to capture the unrealized potential of ICT and broadband to enable the post-2015 development agenda and help build a more inclusive, sustainable society. My contribution to the Leadership Council of

the UN Sustainable Development Solutions Network is to help ensure that viable solutions are part of this framework.

A transformative technology
Mobility, broadband and the cloud are transforming industries. Utilities are deploying smart metering to save electricity costs and reduce carbon emissions while connected cars enhance safety and enable electric vehicle charging. Smart grids and more efficient public transport ease the challenges of urbanization.

Technology is also transforming how we meet basic needs. In Connect to Learn, now in 21 countries, we partner in a public-private initiative using cloud-based ICT solutions to deliver high-quality secondary education worldwide while highlighting the need to improve access to education for girls. With 2.5 billion unbanked people globally, our mobile money platform is addressing the challenge of financial inclusion. Community health workers equipped with mobile phones in the devastating Ebola fight are better able to save lives. These are the kind of impacts that illustrate the power of Technology for Good™, and in 2015 our initiatives aim to impact more than 5 million people.

Sustainability at the core
At Ericsson, sustainability and corporate responsibility are integrated in our corporate strategy. Our aim is to continuously improve our sustainability performance – in areas such as good governance, responsible sourcing, and health and safety – to minimize risks to our, and our customers', brands and earn the trust of our stakeholders.

Ericsson continues to support the ten principles of the United Nations Global Compact and the UN Guiding Principles for Business and Human Rights (UNGP), and we were first in our sector to use the new UNGP Reporting Framework. We think this is important because while human rights such as freedom of expression and the right to privacy are enabled by ICT, there is also a risk the technology can

be misused. We are working to ensure greater privacy and security in our networks, and are active in multi-stakeholder dialogue to address concerns.

Steady progress
As described throughout this report, in 2014 Ericsson made considerable progress with sustainability and CR, although there is much left to do. Our targets are designed to indicate our priorities, both in terms of reducing risks, and increasing positive impacts, and we continue to deliver real performance. As Ericsson's most significant environmental impact is the energy used by our products in operation, we put heavy emphasis on helping customers optimize their networks. Our new Ericsson Radio System provides a 50% improvement in energy efficiency.

We also seek to reduce the carbon footprint of our own performance. We are on track towards our objective to maintain absolute CO_2e emissions from business travel, product transport and facilities at 2011 levels up to 2017. This equates to a reduction of 30% CO_2e per employee, and this year, we reduced emissions by 10% CO_2e per employee.

To accelerate action towards a low-carbon economy, we also set a new goal this year to help other sectors of the economy reduce societal carbon emissions by a factor of 2 relative to Ericsson's own carbon emissions in 2014. We will do this by implementing ICT-enabled solutions such as smart meters and smart transport solutions.

Scaling positive impact
This is only the very start. ICT-enabled solutions can and should be a powerful tool for sustainable development. By enabling every area of society to use mobility, broadband and the cloud to address global challenges, we can ensure our sector's legacy is a positive one.

Hans Vestberg
President and CEO

LETTER FROM THE VP OF SUSTAINABILITY AND CR

Elaine Weidman-Grunewald
Vice President, Sustainability
and Corporate Responsibility

"We strive to be positive change-makers in the Networked Society."

Dear stakeholders,
Two decades of strong commitment to sustainability and corporate responsibility (CR) has launched Ericsson on a business mission to positively impact the world around us. Each year brings new challenges and opportunities, but over time, sustainability and CR have become an integral part of our mindset and identity, and the impact we want to have on the world.

Establishing strong foundations
Our vision to be a responsible and relevant driver of positive change in the Networked Society starts with conducting business responsibly. If we don't get this right, it will be difficult to succeed in an increasingly transparent Networked Society.

This is of growing importance to our stakeholders, and Ericsson aims to raise the performance bar each year in areas like human rights, responsible sourcing and anti-corruption. Equally important is our focus on energy, the environment and climate change – and ensuring the benefits of mobility reach everyone. We have targets in all areas that help guide our work and measure performance.

Embedding sustainability and CR
One of our key aims is to embed sustainability and CR in everything we do. It is integrated into our business strategy and our portfolio as a key business factor, and 2014 saw many exciting portfolio developments. Financial and social inclusion for the 2.5 billion unbanked is a central focus of our mobile commerce business. Our TV Anywhere solution can be brought to even the remotest corners of the world over mobile broadband. To help shape the low-carbon society of the future, our Industry & Society portfolio offers viable solutions for the utility and transport sectors like smart grids and our Connected Vehicle Cloud.

Technology for Good
Providing affordable and accessible mobile broadband can help break the cycle of poverty for millions of people around the world. Despite rapid growth of the ICT industry, today, more than 4 billion people do not have access to the internet. In the 48 Least Developed Countries, 90% of the population is unconnected. Market forces alone cannot address the main barriers to progress: infrastructure, affordability and usage. Greater joint efforts are needed by industry, governments and others to close this gap.

As the leading advocate for Technology for Good™ in the Networked Society, we use our technology and solutions to address global sustainable development challenges. In 2014, we scaled up our education solution Connect to Learn, and secured our first large-scale engagement with a national development agency (DFID in the UK) to expand secondary education to thousands of marginalized girls in Myanmar.

Tackling the challenges
Despite great progress in our sustainability and CR aims, we also met new challenges, in areas like privacy and freedom of expression, reducing health and safety incidents in the supply chain, and setting more realistic levels for the volumes of e-waste collected. We also need more women in the ICT sector, an industry challenge that we work with others to tackle.

But addressing these challenges can also result in new opportunities to build trust among our stakeholders. Our ability to meet expectations is increasingly important in handling emerging risks and challenges. For example, telecom is a powerful enabler of human rights, but certain functionality can also be misused. We acknowledge mounting concern among investors, customers, civil society and other stakeholders about the complex issues surrounding privacy, surveillance, cybersecurity and freedom of expression in the ICT sector, and in 2014 we significantly increased our stakeholder engagement and outreach on these topics.

An untapped potential
ICT and broadband are increasingly integrated into every aspect of the global economy as a vital part of modern infrastructure. As a technology advocate, I know what a huge impact ICT can have on each one of the 17 proposed UN Sustainable Development Goals. It seems obvious to me, and many others in our industry, that ICT should be a central element in any framework for addressing sustainable development. But technology is rapidly evolving and not everyone has understood its full potential.

The UN and other organizations have an enormous opportunity to make this link – between existing technologies like ICT where industry and governments have invested billions, if not trillions, and national and global sustainable development plans. There are some quick wins to be gained, for example, in climate change, by engaging more with the ICT sector and its solutions-based approach.

In closing, whether it is stakeholder consultation, customer engagement, or public-private partnerships, more multi-sector engagement is crucial for providing leverage, impact and scale to many of the areas presented in this report. By working with others, we develop a true understanding of the trade-offs and impacts our business has in the world. With this insight and our commitment, we strive to be positive change-makers in the Networked Society.

Elaine Weidman-Grunewald
Vice President,
Sustainability and Corporate Responsibility

2014 AT A GLANCE

CONDUCTING BUSINESS RESPONSIBLY

1ST ICT company to report according to the UN Guiding Principles on Business and Human Rights Reporting Framework

71% of Ericsson employees feel that the Company's efforts on sustainability and corporate responsibility have increased their overall job satisfaction (15% above external benchmark)

ENERGY, ENVIRONMENT, CLIMATE CHANGE

−10% CO_2e reduction per employee

Over **10,000** tonnes e-waste collected

98% recycling of materials through product take-back

COMMUNICATION FOR ALL

Connect To Learn now in **21** countries

Over **350,000** registered in Refugees United database to find separated families

0

"Zero Incidents in High-Risk Environments and Occupational Health&Safety" program established

90,000

employees have taken anti-corruption training

"The UN Guiding Principles Reporting Framework is a ground-breaking and vital tool for companies like Ericsson to know and show that they are managing risks to human rights effectively throughout their operations and value chain, with the potential for positive impact on millions of peoples' lives."

Caroline Rees, President of Shift

1.4 million tonnes CO_2

Estimated carbon reductions in 2014 from two Ericsson selected offerings

50%

Ericsson Radio System provides a 50% improvement in energy efficiency

"Global greenhouse gas emissions continue to rise and we face steep financial risk if we do not mitigate them. The business case for action to mitigate climate change has never been stronger or more urgent. For this reason we congratulate Ericsson that has achieved a position on The A List: The CDP Climate Performance Leadership Index. Ericsson is responding to market demand for environmental accountability and at the same time is making progress towards the realization of sustainable economies."

Paul Simpson, Chief Executive Officer of CDP

4 million

people positively impacted through our Technology for Good™ initiatives

"Ericsson's contribution of ICT tools and training is helping the Whitaker Peace & Development Initiative create a truly connected Youth Peacemaker Network in South Sudan, Uganda and Mexico. Their commitment allows us to advance our shared goal to collectively make the world a place where peace, hope and reconciliation can be communicated to all, one connection at a time."

Forest Whitaker, Founder and CEO of The Whitaker Peace & Development Initiative; UNESCO Special Envoy for Peace and Reconciliation

STRATEGY TO DRIVE POSITIVE CHANGE AND REDUCE RISK

An important part of Ericsson's ambition is to be a responsible and relevant driver of positive societal change.

Our commitment to sustainability and CR is essential to achieving this ambition, and to create value for our employees, customers, shareholders and society.

As a leader in the ICT industry, our aim is to provide significant and measurable contributions to a sustainable Networked Society.

The Networked Society
The Networked Society goes beyond more than 50 billion connected devices. It is the result of people starting to use those connections to make their lives, businesses and society better and more efficient. We facilitate this development through our ideas and solutions, our products and services, and our partnerships.

In our vision of a Networked Society, every person and every industry is empowered to reach their full potential. We believe a better, more sustainable world will take shape when 21st century infrastructure is used to deliver services more effectively and promote social inclusion.

Integrated across the business
Sustainability and CR is integrated in Ericsson's business strategy, target-setting and risk management process which involves Regions, Business Units and Group Functions.

Governance
Sustainability and CR policies are part of our governance system and applied globally across the business. These include the Sustainability Policy, Code of Conduct, Code of Business Ethics and Occupational Health and Safety Policy. The Code of Business Ethics is periodically acknowledged by all employees.

The Ericsson Sustainability and CR Steering Group is comprised of senior executives who approve the strategy and targets that support our commitments. For more information on governance, see p. 11.

Measuring progress
To track our performance, we report on a range of objectives, risks, and achievements associated with our most material issues and aim for continuous improvements over time.

Focused strategy
Our Sustainability and CR strategy (see below) remains constant, focused on reducing risks and increasing positive impacts in society.

ERICSSON'S AMBITION
Grow faster than the market with best-in-class margins

Customer
Leading ICT transformation partner

Employees
Attract, develop and retain best talent

Shareholder
Shareholder value creator

Society
Responsible and relevant driver of positive change

Our sustainability and CR strategy
Our Sustainability and CR strategy is focused on driving positive change in three main areas: Responsible Business Practice, Energy, Environment and Climate Change, and Communication for All. Each area includes specific goals upon which we measure progress year on year.

	Undisputed leader in energy and environment	
Trusted partner by conducting business responsibly	Improve performance of our own operations	Technology for Good™ Impact and Scale
	Demonstrate ICT and low-carbon benefits	
Responsible Business Practice	Energy, Environment and Climate Change	Communication for All

ENGAGING WITH STAKEHOLDERS

Listening to, and learning from, stakeholders helps address shared challenges, and find common solutions.

Engaging with stakeholders is an inclusive and continuous process that allows us to build relationships and create mutual understanding. Our stakeholders include employees, investors, customers, suppliers, governments, civil society, non-governmental organizations (NGOs), industry partners, media, academia, and consumers.

Woven into daily business
Interactions with stakeholders are part of the day-to-day operations of our business.

We reach out to stakeholders through a variety of means such as employee dialogues, joint projects and initiatives; customer meetings; investor meetings; surveys, membership in industry groups and representation on decision-making bodies or academic research. Other interactions include in-person meetings, online dialogues, consultation with affected stakeholders, and formal public reports. We engage with customers on many issues, including supply chain management, energy efficiency and our Technology for Good™ programs. We leverage our social media to extend the conversation.

Strengthening approach
In 2014 we developed a more detailed pro-

cess for stakeholder engagement, in order to ensure that we are transparently communicating and reporting about these issues in a relevant, meaningful and transparent way. One of the focus areas was the management of CR risks, including human rights.

Focus areas
Stakeholder engagement also contributes to better management of CR risks, and one particular focus area for Ericsson in this regard is human rights (p.12). Other CR risks areas we address through stakeholder engagement include responsible sourcing, corruption, health and safety, conflict minerals, and handling of e-waste.

ENGAGING WITH STAKEHOLDERS

In our approach to stakeholder engagement, we carefully consider each step of the process in order to achieve the greatest impact.

A. With Whom companies need to engage

B. About What issues companies need to engage

C. How engagement should take place

D. When engagement should take place

E. Corporate/ Policy Level engagement

F. Internal engagement

G. Engaging Neutrals when necessary

ADVOCATING FOR CHANGE

Ericsson takes an active role in advocating for ICT's transformational role in sustainable development. This includes connecting the unconnected as well as scaling up access to education, reducing carbon emissions, and contributing to sustainable urbanization, women's empowerment, peacebuilding and humanitarian response. Focus areas include:

◉ **Highlighting broadband's role in sustainable development:** The Working Group on Sustainable Development of the Broadband Commission for Digital Development, chaired by Ericsson CEO, published a new report in 2014 "Means of Transformation," highlighting ICT's role in proposed new Sustainable Development Goals.

Conducting business responsibly: Human rights, anti-corruption, and responsible sourcing are among our focus areas. In 2014, for example, we participated in a case study by the Institute for Human Rights and Business (p.13) to further multi-stakeholder dialogue on human rights challenges in the ICT sector.

◉ **Supporting UN initiatives:** Ericsson is involved with advocacy and solutions in many UN initiatives, including the Leadership Council of the UN Sustainable Development Solutions Network, which gathers academia, civil society and the private sector to mobilize action on sustainable development (p. 44) and Together for Safer Roads, a coalition launched in 2014 (p. 39).
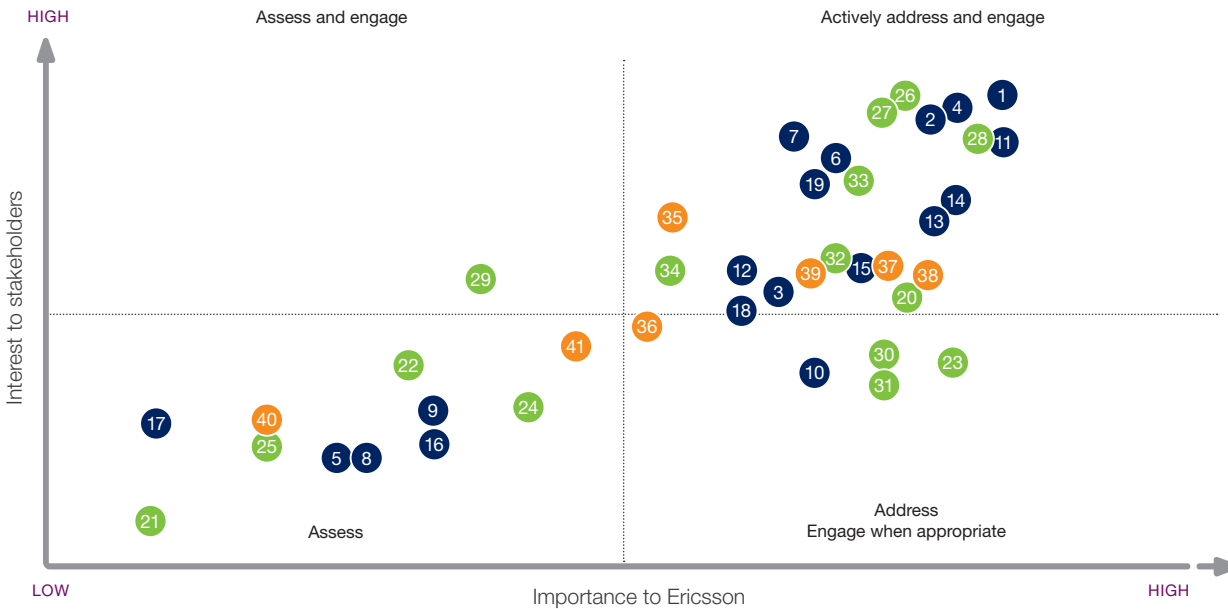
Expanding humanitarian response: We see huge potential for ICT to help address crises from health to refugees and disaster response. We are a member of the UN Emergency Telecom Cluster and in 2014, we launched a partnership with the International Rescue Committee (p. 46).

◉ **World Economic Forum:** As a partner of the World Economic Forum, we join other leading global companies to support a commitment to improve the state of the world. Sustainable development is one of our key focus areas.

Many other advocacy initiatives are described throughout this report.

OUR MOST IMPORTANT SUSTAINABILITY IMPACTS

A materiality assessment is a vital element in our sustainability and CR strategy, reporting, and target- and risk-setting process. We look at the economic, environmental and social impacts most significant to our business, and those that substantively influence the assessments and decisions of stakeholders.

HIGH | Assess and engage | Actively address and engage

Interest to stakeholders

Assess | Address — Engage when appropriate

LOW — Importance to Ericsson — HIGH

Conducting business responsibly*

1 Anti-corruption
2 Unintended use of ICT
3 Radio waves and public health
4 Respect Human Rights
5 Child labor
6 Information security (including cybersecurity)
7 Right to privacy
8 Forced labor
9 Freedom of association
10 Policy engagement and advocacy
11 Responsible sourcing
12 Tracing of conflict minerals
13 Diversity and inclusion
14 Occupational health and safety
15 Employee engagement
16 Responsible land use
17 Product information and labeling
18 Responsible tax
19 Freedom of expression

Energy, environment and climate change*

20 E-waste management
21 Biodiversity
22 Emissions (effluents, air emissions other than GHG)
23 Environmental legal compliance
24 Waste management (office and production)
25 Water consumption
26 Ericsson carbon footprint
27 Climate change
28 Product energy performance
29 Use of renewable energy
30 Hazardous substances avoidance
31 Efficient use of materials (excluding hazardous)
32 ICT contribution to low-carbon economy
33 Energy consumption (Ericsson own activities)
34 Smart cities

Communication for all*

35 Disaster response
36 Access to education
37 Digital inclusion
38 ICT socio-economic impact
39 Access to communication
40 Access to healthcare
41 Peace building and conflict resolution

* Numbering for reference in the graph, not in order of importance.

Ericsson regularly reviews issues to ensure our materiality assessment captures the aspects most vital to our sustainability impacts. Prioritizing helps us make better decisions and guides our strategic choices.

Gathering insight
This year we took into account the Global e-Sustainability initiative's (GeSI) updated materiality assessment for the ICT industry, to which Ericsson contributed. Notable issues highlighted in the assessment include additional privacy, human rights and waste concerns, as well as recognition that the Internet of Things – the interconnection of various objects, devices and applications through wireless communications – is in fact becoming a reality.

Ericsson identifies stakeholders and their significance to the business and incorporate stakeholder perspectives in our work.

Prioritizing issues
We use previous materiality assessments as the starting point to rank issues in order of importance and then include updates based on developments during the year. We take into account upstream and downstream material issues across the value chain. Life-cycle assessment helps to identify and measure opportunities to decrease negative environmental impacts. Human Rights Impact Assessments help identify salient human rights issues.

We actively address issues deemed most material to Ericsson. We manage efforts to tackle the issue, and investigate, steer and/or implement new governance procedures to ensure business sustainability and accountability. We also engage on this set of issues with stakeholders, through dialogue and advocacy, to demonstrate the positive socio-economic and environmental effects of mobility, broadband and the cloud. Issues in which

we assess and engage are those rising in importance for Ericsson and stakeholders.

We assess by reviewing and monitoring the evolution of an issue and we report on our performance in these areas. For some issues, we address and engage when appropriate.

Issues which we assess are important and we have procedures in place to ensure that we are working according to our stakeholders' expectations on these issues. Stakeholders generally require less disclosure about performance in these areas as they are aware of our standards and express confidence in our ability to adequately address them.

RIGHT TO PRIVACY RISING ON AGENDA

The ICT sector is facing new challenges arising from the use of technology – notably the convergence of previously separate industries such as telecoms, data management and media. "Big data" provides opportunities for improving efficiencies and gaining business insights. It can also pose societal risks if misused.

We have identified the right to privacy as one of Ericsson's salient human rights issues, and recognize that it is important to stakeholders as well. Privacy and security issues affect businesses as well as individuals, particularly as commerce becomes increasingly digitized. We are committed to good governance and responsible business practices in this area, as well as to multi-stakeholder dialogue. See further discussion on our approach to human rights (p.12).

New technologies and capabilities across the ICT sector mean that more aspects of our lives are becoming connected, and with that arises new

challenges. The trend towards a digitized society is increasingly placing empasis on the right to privacy. Ericsson has introduced a Privacy by Design Framework, which ensures privacy is considered from the beginning of any product release and made an integral part of the product development process.

The technological and legal implications of the right to privacy must be understood and addressed by all sectors involved in the debate. We will continue to be engaged in that dialogue.

56%
of smartphone owners

would like communication to be ЕϖСЯ\'РТ3D
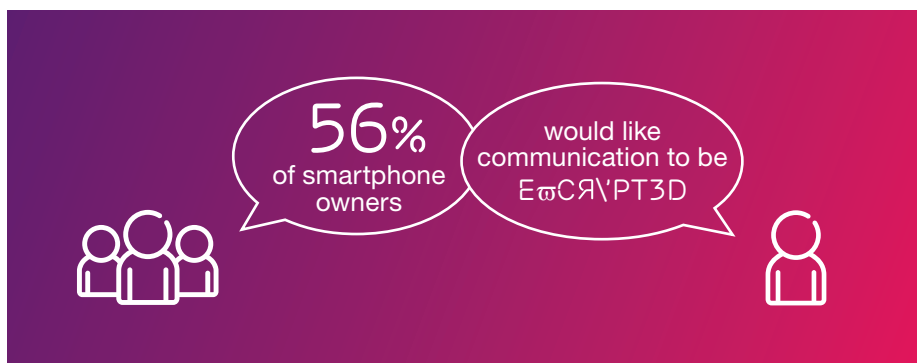
Source: Ericsson ConsumerLab report, 10 hot consumer trends 2015.

CONDUCTING BUSINESS RESPONSIBLY

BUILDING TRUST THROUGH RESPONSIBILITY

Our solid commitment combined with our culture and core values support our responsible business approach to deliver long-term business benefits.

Conducting business responsibly is the foundation of our commitment to sustainability and corporate responsibility. Integrity, transparency and responsibility characterize the way we conduct business. It is critical to maintaining trust and credibility with customers, partners, employees, shareholders and other stakeholders.

Governance framework
Ericsson has Group policies, processes and directives within responsible sourcing, occupational health and safety (OHS), environmental management, anti-corruption and human rights, and other areas. The Ericsson Group Management System includes the Code of Business Ethics, Code of Conduct, OHS policy, and Sustainability Policy. We are committed to uphold the UN Global Compact Principles and to implement the UN Guiding Principles on Business and Human Rights throughout our business operations. Under our Global Assessment Program, an external assurance provider audits the implementation of these policies and directives, management of risks and achievement of objectives. Policies are regularly reviewed; several were strengthened in 2014.

Code of Business Ethics
Our Code of Business Ethics sets the tone for how we conduct business globally. It is acknowledged by all employees at the time of employment and repeatedly throughout the term of employment. We have zero tolerance for corruption and bribery, and have set high standards within the areas of responsible sourcing, the environment, occupational health and safety, human rights and labor across our operations.

Strengthened focus on human rights
Ericsson respects all internationally proclaimed human rights and strives to ensure that we are not complicit in human rights abuses. In 2014, we embedded a stronger human rights focus in our Code of Business Ethics and Code of Conduct (p.12).

The Code of Conduct was strengthened with stronger labor standard protection in accordance with UN and customer requirements, including reference to the process for reporting violations, and requirements on suppliers to report breaches of the Code of Conduct.

All employees are offered online training on sustainability, anti-corruption and other CR issues. About 90,000 employees have taken the anti-corruption training to date, which covers policies and requirements and explores challenges and dilemmas. In addition, specific training on human rights issues are provided for certain functions where human rights issues are especially relevant, for example, Sourcing, Security and Legal Affairs.

Top-level commitment
The CEO and senior management actively support the commitment to responsible business and are regularly informed of progress. Sustainability and CR objectives are part of the Ericsson Group 2014 balanced scorecard. A cross-functional Sustainability and CR Steering Group provides guidance for strategic and operational issues.

The Board of Directors of the Parent Company is briefed twice a year on sustainability and CR matters; more often if needed. In 2014, briefings covered sustainability and CR strategies and risks, performance, internal operations, OHS, environment, human rights challenges, and sales compliance processes and results.

MANAGING HUMAN RIGHTS CHALLENGES

Many fundamental human rights – such as the right to health, education, freedom of assembly and freedom of expression – are enabled through ICT. At the same time, the Networked Society can also give rise to specific human rights challenges. Recognizing both the opportunities and the challenges, Ericsson is working actively to address human rights.

Spotlight on most salient issues
The new UN Guiding Principles (UNGP) on Business and Human Rights Reporting Framework states that a company's salient human rights issues are those human rights that are at risk of the most negative impact through the company's activities or business relationships. Ericsson has defined our salient human rights issues. These are the right of freedom of expression, the right to privacy, and labor rights. These are highlighted in the Code of Business Ethics and Code of Conduct. We identify these issues from various input: our own assessment of impacts, external stakeholder views resulting from Human Rights Impact Assessments in higher-risk environments (p.14), broader stakeholder consultations and industry initiatives. We may identify other human rights issues to be salient over time.

Growing stakeholder concerns point to the need for more transparency, constructive discussion and clear guidance on good corporate conduct and due diligence on human rights and appropriate limits of government control over communication services. More clarity is needed on expectations and responsibility of companies, and what constitutes effective oversight of laws governing interception and surveillance of data to preserve public safety and national security interests (referred to as lawful interception). We held and engaged in several stakeholder consultations during 2014 to address these issues (p.14).

Rising societal concerns
Technology is used by governments to fight crime and to assist in life-saving

We engage in stakeholder dialogue in Myanmar, a country undergoing rapid change.

emergencies. Despite the benefits, in some cases it can also be misused to restrict human rights, and can infringe on an individual's right to privacy.

Concern around surveillance, mining of personal data and cyber-attacks is rising. It is essential that the right to privacy is protected so that users and their data

are secure and rights are protected. Ericsson works to ensure appropriate levels of security in our products, and a range of tools are deployed to ensure security solutions and safeguarding of network operations. This is outlined in the Ericsson white paper, "Guiding Principles for Security in a Networked Society."

Human Rights Challenges for Telecommunications Vendors: Addressing the Possible Misuse of Telecommunications Systems
Case Study: Ericsson

Case Study Number 2
NOVEMBER 2014

Institute for
Human Rights and Business
Shaping Policy • Advancing Practice • Strengthening Accountability

Reporting violations

We recognize the importance of having processes in place to provide or enable remedy in the case of negative human rights impacts related to business activities or relationships. Possible violations of the Ericsson Code of Business Ethics, including human rights issues, can be reported through our whistleblower procedures publicly available on our website. A transition to a third party-managed whistleblower process is planned for 2015 (p.16).

Embedding a Human Rights framework

Since 2011, we have been working to integrate the United Nations Guiding Principles on Business and Human Rights into our governance framework. Since 2012 we have been active with the Business Learning Program of the non-profit center for business and human rights, Shift, to embed a human rights framework across the company. Our human rights due diligence covers areas such as Sales, Sourcing and Legal Affairs. In 2014, we reviewed and further strengthened the human rights aspects of our due diligence regarding mergers and acquisitions.

UNGP's new reporting framework

Ericsson is using the opportunity in this report to start applying the UNGP's Reporting Framework, launched in February 2015 as the first comprehensive guidance for companies to report on human rights issues in line with the Guiding Principles. The Framework was developed by Shift and international accountancy firm Mazars. We are the first ICT company to apply the framework and also among the first companies to do so overall. We will be building on this year's experience in our future reporting.

Digital Dangers

Ericsson was the focus of a 2014 case study on human rights by the Institute of Human Rights and Business (IHRB) in their "Digital Dangers" series. The study explored challenges facing network vendors, and how they can reduce the risk of misuse of telecommunications systems, and in particular lawful interception systems. The

analysis of Ericsson's sales compliance process (p.15) highlighted a number of best practices, including escalation of issues, and requiring end user statements as part of all sales that describe approved uses of the product or service to help track products and performance. The authors also called for governments to clarify rules for companies providing technologies which can be used in ways that undermine respect for human rights and to bear in mind their own duty to protect against human rights abuses involving non-state actors such as companies. The report also highlighted the importance of multi-stakeholder dialogue, an area in which we are deeply engaged.

"Ericsson's due diligence process…points to processes companies can embed into operations to give proper consideration to human rights risks," the study stated.

VIEWPOINT

The impact of ICT on human rights is generally positive, but its increasing use by governments and business to acquire data creates a complex interrelationship. Awareness of the risks associated with information and communications technologies has grown in recent years. The indeterminate period for which data is stored online raises a whole set of issues, particularly for the right to privacy. The implications of these developments are not fully or widely understood. The ICT sector needs to do more to find a unified response to such challenges, and ideally this should be done in consultation with stakeholders including civil society and other experts. Those dialogues are happening, and we are involved in some of them. Ericsson, and other companies in the ICT sector, are well served by having dilemmas around human rights publicly discussed. Companies cannot effectively deal with these issues if they are kept secret or confidential. Ultimately, while companies can institute best practices and due diligence, judicial oversight is crucial. This requires the right regulatory framework with human rights protection at its core."

John Morrison is the Executive Director of the Institute for Human Rights and Business.

ASSESSING OUR HUMAN RIGHTS IMPACT

Ericsson has customers in more than 180 countries, with different cultures, legal systems and other factors impacting society and the business environment. Group policies and directives regarding human rights governance apply to our global operations.

Identifying the issues

We conduct Human Rights Impact Assessments (HRIA) in accordance with the UNGP as part of our human rights due diligence and to help identify salient human rights issues. The HRIA covers adverse human rights impacts that Ericsson may cause or contribute to, through our own activities, or which may be directly linked to our operations, products or services by our business relationships. The aim is to ensure that we respect human rights within the scope of our business operations and describe the social, operational and human rights context for doing business in the country.

Continued focus on Myanmar

The work with the recommendations from the HRIA in Myanmar has continued during 2014. At the stakeholder consultation conducted in Myanmar during the summer of 2014 one issue raised was labor conditions and safety, particularly in the supply chain. Focus on these issues has been highlighted during 2014, for example, when conducting audits. Several internal processes within Ericsson regarding the right to privacy have also been strengthened during 2014 as one result of the work with the HRIA for Myanmar.

HRIA initiated in Iran

In Iran, where Ericsson has had customers for over 100 years, a HRIA was initiated in 2014. In light of international developments, we are engaging with existing customers, and exploring opportunities with new customers in Iran, while evaluating the human rights situation and continuing to monitor international developments.

Prioritized areas for action identified in the HRIA include:

> occupational health and safety
> sourcing and supply chain management
> security
> trade and sales compliance
> discrimination

We will implement the recommendations from the HRIA into our processes and management systems to ensure continuing attention to addressing and tracking human rights challenges.

Ericsson has served customers in Iran for over 100 years.

CONSULTING STAKEHOLDERS

We support discussions on finding ways to manage emerging dilemmas through greater transparency, collective action and a clear regulatory framework.

The initial results of our HRIA in Myanmar were shared in stakeholder consultations in both Stockholm and Yangon. Stakeholders included investors, the government, customers and local civil society participants. In 2015 stakeholder consultation on the HRIA for Iran took place. The outcome of these stakeholder consultations are an important contribution to the final list of identified mitigation measures. The HRIA process is a learning experience for the company that we will continue to build upon, in Iran, Myanmar, and potentially other markets.

Right to privacy focus at Wilton Park

We played a leading role in convening a multi-stakeholder roundtable on privacy, security and surveillance with the Institute for Human Rights and Business (IHRB) held at strategic forum Wilton Park in the UK. Participants addressed growing challenges and dilemmas around right to privacy, freedom of expression, security and lawful intercept, and finding the appropriate balance between privacy rights, freedom of expression and security. The input from the roundtable discussion provided vital insight for Ericsson's continued work with human rights. Part of our long-standing collaboration with IHRB was our participation in a 2014 case study on managing human rights dilemmas, (p.13).

GeSI working group on human rights

Ericsson is also a member of the Global e-Sustainability Initative (GeSI) working group developing an action plan to provide leadership in addressing human rights in the ICT sector. The group is focused on prioritizing action on human rights impacts; applying a human rights lens to emerging technologies and their application; the future of responsible sourcing in the ICT sector, and building capacity in emerging markets.

DUE DILIGENCE IN THE SALES PROCESS

Human rights considerations are an integrated part of Ericsson's sales process.

Human rights risk management is embedded into our operations through our sales compliance process. This is particularly relevant for the continuing assessment and prevention and mitigation of potential impacts related to freedom of expression and privacy. A Sales Compliance Board, supported by a Sales Compliance Core Team, governs the process.

The cross-functional, senior-level Sales Compliance Board represents Legal Affairs, Trade Compliance, Government and Industry Relations, Sales, Marketing and Communications, Business Units, and Sustainability and Corporate Responsibility. It meets bi-monthly to review cases, in particular those with potentially negative human rights impacts. The Sales Compliance Board may approve with conditions or reject cases, or in specific cases, recommend that human rights impacts assessments for specific countries be conducted.

Gathering broad input
The Sales Compliance Core Team meets bi-weekly to review cases, using expertise from several functions and departments to discuss potential impacts and review policies.

The team looks at sales requests, and when necessary, determines what mitigation actions should be undertaken, for example, that implementing staff at the operator must have the right product or service training before a contract is concluded.

Involving different departments helps ensure that any decision considers multiple angles, in order to reduce the risk that Ericsson's technology directly or indirectly impacts negatively on human rights.

Criteria for evaluation
Sales that trigger one or more of the following criteria are evaluated in the sales compliance process for human rights risks:
> **Portfolio:** This concerns products and services that Ericsson provides that could potentially be used for unintended purposes.
> **Purpose:** This concerns understanding the purpose and context in which the product, service or know-how will likely be used.

SALES COMPLIANCE RISK METHODOLOGY

Portfolio

Country

Total risk evaluation

Purpose

Customer

> **Customer:** This focuses on enhancing our understanding about to whom we sell/deliver.
> **Country:** This provides insight about the country to which we deliver, based on the risk indices of a global risk analytics firm in areas such as human rights risks; corruption; democratic governance; freedom of opinion and expression. Countries requiring extra attention are those under sanctions as well as other countries ranked as a high risk based on a external risk indices. We recognize this is an ongoing process and continuously monitor international developments.

Results
In 2014, more than 300 cases were reviewed (see graph). The review and approval process was enhanced, so that while the total number of cases increased in 2014, more cases were approved with conditions. We have procedures for following up on mitigation measures and the decisions that are taken within the sales compliance process.

Sales Compliance Board Review of Cases

219

319

	2013		2014
■ 183		Cases approved	■ 214
■ 24		Cases approved with conditions	■ 85
■ 12		Cases rejected	■ 20
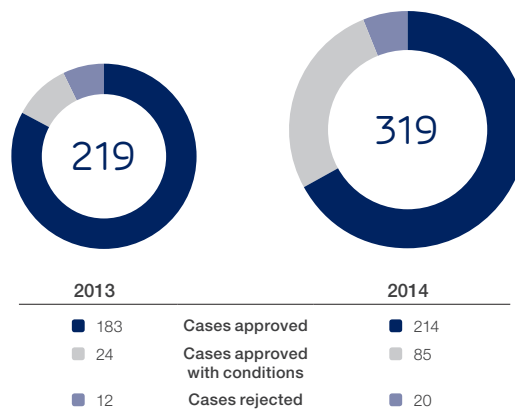
Source: Ericsson

ANTI-CORRUPTION A TOP PRIORITY

According to the World Economic Forum, the cost of corruption equals more than 5% of global GDP (USD 2.6 trillion). With over USD 1 trillion being paid in bribes each year (World Bank), transnational corruption is a major barrier to conducting business. Ericsson takes a zero tolerance approach to bribery and corruption.

Corruption hampers investment, undermines legal and democratic systems and increases the costs of doing business. In response, around the world anti-corruption legislation is becoming stricter, enforcement is increasing, and stakeholder expectations for high standards of business integrity are growing. Fair competition and a level playing field are essential to free markets and business must play its part to actively reinforce this throughout the value chain.

With our global operations spanning 180 countries – many with a high risk of corruption according to Transparency International's anti-corruption index – staying focused on anti-corruption is important to Ericsson. This is achieved through a combination of risk assessment, a strong anti-corruption program, internal audits and through regularly updated employee and supplier training.

Prevention and accountability
Ericsson continuously assesses corruption risks as part of Group Risk Assessment, in line with strategy and target-setting processes. Headed by the Group's Chief Compliance Officer, the anti-corruption compliance program targets both prevention and accountability. The effectiveness and appropriateness of the program is also reviewed and evaluated annually by the Audit Committee of the Board of Directors.

Ericsson has an established process for the selection of suppliers and in general does not use agents, unless required by law or in very restricted circumstances.

Reporting violations
Both employees and third parties may report suspected violations of law or the Group's Code of Business Ethics, which is available publicly on the Ericsson website.

Reported violations of law or the Code of Business Ethics are handled centrally by a Group Compliance Forum, supported by a Regional Compliance Forum in each region. We also initiated the transition to a third party-managed whistleblower process, i.e. Ericsson will appoint a third party to whom employees and third parties can report violations. The process is planned to be implemented in 2015.

Towards a culture of integrity
To foster individual accountability, Ericsson employees periodically acknowledge the Code of Business Ethics and undergo an anti-corruption e-learning course to raise awareness of risks, dilemmas and appropriate courses of action.

By year-end 2014, more than 90,000 of current employees had completed the training.

Additional specialized training is provided to key personnel in Sourcing, Sales and other relevant functions, such as regional leadership teams. With regard to suppliers, focus on anti-corruption in self-assessment questionnaires was tightened and a new anti-corruption e-learning for suppliers was launched. At year-end, more than 1,100 employees of suppliers had concluded the training.

Industry commitment
Since 2012, Ericsson has been a member of the World Economic Forum Partnership against Corruption Initiative (PACI), aimed at raising business standards and contributing to greater transparency and accountability. Members commit to a set of principles, which includes zero tolerance towards bribery and corruption, the cornerstone of Ericsson's anti-corruption program.
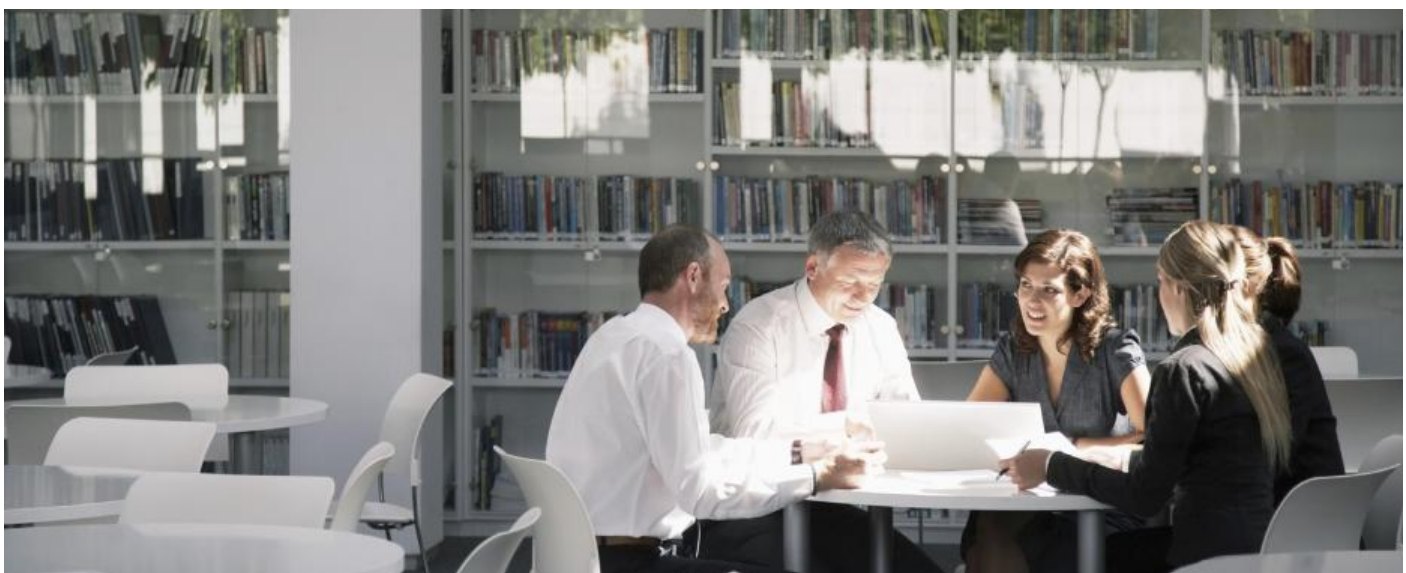
PROACTIVE ENGAGEMENT ON RESPONSIBLE SOURCING

Responsible sourcing is a top priority for Ericsson. We work towards continuous improvement to ensure our suppliers meet high social, ethical, human rights and environmental standards.

Through transparency and engagement, we work to build trust across the value chain from suppliers to customers. Our "beyond monitoring" approach develops our relationship with suppliers across three phases: "require," "assess" and "improve."

> First, we provide suppliers clarity around our sustainability and CR requirements.
> Second, we evaluate suppliers' sustainability performance through monitoring and audits. This includes identifying and auditing high-risk suppliers.
> Third, to ensure continuous improvement, we engage with suppliers through audit follow-up, Code of Conduct seminars and training sessions, and web-based learning.

Setting expectations
Suppliers must comply with the requirements of the Ericsson Code of Conduct which are included in supplier contracts. The Code of Conduct was updated in 2014 to include stronger human rights language in accordance with the UN Guiding Principles on Business and Human Rights as well as international labor standards.

Specifically, maximum working hours are more clearly set out. Another new provision prohibits deduction from wages as a disciplinary measure.

In 2014 we carried out over 30 supplier seminars to raise awareness on our Code of Conduct, Occupational Health and Safety and environmental requirements, and to emphasize the importance of compliance.

Assessing risk
Ericsson uses a risk-based approach to identify relevant suppliers for Code of Conduct audits. Prioritized risk areas include working at heights, road and vehicle safety, anti-corruption, working hours, labor rights, environmental management, and communication of requirements further down the supply chain.
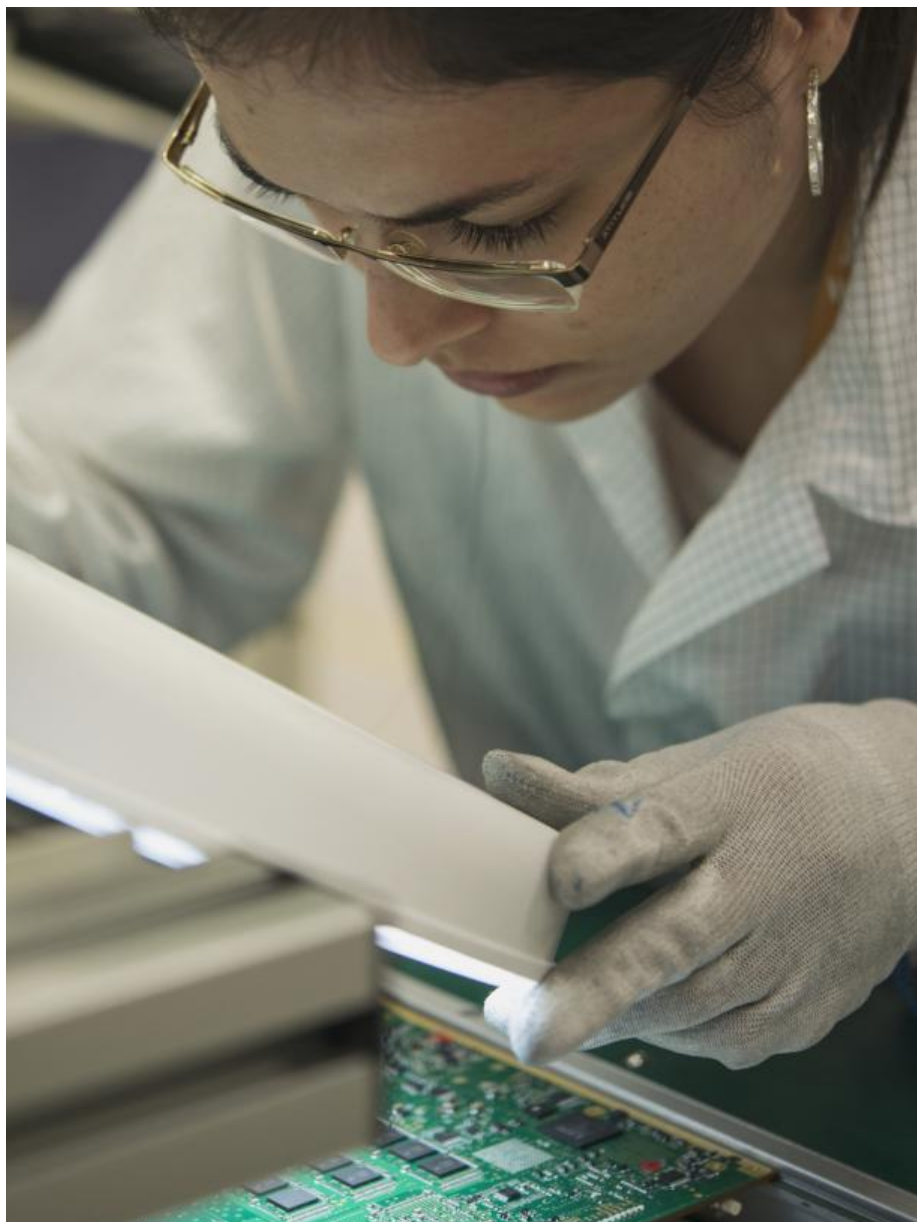
Monitoring performance
In 2014, 595 supplier Code of Conduct audits and on-site assessments were performed by Ericsson's 197 Supplier Code of Conduct auditors. We view each of our audits as an improvement activity and expect suppliers to address identified findings. Auditors follow up the actions to ensure there is continual improvement in the supply chain.

Year on year, analyses of our audit results demonstrate significant improvements in areas such as better working conditions, fire prevention, training and environmental management. Critical findings among 32 selected high-risk suppliers audited in both 2013–2014 declined 60% (from 18% to 7%). (See graph p.18).

We prefer to use leadership and transparency with suppliers to encourage continuous improvements over time. However, suppliers who repeatedly fail to comply with our Code of Conduct risk being disqualified for further business.

Capacity building

As an important element of our approach, we provide free, online Code of Conduct training to suppliers, offered in 13 languages. In 2014, Ericsson also launched a web-based anti-corruption training for suppliers to reinforce our zero tolerance view on corruption and bribery.

Meeting customer expectations

Our own performance as a supplier is a critical part of our proactive engagement in responsible sourcing. We participate in the yearly Joint Audit Cooperation (JAC) Forum made up of ten of our largest customers, telecom operators. JAC members conduct Corporate Responsibility audits of

their suppliers, including Ericsson factories and suppliers, and share results. Several Ericsson and supplier sites have been audited by JAC auditors during the past few years with satisfactory results.

COLLABORATING WITH SUPPLIER A WIN-WIN

When a supplier is closely aligned with our strong commitment to find sustainable solutions, collaboration can lead to significant improvements. That is the case with global logistics provider DB Schenker, which worked jointly with local Ericsson teams to address the challenge of transporting products from Ericsson in China to our facilities in Brazil – all while reducing lead time, costs and carbon impact.

By jointly tackling the problem, Ericsson and DB Schenker arrived at a sustainable multi-modal solution combining rail with air freight which reduced CO_2 emissions by 47% per 45ft container and cut lead time from 45–50 days by sea freight to 23–25 days with the rail-air combination. In addition, intermodal air-rail transports developed by DB Schenker together with Ericsson for our inbound flows to and from Europe and China has led to a 56% reduction in CO_2 per 45 ft container.

Close and ongoing dialogue with the supplier – central to our Responsible Sourcing approach – was key to ensuring they understood our requirements and could develop the right solution. In 2014, Ericsson presented an award to DB Schenker for sustainability excellence, an example of how working together with a supplier can achieve positive outcomes with long-term benefits for Ericsson.

Photo: DB Schenker

Performance of selected suppliers – globally

	2013	2014
Critical	17.9%	7.1%
Warning	28.1%	27.6%
Conformity	54.0%	65.3%
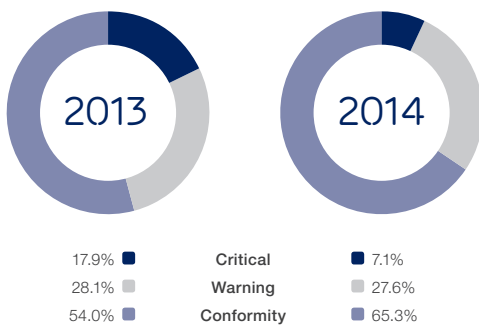
Source: Ericsson

Type and number of critical and warning findings of selected suppliers – globally

Employee contract
Local legislation
Benefit and compensation
Forced and bonded labor
Occupational Health and Safety
Physical working environment
Handling of chemicals
Personal Protective Equipment
Records on incidents
Supply chain
Environmental Management System

Critical Warning

Source: Ericsson

RAISING TRANSPARENCY ON CONFLICT MINERALS

During 2014 we have taken further steps together with our suppliers to increase transparency regarding conflict minerals in our supply chain, working with our suppliers towards the aim of conflict-free sourcing.

Some of the mineral mines in the eastern part of the Democratic Republic of the Congo (DRC) have been exploited for many years by warlords using illegal trade to finance their activities. The minerals are exported to smelters around the world and after refinement they end up in products in different parts of the world.

Electronic products contain various metals, including tantalum, tin, tungsten and gold ("conflict minerals"), which can be found in the eastern part of the DRC. There are several tiers of suppliers between Ericsson and the actual mines which is why collaboration with our suppliers is necessary to achieve our aim to increase transparency in our supply chain.

Industry cooperation

Broad industry cooperation is needed to improve the situation and to achieve the objective of increased supply chain transparency enabling legitimate trade of raw materials that can create a positive impact on the local community. We work actively with our suppliers and through industry initiatives such as the Conflict-Free Sourcing Initiative (CFSI), driven by the Global e-Sustainability Initiative (GeSI), and the Electronic Industry Citizenship Coalition (EICC). We are also active in the dialogue with policymakers in the EU and other industry sectors aiming to increase awareness and understanding of conflict minerals.

Our approach

Our approach to conflict minerals is based on four principles.
> We have made an active choice not to ban minerals from the DRC. The reason is negative consequences that could result from an embargo of the region.
> We have worked to incorporate the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas" in our existing sourcing practices. Some examples are our public Statement on Conflict Minerals, contractual clauses in supplier agreements, and the annual conflict minerals reporting. We filed our first Conflict Minerals Report with the US Securities and Exchange Commission in 2014.
> We have a goal to trace metals back to the smelters. This is done using the joint industry tool, the Conflict Minerals Reporting Template. The collected information is used as an input to supplier assessments.
> We are members of the Conflict Free Smelter Initiative which includes the Conflict-Free Smelter Program. This program makes it possible for smelters to become certified by an independent third party audit if the smelter does not source raw materials that contribute to conflict in the DRC. The certification also enables their customers to source metals from smelters and refiners that are certified as conflict free.

Continuous improvements

During 2014, we have taken further steps to increase the transparency regarding conflict minerals in our supply chain. Our focus has been to improve the quality of supplier data. An ongoing challenge is to obtain sufficiently high-quality supplier data to enable us to gain reasonable knowledge of the origin of the used minerals, given an extremely complex supply chain.

During 2014 we have taken further steps to increase the transparency regarding conflict minerals in our supply chain.

A STRENGTHENED APPROACH TO HEALTH AND SAFETY

Providing a safe and healthy workplace is of fundamental importance to Ericsson. Our ambition is zero incidents and we focus on continuous improvements to reduce the number and severity of Occupational Health and Safety (OHS) incidents.

The OHS system helps to protect our employees and others engaged in company business. The Ericsson Group Management System is certified to the OHSAS 18001 standard. Ericsson's operations undergo internal audits as well as regular third-party assurance audits.

A comprehensive approach
We provide requirements and controls, guidance and training in a comprehensive approach to strengthen OHS performance. Competence and awareness is key to reducing major incidents and must be based on trust and transparency, to encourage reporting of incidents. Unlike many companies, our approach extends beyond our own operations and includes our supply chain, where we see the greatest risks occurring.

We also significantly strengthened and prioritized the OHS area by integrating it into the Sustainability & CR organization, with higher management visibility, and appointed a new Head of Environment, Health and Safety.

In 2014, 22 workplace fatalities were reported. Of these, one was an Ericsson employee, one was a member of the public (an accident involving a caretaker in a work zone), and 20 were supply-chain related. These fatalities were reported in three categories: 12 driving and vehicle safety; 9 involved climbing and working at heights; and one related to manual handling.

As a leader in our industry, we support full transparency and accountability in the area of health and safety, and report on and investigate all incidents that we are made aware of, including those relating to supplier operations.

Towards zero incidents
Any workplace fatality is unacceptable and we are taking concrete steps to address this. A program "Zero Incidents in High-Risk Environments" was established in early 2014 to reduce severe incidents in high-risk operations in both Ericsson's own activities and in the supply chain.

The Zero Incidents program will increase OHS training and awareness of project managers, field service personnel and sub-contractors. It will reinforce governance and global tools, including instructions, check lists, training materials and escalation procedures. If persistent violations occur, the supplier contract may be ended. The Zero Incident program pilot was launched in early 2015 in the Netherlands, India and Egypt, and global rollout will follow later in 2015 and the first half of 2016.

Fatalities

Year to year reporting
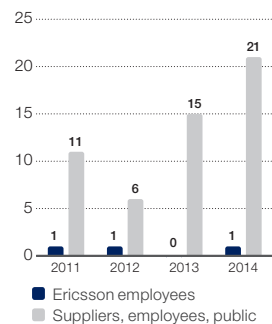
A challenge for the industry is a lack of common definition and varying legislation globally on how to classify and report fatalities in different areas, such as driving vehicles. Ericsson intends to work towards a more standardized framework for reporting but currently takes a more comprehensive approach. This means that in the future we may exclude some incidents from numbers currently reported as workplace related.

■ Ericsson employees
▨ Suppliers, employees, public

Source: Ericsson

RADIO WAVES AND HEALTH

Ericsson employs rigid product testing and installation procedures with the goal of ensuring that radio wave exposure levels from products and network solutions are below established safety limits. The Company also provides public information on radio waves and health, and supports independent research to further increase knowledge in this area. Since 1996, Ericsson has co-sponsored over 100 studies related to electromagnetic fields and health, primarily through the Mobile Manufacturers Forum.

To ensure scientific independence, firewalls were in place between the industrial sponsors and the researchers conducting these studies. Independent expert groups and public health authorities, including the World Health Organization, have reviewed the total amount of research and have consistently concluded that the balance of evidence does not demonstrate any health effects associated with radio wave exposure from either mobile phones or radio base stations.

In 2014, a new web-based general course on radio waves and health was launched and is available to all Ericsson employees. A second part of the course, with specific information for employees working in environments where general public limits on electromagnetic exposure may be exceeded, will be launched in the first half of 2015.

OUR PEOPLE – ANCHORED BY CORE VALUES

The commitment of our people is essential to conducting business responsibly and meeting our sustainability and corporate responsibility goals.

Ericsson's core values

Our values are the foundation of our culture. They guide us in our daily work, in how we relate to each other and the world around us and in the way we do business.

Respect

Professionalism

Perseverance
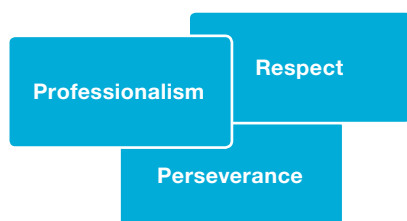
Our People Strategy starts with the business direction: to attract and retain the best talent needed to maintain and develop our business. With an engaged, high-performing, and diverse workforce, we are better positioned to meet future challenges.

Building on our strengths

Our core values underline who we are, how we do business, and how we behave towards each other, within our teams and with our customers. A key competitive advantage is being able to learn faster than our competitors, which requires a high-impact learning culture. We have a collaborative and constructive environment, where innovation is encouraged, and people have the freedom and support to turn ideas into achievement. We also believe that a diverse and inclusive workplace sparks innovation and creativity, which makes our offerings to our customers more competitive.

People make the difference

Our global scale, technology and services leadership and strong sustainability and corporate responsibility performance depends on our people. Employees are motivated by what Ericsson stands for and they want to work for a company that strives to make a positive impact in the world.

Employees are highly engaged in Ericsson's success, demonstrated by the results of our annual employee survey with a 93% participation rate. Our engagement index is at 78%, and 89% of employees state they are "proud to work for Ericsson."

In 2014, as part of the Global Employee Referral Program, we increased the number of referrals by 21%.

BUILDING SKILLS FOR THE NETWORKED SOCIETY

In the competitive ICT market, our skills are our major advantage and an investment in our future. As we move into the Networked Society, the rules of business are changing and so are the ways we learn and develop our competencies.

Ericsson aims to be a best-in-class learning organization that enables employees to excel in their careers and contributes to Ericsson's market leadership and financial goals. Learning in the Networked Society means driving a learning culture at Ericsson. This includes both formal and informal learning, collaboration and knowledge sharing.

Strategic approach
In order to stay relevant and remain a pioneer and a thought leader in the Networked Society, we need to keep continuous focus on competence. We have a strategic approach to learning, using a two-tier framework.

Top-down, we have a process to identify gaps for strategic competences in relation to a specific position or geography. We close these targeted gaps through development and deployment of global learning programs. We have structured formal and on-the-job training programs to build competence in emerging technology areas as well as focus on our sales, services and product development teams.

The bottom-up approach is centered on the individual performance discussion every employee has annually. Employees discuss with their manager how to close competence gaps, and identify learning and competence goals.

◉ Identifying competence gaps
In our 2013 report we identified a goal to increase employee technical certifications 30% over levels achieved in 2014. We subsequently determined that this goal is not the best measurement of our investments in building competence. Instead we decided to track key measures such as closure of critical competence gaps, identified through a rigorous annual process working with the business, including both technical and non-technical employee skill gaps. In 2014 we closed over 99% of the identified targeted employee critical competence gaps through training.

Everyday learning model
Our "Everyday Learning" model consists of on-the-job learning, collaboration forums, and formal training. This approach supports various learning styles, which makes development easier for employees. As in all companies, our employees are busy with day-to-day activities and setting aside time for learning is always a challenge. Hence, at Ericsson we aim to mix learning into our daily work by offering activities such as stretch assignments, peer coaching, and providing several online learning and sharing tools.

Taking learning virtual
We take full advantage of advancements in the Networked Society to develop our employees' competence. Learning is changing. People learn on the go, and want it at their fingertips. It has moved beyond the traditional classroom towards blended learning, including crowd sourcing, discussion forums, video sharing. We recognize the importance of collaboration and knowledge management and have focused on driving adoption across Ericsson.

◉ In 2014, Ericsson Play, a corporate video-sharing platform, was launched. Our Learn Channel has 30 dedicated channels featuring over 800 videos. Employees can access Learn@Ericsson Play at any time on their mobile device. The newly launched Ericsson Virtual Campus also enables our business and technology experts as well as inspirational speakers to share their knowledge and insights live with a large employee base worldwide, via the web, to save time, energy and travel costs. These new delivery channels are complements to our online Learning Portal.

A learning organization – 2014 facts and figures

Share of employees that took formal training **78%**

Average learning hours per active employee **26.7 HOURS**

Total learning hours: **2.7** million

No. of different courses: **13,000**
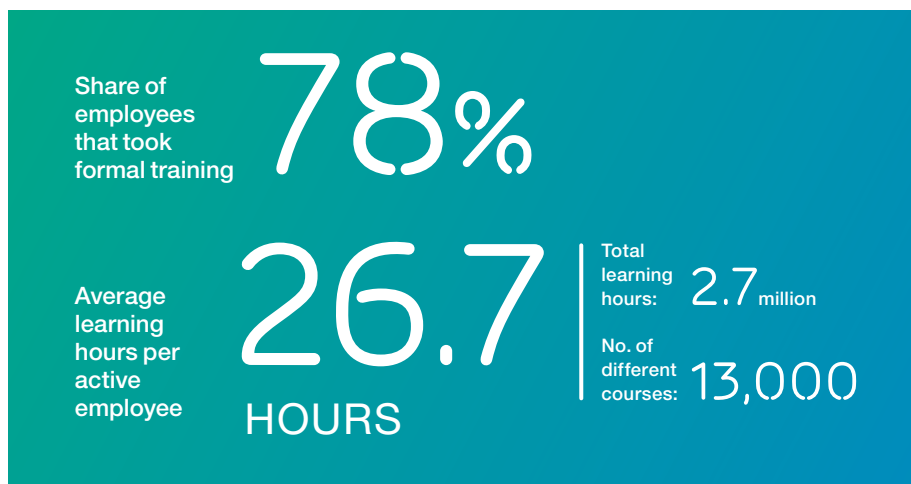
COMMITTED TO DIVERSITY AND INCLUSION

A diverse and inclusive workforce is critical to Ericsson's future success. Diversity not only drives a high-performing team and strong-business results, it also enhances employee motivation, and helps attract and retain top talent.

In an increasingly global market, diversity helps us better respond to the needs of our customers and tap into greater innovation. Diversity and inclusion are also of great concern to our stakeholders and to society at large – a trend we expect to continue. We engage in a wide variety of initiatives related to gender diversity, both within the company, and to contribute to the global debate on these issues.

The diversity of our employees is one of our major strengths as a business. It is this collective mixture of individuals, cultures and organizational experiences that drives creativity, makes us stand out from the competition and delivers great results for our customers.

Diversity spurs innovation
Diversity has been high on Ericsson's agenda for many years and we believe diverse teams are the best teams. They are high-performing and innovative, with a variety of perspectives, experiences and references, which spurs creativity.

We believe that achieving success in an increasingly multi-faceted, global and competitive market requires tapping into a broad talent pool in which diversity is a central component. Our definition of diversity extends beyond gender, race, religion, ethnicity, age and other established parameters to focus on diversity of thought which is a driver of innovation. We are committed to increasing diversity and inclusion at Ericsson, and have made progress, but when it comes to gender diversity, we are not where we want to be.

Gender diversity in focus
Gender diversity is a key focus of our approach. In order to accelerate progress towards better gender balance, we have set a goal that by 2020 women will make up 30 percent of our employee population. In 2014, 22% of Ericsson employees were female. See gender-related data, p. 25.

Our diversity strategy and supportive framework are geared at putting the right processes in place, raising awareness and encouraging open dialogue among employees. We measure progress through a diversity dashboard, in which a wide range of diversity statistics are gathered. Key figures are shared externally on the ericsson.com Diversity and Inclusion web page.

Progress in embedding diversity
A Global Diversity and Inclusion Council made up of senior business leaders drives the strategy. In addition, we are working hard to embed diversity into human resource processes such as talent acquisition and talent management.

Mentoring is used to promote gender diversity: all members of the Executive Leadership Team mentor a high-potential female in the organization. We have also created mentoring circles in some of our regional operations.

Women in Leadership is an Ericsson employee network spanning Ericsson operations in several countries and regions worldwide. It helps participants achieve their career goals with the help of mentoring, networking and engagement. Members drive internal events, collaborate with local organizations and universities and promote relevant external events.

SIGNING THE UN PLEDGE

As part of our commitment to diversity and inclusion, including gender equality, male employees are being encouraged to sign the United Nation's HeForShe pledge. The HeForShe campaign, organized by UN Women – the UN organization dedicated to gender equality and the empowerment of women – focuses on what men can do to address the inequalities and discrimination faced by women.

Since its launch in September 2014, thousands of men around the world have supported the campaign including US President Barack Obama and UN Secretary-General Ban Ki-moon. At Ericsson, male employees are asked to sign a simple pledge that they are committed to gender equality. Ericsson President and CEO Hans Vestberg has signed the pledge, and all of Ericsson's male staff members are urged to do the same.

The campaign states: "When women are empowered, the whole of humanity benefits. Gender equality liberates not only women but also men, from prescribed social roles and gender stereotypes."

Right: Valter D'Avino, Head of Ericsson Region Western and Central Europe, and Head of Ericsson's Diversity and Inclusion Council, supports the HeforShe campaign.

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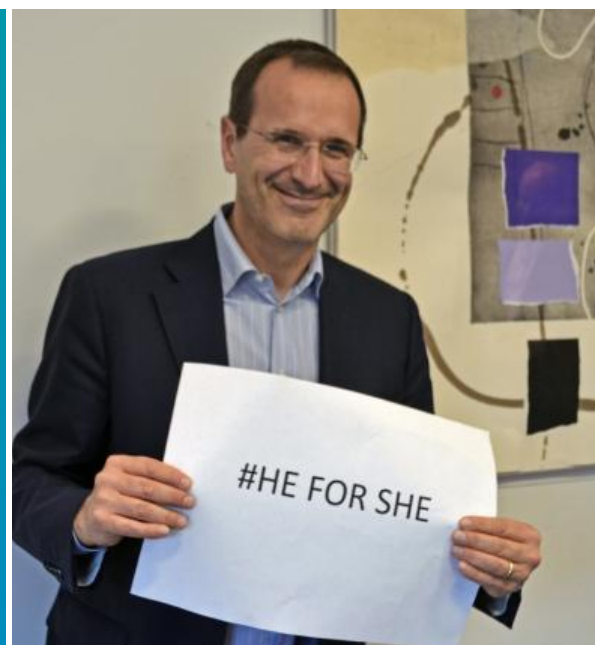
nationalities are represented in Ericsson's workforce.

Celebrating differences

In 2014, we celebrated our first Diversity Awareness Month, addressing issues from sexual orientation to physical ability, cultural issues and gender. Ericsson celebrated International Women's Day at the global level for the first time in 2014. We held over 25 activities across the world and we produced more than 30 video portraits highlighting "Ericsson's outstanding women." We also hosted our first Global Gender Conference, attended by men and women. Attendees were empowered to bring the gender discussion to their own locations to raise awareness and they created activities at the local level.

Recognizing unconscious biases

Research confirms that we all harbor unconscious biases that are a result of life experiences, culture, background, and exposure. Biases influence decision making and can affect perceptions and behavior towards others. One of the ways in which we are furthering a constructive dialogue on inclusion is by raising awareness of unconscious bias. Our aim is to reach the entire employee population in the next three years. Face-to-face training is slated for business leaders and e-learning for the workforce, with a target to reach 30% of each group during 2015.
The objective of the course for leaders:
> Raise awareness about diversity and inclusion
> Initiate a culture of constructive dialogue around diversity and inclusion
> Learn about unconscious bias and impact on decision making

> Increase awareness of techniques which can help overcome unconscious bias
> Identify one opportunity for driving change

Supporting women in technology

Ericsson participates in various external diversity initiatives. A central focus is encouraging more women to join the male-dominated technology industry.

We support TechWomen, which empowers and connects next-generation women leaders from Africa and the Middle East in science, technology, engineering, and mathematics (STEM) by providing access and opportunities for career advancement.

We are a founding partner of WomenUp, a leadership development program for high-potential women under the umbrella

of Hillary Clinton's International Council on Women's Business Leadership.

We also participate in Introduce a Girl to Engineering. The fifth annual "Girls in ICT Day" at Ericsson in 2014 included seminars, workshops, campus visits and a speech by former US First Lady Laura Bush. The aim is to encourage girls and young women to consider careers in ICT.

Global outreach

Ericsson collaborates with the Broadband Commission for Digital Development Working Group on Gender and Broadband in a mission to promote women in ICT. The Ericsson global education initiative Connect To Learn (p. 44) promotes access to secondary school education for girls around the world.

Employees by age and gender 2014

Male Female

Source: Ericsson

Female representation, %

Overall workforce Line managers Executive (Top 250 positions)
Executive Leadership Team
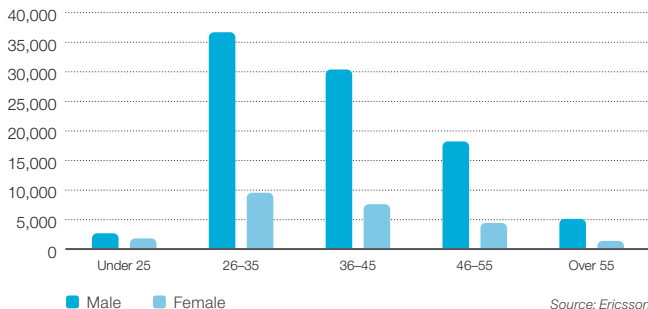
Source: Ericsson
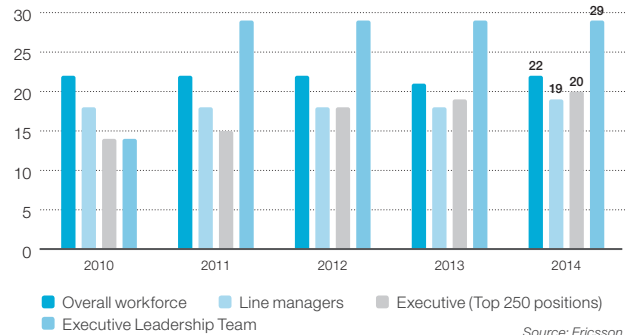
FACTS AND FIGURES

Employees

No.	2014	2013	2012	2011	2010
Year end	118,055	114,340	110,255	104,525	90,261
Average	117,156	116,630	112,758	103,130	91,825
Temporary employees	776	493	766	901	978
Employees who have left Ericsson	15,536	13,025	12,280	10,571	10,066
Employees who have joined Ericsson	19,251	17,110	18,010	24,835	17,834

Satisfaction

%	2014	2013	2012	2011	2010
Engagement index	78	77	77	77	–
Proud to say that I work for Ericsson	89	89	88	89	–
Extremely satisfied with Ericsson as a place to work	81	80	80	80	–
Recommend Ericsson as a great place to work	78	77	77	78	–
Response rate	93	93	94	90	–

Diversity – Background

%	2014	2013	2012	2011	2010
Executives with a background other than Swedish (Top 250 positions)	54	48	55	50	50
Executives with a background other than Swedish (Executive Leadership Team)	29	29	29	29	36

Diversity – Female representation

%	2014	2013	2012	2011	2010
Overall workforce	22	21	22	22	22
Line manager	19	18	18	18	18
Executive (Top 250 positions)	20	19	18	15	14
Executive Leadership Team	29	29	29	29	14

Diversity – Age and gender 2014

No.	Under 25	25–35	36–45	46–55	Over 55
Female	2,680	9,557	7,777	4,410	1,399
Male	2,683	36,316	30,062	18,072	5,099

Responsible sourcing

Audits and assessments

	2014	2013	2012	2011	2010
Auditors	197	195	179	170	150
Audits	444	479	494	392	550
Assessments	151	144	152	270	218

Occupational health and safety

Fatalities (Ericsson employees)

	2014	2013	2012	2011
Total	1	0	1	1
North America	0	0	0	0
Latin America	0	0	0	1
Northern Europe & Central Asia	0	0	0	0
Western & Central Europe	0	0	0	0
Mediterranean	0	0	0	0
Middle East	0	0	0	0
Sub-Saharan Africa	0	0	0	0
India	1	0	1	0
China & North East Asia	0	0	0	0
South East Asia & Oceania	0	0	0	0

Major incidents (Ericsson employees)

	2014	2013	2012	2011
Total	25	29	20	20[a]
North America	0	0	0	0
Latin America	12	16	19	19[a]
Northern Europe & Central Asia	2	4	0	0
Western & Central Europe	8	2	0	0
Mediterranean	0	0	0	0
Middle East	2	0	0	0
Sub-Saharan Africa	1	0	0	0
India	0	5	1	0
China & North East Asia	0	0	0	1[a]
South East Asia & Oceania	0	2	0	0

Fatalities (Supply chain and others)

	2014	2013	2012	2011
Total	21	15[b]	6	11[a]
North America	2	2	0	0
Latin America	5	0	1	8[a]
Northern Europe & Central Asia	0	1	0	0
Western & Central Europe	0	2	1	0
Mediterranean	1	1	1	0
Middle East	5	7[b]	2	2
Sub-Saharan Africa	1	0	1	0
India	6	0	0	1
China & North East Asia	0	1	0	0
South East Asia & Oceania	1	1	0	0

[a] Data revised in 2014.
[b] Fatalities reported in 2014.

Major incidents (Supply chain and others)

	2014	2013	2012	2011
Total	44	35	78	11
North America	4	2	1	0
Latin America	13	11	40	7
Northern Europe & Central Asia	1	2	10	1
Western & Central Europe	0	2	5	1
Mediterranean	1	1	2	0
Middle East	7	9	5	1
Sub-Saharan Africa	1	1	7	0
India	16	2	2	0
China & North East Asia	0	4	4	1
South East Asia & Oceania	1	1	2	0

[a] Data revised in 2014.

ENERGY, ENVIRONMENT AND CLIMATE CHANGE

ON ENERGY AND CLIMATE, ICT ENABLES TRANSFORMATION

Our strategy is to maximize the energy performance of our products and solutions, reduce the carbon footprint of our own activities, and drive the transformation that enables a low-carbon economy.

Ericsson takes a life-cycle approach to environmental management that includes raw material extraction, manufacturing, transport, use, disassembly and end-of-life management. We focus on the following three areas:

> Reducing our own environmental impacts,
> Reducing environmental impacts from our products and solutions in operation,
> Advocating and enabling ICT solutions for a low-carbon economy.

Our life-cycle assessments consistently confirm that Ericsson's most significant environmental impact is the energy used by our products in operation. O ur main aim is to maximize the energy performance of our products, services and solutions to help customers optimize their networks (p. 30). We also seek to reduce the carbon footprint of our own activities (p. 34).

The ICT sector footprint
The ICT sector is responsible for about 1.3% of total global greenhouse gas (GHG) emissions, according to the Ericsson Energy and Carbon Report (2014), which looks at the ICT sector's own environmental impact in terms of electricity use and GHG emissions. It also includes an update of our 2020 forecast for the sector's GHG emissions.

Even with the expected dramatic growth in mobile subscriptions, the total ICT impact is expected to account for no more than 2% of the total GHG emissions in 2020. This is largely due to advances in technology, and industry-wide efforts to reduce energy consumption.

However, in absolute terms the emission levels from ICT are still considerable and must be addressed. We prioritize energy performance throughout the network to identify opportunities to reduce energy consumption and GHG emissions of mobile networks.

The ICT enablement effect
While the continued growth of the ICT sec-

tor brings with it a range of environmental challenges, we see huge potential for the ICT sector to provide solutions that reduce global GHG emissions in other sectors. In fact, our research shows that the use of ICT has the potential to reduce global GHG emissions by approximately one sixth.

ICT solutions help other sectors of society to reduce GHG through dematerialization of physical products and systems, for example, substituting travel with collaborative tools or substituting the need to produce physical products by delivering e-products and services. Energy can be generated, distributed and consumed more efficiently through smart grids and smart meters. ICT can also unlock efficiency gains in buildings, transportation, and logistics.

Measuring the impact
In 2014, we strengthened our focus on providing solutions to help other sectors of the economy, primarily utilities and transport, to offset carbon emissions. In line with this focus area, we set a target for 2015: to reduce societal carbon emissions by a factor of 2 in relation to carbon emissions from Ericsson's own activities in 2014, by implementing ICT-enabled solutions, such as smart meters and smart transport solutions.

Ericsson carbon footprint 2014

Mtonnes CO_2e

Activities in 2014
- Supply chain
- Own activities

Future (lifetime) operation of products delivered in 2014
- Operator activities
- Products in operation
- End-of-life treatment
- ~ Approximately

Source: Ericsson

ENERGY AND CARBON REPORT

ERICSSON
ENERGY AND
CARBON
REPORT

INCLUDING RESULTS FROM THE FIRST-
EVER NATIONAL ASSESSMENT OF
THE ENVIRONMENTAL IMPACT OF ICT

November 2014
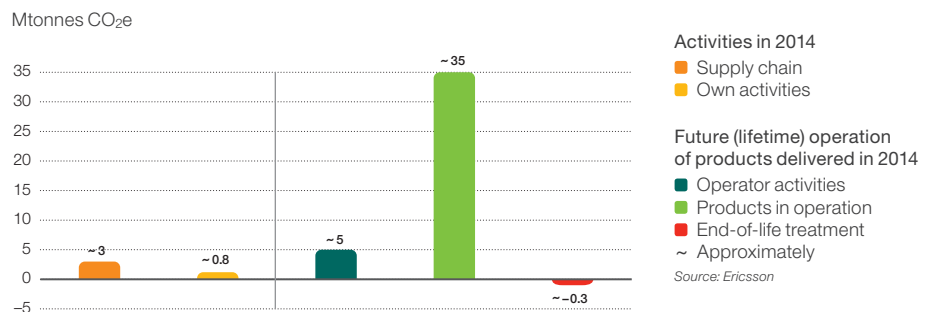
The Ericsson Energy and Carbon Report 2014 focuses on the ICT sector's own environmental impact in terms of electricity use and GHG emissions. It also includes an update of our 2020 forecast for GHG emissions of ICT; the first-ever national assessment of the total GHG emissions attributable to the ICT sector, and a detailed study of the life-cycle impact of a smartphone. The research is a collaboration between Ericsson, telecom operator TeliaSonera, the KTH Royal Institute of Technology in Stockholm and Sony.

SMART STREET LIGHTING

Ericsson Zero Site portfolio are smart encapsulated street furniture solutions. The lamp post solution is developed in co-operation with Philips to offer city officials an innovative way to support energy efficient LED lighting to meet sustainability goals, and enables network operators to offer improved city-wide mobile broadband and app coverage. This street site solution is designed to be deployed in just a few hours in a city environment.

ASSESSING ICT SECTOR CARBON FOOTPRINT

Accommodating growth in the ICT sector while enabling a low-carbon economy was the focus of new research by Ericsson in 2014, including the first-ever national assessment of the life-cycle environmental impact of ICT.

By 2020, global mobile subscriptions will reach 9.5 billion, according to the November 2014 Ericsson Mobility Report. Mobile data traffic is expected to increase annually about 40% and will grow eight-fold by 2020, driven by mobile broadband, cloud services and new devices. This places huge capacity demands on tomorrow's networks.

Data growth marginal impact
On a global basis the global GHG per subscriber for ICT are estimated to decrease from ~110 in 2007 to ~72 in 2020, as shown in the graph. It is also expected that individual users will have more subscriptions and devices in the future.

Interestingly, the rapid increase in data capacity is not having a significant impact on the overall carbon footprint of the ICT sector. Estimates indicate GHG emissions per amount of fixed data transmitted will decrease from nearly 6 kg CO_2e/GB in 2007 to about 0.25 kg CO_2e/GB in 2020.

For mobile data, the estimated decrease is even greater, from about 100 kg CO_2e/GB to about 0.5 kg CO_2e/GB during the same period. In mobile networks, there was roughly 8 times more data than voice traffic during 2014, and by 2020 there will be in the magnitude of 30 times more data than voice traffic.

First-ever national assessment of ICT footprint
In 2014, the first-ever national-level study of the life-cycle environmental impact of ICT was published together with TeliaSonera and KTH Royal Institute of Technology in Stockholm. This unique study for Sweden is based on available statistical data from 2010.

The total GHG emissions due to the ICT sector in Sweden amounted to approximately 1.5 Mtonnes CO_2e in 2010. This corresponds to 1.2% of total Swedish GHG emissions.

The main electricity-consuming categories were user PCs, data centers (servers) and other user equipment. These areas also offer the largest potential for reducing electricity consumption.

When applying a global average electricity mix to the ICT model for Sweden, the relationship between the manufacturing and use stage changes considerably for all parts, (see graph). The electricity mix is used for calculating CO_2 impact based on distribution of energy sources used to produce the electricity in an area.

In our study, annual GHG emissions for an average Swedish subscription, recalculated with global electricity mix, ranges from 34 kg CO_2e for 2G mobile communications up to about 560 kg CO_2e for a fixed (xDSL) broadband subscription or a workplace (LAN) PC. The relatively large impact for fixed subscription is linked to the average subscriber having a greater number of user equipment connected to the fixed network. These devices are on average physically larger compared to mobile user equipment. Fixed ICT networks carry the majority of the transmitted data, with a larger share of GHG emissions being allocated from data centers.

Graph 1: GHG emissions per subscribers outlook

kg CO_2e/subscriber

Fixed ICT sub
Average ICT sub
Mobile ICT sub
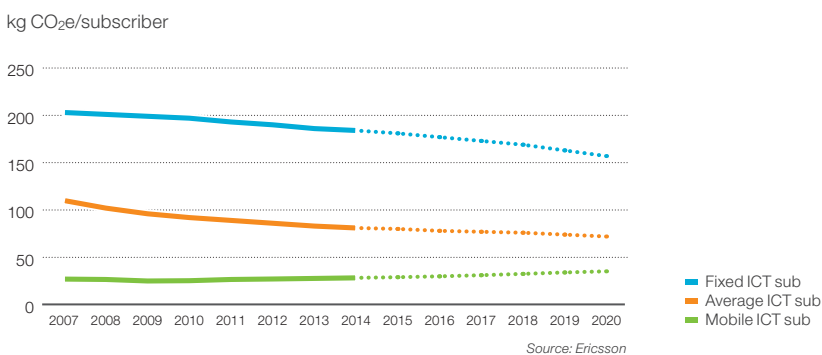
Source: Ericsson

Graph 2: Annual GHG emissions for different average ICT subscriptions in Sweden 2010 – global electricity mix in the use stage

kg CO_2e

Use (electricity consumption)
Use (other energy)
Manufacturing (embodied)
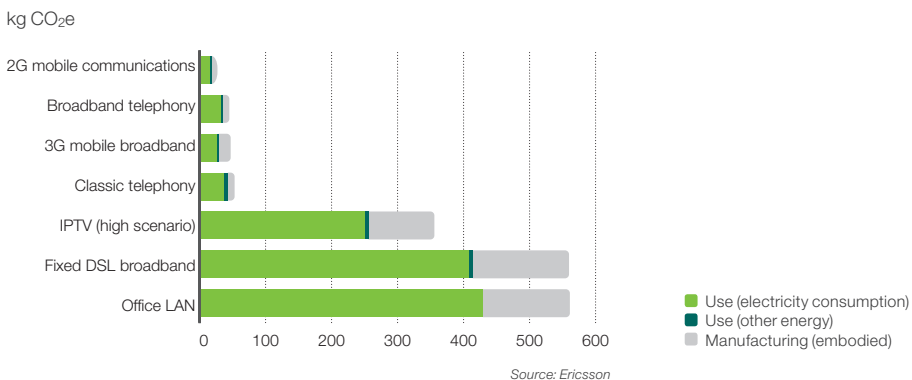
Source: Ericsson

RETHINKING ENERGY PERFORMANCE

With our strategy to lead our sector in network energy performance, Ericsson has taken a systematic approach for energy performance that will reduce energy consumption while increasing app coverage.

Energy efficiency has become a key priority for the telecom industry as mobile network operators are increasingly challenged by the need to build energy-efficient networks as well as deliver high performance. Reducing energy consumption makes good business sense, satisfies regulatory needs and contributes to reducing environmental impact.

Generation shift brings efficiency

The new Ericsson Radio System is a modular approach to build and expand mobile networks. It represents a generational shift. The energy-efficient Ericsson Radio System is designed to handle the mobile data traffic increases expected by 2020. The system is half the size and weight and delivers twice the capacity. It enables operators to capitalize on growing mobile broadband demand from consumers, businesses and the Internet of Things to build their business as they evolve to 5th generation mobile systems.

A holistic approach

In a mobile network, the radio access network (RAN) is the largest consumer of energy, and is therefore where most energy-efficiency improvements are focused. However, addressing the total cost of energy of a network covers more than reducing energy consumption of radio base stations. It requires a holistic approach to address all aspects, from nodes to sites to network.

Address the installed base

Improving radio network energy performance involves more than replacing old equipment with new, more energy-efficient hardware. Much can be gained, for example, by deploying energy-saving software features to the installed base. Whenever new radio technology is added, existing generations remain. Solutions must therefore address all generations of technology;

> From always on to always available, there are many RAN-specific energy-saving features for 2G, 3G, 4G, giving operator the potential to reduce energy consumption in existing radio equipment up to 25%. For example BCCH Power Saving (GSM), see Turkcell case; Traffic Aware Power Saving (WCDMA) and Micro Sleep Tx (LTE).

> Prolong capacity life-cycle. An energy-efficient network can deliver needed capacity for a long time based on flexible capacity growth rather than hard-ware upgrades. Network capacity can be increased by staying current with the latest software release, without adding new hardware.

> New hardware platforms that support multi-standard, multi-band are more energy efficient and future proof. The radio unit from Ericsson Radio System provides a 50% improvement in energy efficiency. Ericsson Radio System was launched during 2015.

Build with precision

From our global installed base Ericsson offers insights into traffic and network reality, enabling operators to understand how traffic is distributed. Over-dimensioning does not always result in performance gains. Instead, it more often leads to increased OPEX, higher energy consumption, and inflated capital expenditures – all of which impact the total cost of ownership. In one trial, energy consumption of a deployment with traditional, large-capacity radio base stations was compared with that of a more precisely matched mix of solutions. Results showed that with this approach, it is possible to reduce energy consumption by 40%.

The different site capacity demands need to be matched with different variants of baseband and radio products, optimized for each of the desired traffic segments.

Ericsson's unique Psi Coverage is one solution that has enabled accelerated

EFFICIENCY GAIN FOR TURKCELL

Turkcell, the leading mobile operator in Turkey, required a more efficient way to operate its network and to build in more capacity for increased mobile traffic while keeping energy costs under control. By deploying Ericsson's energy-efficiency software feature BCCH (Broadcast Control Channel) Power Saving, Turkcell managed to reduce energy consumption in GSM networks and improve network performance. The solution, designed to save power in GSM networks, regulates the power level of time slots in the BCCH carrier while maintaining network quality. The feature aims to save energy by down-regulating the time slots (except for TS0) at BCCH TRX (transceiver). Turkcell has deployed this feature for the entire network. It has not only reduced power consumption but improved network performance. The monthly average energy consumption per site decreased by 86.8 kWh, which resulted in a 6% reduction of total energy consumption yearly for Turkcell.

deployment of 3G coverage and improved user experience, while providing significant energy and cost savings compared to traditional solutions. Successfully deployed in supporting 3G coverage globally, the Psi Coverage solution will during 2015 also be launched for 4G networks. (See Croatia case below.)

Optimize on site

One way in which we help operators solve challenges on-site is through Remote Site Management. This assists operators to control site expansion by adding intelligence that manages energy consumption within limits. It provides continuous information of energy source which helps control and compare energy consumption at all sites. The remote Hybrid Control Management ensures an optimized usage of diesel generators, batteries, solar power, wind turbine, fuel cells, etc. The battery life is also prolonged through battery management which helps avoide unnecessary replacements.

Reduced energy despite demand

By implementing a systematic approach to energy performance, it is possible for network operators to cover the forecasted eight-fold growth in mobile traffic between 2014 and 2020 with reduced energy consumption.

Leveraging small cells deployment

In some environments – such as certain stadiums, busy streets and multi-story office blocks, small cells provide a complement to macro cells in meeting user demands. Indoor environments pose special challenges for service providers. When small cells are implemented correctly, it has the potential to both improve performance and to reduce energy consumption.

Small-cell designs can enhance user performance while reducing total network energy consumption compared with a pure macro network. When small-cell nodes are added to a highly loaded macro network, energy consumption typically increases, as more equipment is added to the network, but capacity also increases. If placed correctly, small nodes can provide users with better performance than the macro node. This means that higher data rates are possible with less transmission energy.

Global services reach

We work with our customers to determine the optimal approach to maximize energy performance and support future traffic growth. This includes an assessment phase: to understand current energy consumption, set tailored KPIs, predict future

FOR REMOTE AREAS, EXPLORING NEW APPROACHES

In a project funded by the European Union (EU), Ericsson and partners are exploring how fuel cell technology can power off-grid telecom stations. With growing penetration of mobile services, the number of remotely located radio base stations (RBS) is on the rise. Unable to connect to the electricity grid, they rely instead on batteries and diesel generators that can generate substantial carbon emissions. FCpoweredRBS, led by Ericsson, is a large-scale demonstration activity in collaboration with the EU Joint Research Centre, and includes mobile operator Telecom Italia and 3 Italia. The project looks at the viability of fuel cells and other types of alternative energy supply as an alternative to standard power sources. A fuel cell is a device that generates electricity by a chemical reaction.

Integrated solution

In ongoing field trials, the power supply of several radio base stations is replaced with a new energy supply based on a solution that integrates different components (fuel cells, photovoltaics and batteries). The goal is increased energy efficiency and improved total cost of ownership. Results show that the amount of unattended hours can be increased, thanks to efficient use of the alternative energy sources and the storage potential of hydrogen. This means lower operational costs and positive impact on the environment for the operator.

Alternative energy sources are selected based on local conditions such as weather conditions, time of day, battery load, and hydrogen. Electrolyzers contribute to generating hydrogen locally, with the aim of making the radio site energy-independent in the longer term.

Final project results are expected during 2015.

PSI COVERAGE SOLUTION DEPLOYED ON CROATIA'S COAST

Mobile operator Vipnet partnered with Ericsson to expand 3G coverage on Croatia's coastline. Vipnet required a low-power solution for their solar-powered sites. Tested on 20 sites, it was confirmed that the Psi Coverage solution offers up to 50% lower power consumption compared to alternatives, without compromising network coverage and performance. During 2014 the Psi Coverage solution was deployed in 16 networks across 14 countries and included customers such as Robi-Bangladesh, Millicom Ghana, Turkcell Turkey and Telin East Timor.

trends and propose realistic actions to reduce network energy consumption.

To further optimize performance, together with the operator, we look at different ways to deploy, expand, restructure, upgrade, or migrate communications networks. We also explore implementing energy-savings software and other features. Such solutions apply to building a new network, or expanding an existing one.

We also offer the option to operate network and energy-related infrastructure on behalf of operators. Our aim is to help operators reduce energy consumption, maximize efficiency, and improve network availability.

Currently, about 240 million subscribers are served by networks for which Ericsson provides Energy Management, as part of Managed Services contracts. The service includes around-the-clock, real-time monitoring of infrastructure and remote and on-site problem resolution for all, whether or not they are connected to utility grids, along with ongoing energy-related optimization to ensure energy is consumed in the most efficient manner.

Partnering for greater reach
As a complement to Ericsson's end-to-end service portfolio Ericsson has partnered with the GSMA, the mobile industry association, on its Mobile Energy Efficiency Optimization Service. The service undertakes site audits and equipment trials, analyses the costs and benefits of specific actions to reduce energy and emissions, and then works to implement the most attractive solutions. This follows on from the GSMA Mobile Energy Efficiency Benchmarking Service in which more than 40 mobile network operators have participated, accounting for more than 200 networks and over half of global mobile subscribers.

Virtualized data center
Data centers are important assets to deliver IT services, both for internal and for external use for most enterprises, including operators. They are often used to realize a cloud environment where many applications and users can share resources in terms of computing, storage and network. Sharing resources between a number of applications and users enables a better utilization, resulting in less overall need of energy-consuming hardware. For example, some applications are used more during the day; others more often at night. Cloud technology is therefore positive for energy efficiency. An example from the telecom world with a European mobile operator shows that 60% energy reduction was achieved when six locations for support solutions were consolidated into two, while still delivering the same capabilities.

Ericsson's data center offering has a number of capabilities contributing to more energy-efficient solutions. By using the latest generation of processors, it is possible to increase system capacity by 20 to 80% without any increase in power consumption. One example of an Ericsson solution enabling virtualization and cloud deployments is the Ericsson Blade Server Platform (BSP) 8000, a family of blade servers (electronic circuit boards containing microprocessors and memory) used in telecom nodes. By introducing Blade Server Platform 8100 the power consumption will improve, compared to earlier hardware configurations, as 20 to 200% more subscribers can be handled with the same power consumption.

5G energy performance
Ericsson is playing a leading role in development of next-generation 5G mobile communication systems, where key requirements and early concept development are now underway. A new generation of mobile communications technology is a unique possibility to introduce new requirements and related capabilities. Energy performance, aiming at reduced network energy consumption, is one of the new key requirements for 5G.

First-round 5G research projects include the EU-funded METIS [1] and 5GrEEn [2]. Standardization-related activities are expected to start in 3GPP [3] during 2016.

Energy performance in previous generations such as 2G, 3G, and 4G is focused on moving from "always-on" to "always-available" network operation. 5G offers the potential to take the next step to "always-optimized." Networks today, and in the future, will have to cope not only with high traffic loads and coverage demands but also with large traffic variations and low average load. This calls for sufficient sleep mode possibilities to optimize energy performance. Key means to achieve this are advanced antenna techniques and ultra-lean transmission [4].

RETHINK ENERGY PERFORMANCE

Nodes   Sites   Networks   App coverage   Energy
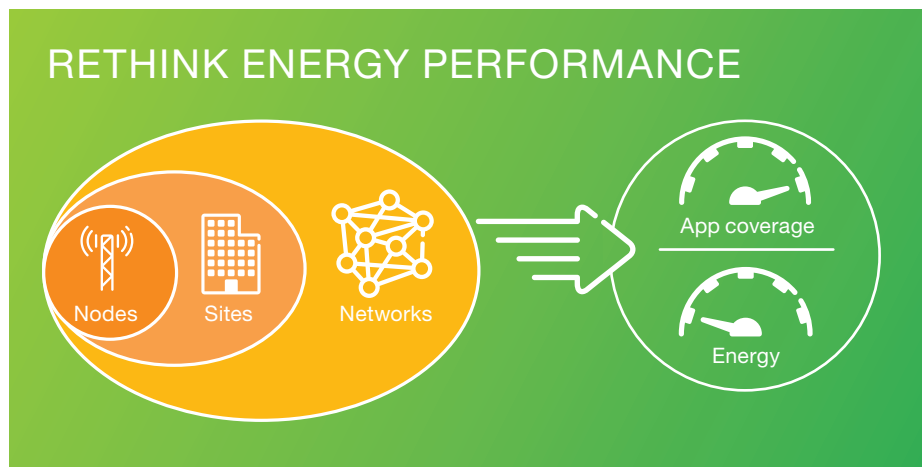
What is 5G?
Among other things, 5G includes:
> 1000x higher mobile data volume
> 10 to 100x more connected devices
> 10 to 100x higher use data rates

Source: METIS

[1] METIS - Mobile and wireless communications Enablers for the Twenty-twenty Information Society. EU-funded research project 2012–2015.
[2] 5GrEEn – Towards Green 5G Mobile Networks. EIT ICT Labs funded research project 2013–2014.
[3] The 3rd Generation Partnership Project (3GPP) unites seven telecommunications standard development organizations.
[4] 5G Energy Performance – Key Technologies and Design Principles.

HANDLING E-WASTE RESPONSIBLY

Operators Airtel and MTN have partnered with Ericsson to help with the disposal and recycling of electronic waste in Africa.

We provide product take-back services to our customers globally as part of our Extended Producer Responsibility.

According to UN StEP (Solving the global E-Waste Problem), by 2017 global e-waste will reach 65.4 million tonnes, one-third higher than in 2012.

The European Union (EU) Waste from Electrical and Electronic Equipment (WEEE) Directive has been in force since 2005. However, we apply our proactive approach globally to address the risks associated with WEEE. These risks include improper handling and treatment, transport, emissions, and human health risks. We conduct product take-back with recycling partners that meet our requirements, and are certified according to internationally recognized environmental and recycling standards.

World-wide free of charge
Our program is available free of charge to our customers globally, not only in markets required by law. For example, in 2014, customers Airtel Ghana and MTN Africa both took advantage of the program. Ghana has one of the largest e-waste dump sites in the world. Airtel has partnered with Ericsson to help with the disposal and recycling of electronic waste in Ghana, including telecom equipment from their networks at end of product life.

We continue working closely with our customers to ensure their e-waste is handled and treated in an environmentally sound manner. Ericsson's ecology management program has, since its start in 2005, taken back e-waste from more than 107 countries.

Increased take-back
When we take back our products, we recycle more than 98% of the materials. We continue to expand our ecology management program involving more countries and increasing take-back volumes for our customers. Product take-back and recycling levels have increased significantly, from 9,800 tonnes in 2013 to 15,900 tonnes in 2014.

The key material streams Ericsson deals with are ferrous metals, precious metals and plastics. The majority of these materials eventually re-enter the commodities market where they are sold to industry as raw materials.

Revised target
Collection levels were below the 2014 target commitment level of 17% take-back, especially in non-legislated (i.e. non-EU) markets. We believe that this target was overly optimistic and have therefore reduced the target for 2015 to a global commitment average of 9%. We are also in the process of revising our requirements concerning our ways of working and our internal processes in this area. Company-wide training is also being prepared. We believe these changes will have a positive impact on achieving the 2015 target and enable us to substantially increase the target from 2016 and onwards.

Further, in order to address these challenges, we have initiated a campaign to raise awareness and engagement among our sales staff, as well as customers. For example, Ericsson is working jointly with customer MTN Benin in an e-waste project to take back telecom e-waste as well as mobile phones, personal computers and other household e-waste.

Take back process – treated

%

- Recycled
- Reuse
- Energy
- Landfill
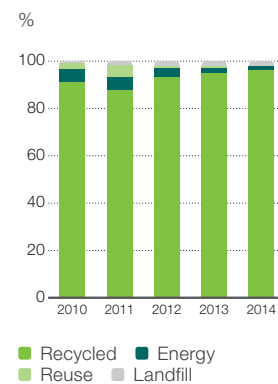
Source: Ericsson

IMPROVING PERFORMANCE OF OUR OWN OPERATIONS

Our aim is to reduce our carbon footprint from direct operations while improving productivity and achieving a cost-benefit balance.

Improving the sustainability performance of our own operations comprises four focus areas:
> reducing energy use in facilities (offices, production sites, data centers and test labs) and prioritizing purchase of green certified energy;
> shifting to low-carbon product transport, from air freight to surface shipping;
> reducing business travel by increasing use of video-conferencing and other collaborative work tools; and
> reducing fuel used in fleet vehicles.

In 2012 Ericsson set an objective to maintain absolute CO_2e emissions from business travel, product transport and facilities at 2011 levels up to 2017. This equates to a reduction of 30% CO_2e per employee. For 2014, the reduction was 10% CO_2e per employee.

Facility energy use
To reduce our facilities' energy use, we work to improve the efficiency usage of our buildings by enhancing workplace functionality; shift to more energy-efficient buildings and implement Leadership in Energy and Environmental Design (LEED) green building requirements, level Gold, or the equivalent in other green building standards.

During 2014 the green building-rated area was maintained at around 10%; however, the green electric power increased in 2014 to 39% compared to 35% at year-end 2013. With an improved reporting process in 2014, close to 80% of our real estate portfolio is now covered in an energy assessment. More flexible ways of working, including "free seating," teamwork work-spaces and greater use of video-conferencing contributed to a smaller carbon footprint. In 2014, facilities' energy usage was around 230 Ktonnes CO_2e. In Sweden, we have had 100% green-certified electricity since 2008.

Product transportation
In 2014, we continued our work of shifting from air to surface transport to reduce CO_2 emissions. Product volumes transported were comparable to 2013 which shows that we have reduced the transport distances, mainly within air transport. We have achieved a reduction of 25 kTonnes CO_2e in absolute terms.

Business travel
In 2014, business travel emissions were up around 8% per employee. However, emissions from business travel declined by 10% per employee, compared to the 2011 baseline. Video conferencing tools such as Ericsson Visual Communication are promoted as a substitute to travel.

Fleet vehicles
Growth in Managed Services puts focus on our vehicle fleet. We are targeting to reduce CO_2e/km in our vehicle fleet by purchasing more efficient vehicles, implementing telematics, and trialing alternative renewable fuels. A telematics pilot rolled out to more than 1,500 vehicles allowed Ericsson to monitor attributes of vehicle operations, performance, location and velocity. This has resulted in over 5% increased fuel economy.

Ericsson own activities Carbon footprint intensity target

Tonnes CO_2e/Employee / Mtonnes

- Carbon footprint intensity Tonnes CO_2e/Employee
- Carbon footprint absolute emission, Mtonnes

Source: Ericsson

GLOBAL ICT CENTERS SAVE ENERGY

In 2014, Ericson opened its first Global ICT Center, located in Linköping, Sweden. This is the first of three high-tech, Global ICT Centers, which will house the company's complete portfolio. Using the latest cloud technology, the center enables Ericsson's 25,000 R&D engineers to collaborate beyond borders more easily and efficiently, bringing innovation faster to market.

Two will be located in Sweden; one in Quebec, Canada. Currently, Ericsson has test labs and data centers located in various countries around the world. The strategy is to consolidate most of these within the new Global ICT Centers, which are placed in areas with access to renewable energy and a reliable power grid. The centers will also significantly reduce our carbon footprint by using green certified power according to the Swedish Green Energy system "Good Environmental Choice."

The three ICT Centers combined will be up to 120,000 square meters – approximately the size of 14 football fields. They will feature leading-edge design, with modular, scalable and efficient use of resources and space adaptable to business needs. Ericsson estimates that the combined architecture, design and location solution will reduce energy consumption up to 40% – another step towards Ericsson's vision of a more sustainable future.

FACTS AND FIGURES

Consumption

Energy consumption (facilities energy use) (GWh)

	2014	2013	2012	2011	2010
Electricity	761	845	808	830	650
District heating	36	47	56	60	93
Other energy	89	96	121	130	100

Business travel (Mpkm)

	2014	2013	2012	2011	2010
Air travel	1,392	1,320	1,200	1,400	1,250
Road travel	113	77	74	129	90
Fleet vehicles	411	390	339	–	–
Commuting	438	430	415	375	300

Product transportation (Mtonnekm)

	2014	2013	2012	2011	2010
Air transport	274	294	452	481	346
Road transport	280	264	372	360	257
Sea transport	276	309	338	99	58
Rail transport	6	5	53	53	–

Production and office waste (Tonne)

	2014	2013	2012	2011	2010
Total	18,100	16,100	29,512	31,045	23,863
Recycling	8,180	6,025	13,500	16,300	11,100
Energy	5,080	5,215	9,900	8,400	6,600
Landfill	4,580	4,510	5,400	5,400	5,100
Hazardous	49	150	712	945	1,063

Product Take-Back (T-B) and End-of-Life treatment (Tonne)

	2014	2013	2012	2011	2010
e-Waste treated	15,862	9,872	7,748[a]	5,567	5,672
Reuse	0	0	1	5	2
Recycling	96	95	93	88	91
Energy	2	2	4	5	6
Landfill	2	2	2	2	1

[a] Data revised in 2014.

Ericsson follows ISO 14040 and ISO 14044 standards when performing Life-cycle Assessments.

GWh: Gigawatt hours = one billion (1,000,000,000) watt hours
Mpkm: Million personal kilometer = Million distance traveled
Mtonnekm: Million *tonne* kilometer
kTonne: Thousand tonne
Mtonne: Million tonne
GHG: Greenhouse Gas

Source: Ericsson

Emissions (CO_2e)

Ericsson own activities (direct and indirect) (kTonne)

	2014	2013	2012	2011	2010
Total	766	829	909	881	647

Direct (kTonne)

	2014	2013	2012	2011	2010
Total	298	357	355	260	204
Facilities energy use (S1)	20	20	30	32	30
Fleet vehicles (S1)	68	66	62	–	–
Facilities energy use (S2)	210	270	263	228	174

Indirect (kTonne)

	2014	2013	2012	2011	2010
Total	470	472	554	621	443
Business travel (S3)	193	172	159	189	164
Product transportation (S3)	204	229	326	370	229
Commuting (S3)	73	71	69	62	50

Other indirect (Mtonne)

	2014	2013	2012	2011	2010
Total	35	28	26	24	18
Products in operation (S3) – future (life time)	35	28	26	24	18

S1, S2 and S3 stand for Scope 1, Scope 2 and Scope 3 according to GHG protocol.

Source: Ericsson

Emissions factors used in the consolidation (kTonne)

Aspect	Emission factor	Source
Electricity	Country specific	International Energy Agency
Electricity, Sweden	0.0007 kgCO$_2$/kWh	Sites in Sweden uses "Good environmental choice" from Telge Kraft.
Green electricity	0.0010 kgCO$_2$/kWh	
District heating, Other regions	0.22 kgCO$_2$/kWh	Chalmers Industrial Technology Average. Site specific when available.
District heating, Sweden	0.10 kg CO$_2$/kWh	Chalmers Industrial Technology/ "Boverket" (Swedish Building Adm.)
Fuels	GHG protocol (for each typical fuel)	
Air travel	0.12 kgCO$_2$/pkm	GHG protocol (average for long/ medium air travel). DEFRA GHG indicators for long haul air travel.
Car travel	0.16 kgCO$_2$/pkm	"Vägverket" (average car in the EU) (Vägverket = Swedish Road Adm.)
Air transports	0.65 kgCO$_2$/tonnekm	Based on an investigation of air transport by Ericsson.
Road transports	0.08 kgCO$_2$/tonnekm	GHG protocol, average Swedish road transports according to Swedish Road and Transport Research Institute.
Sea transports	0.017 kgCO$_2$/tonnekm	Average of Maersk Line and Ericsson typical TEU, TEU = Twenty foot container eq. unit.
Rail transports	0.03 kgCO$_2$/tonnekm	2012 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting
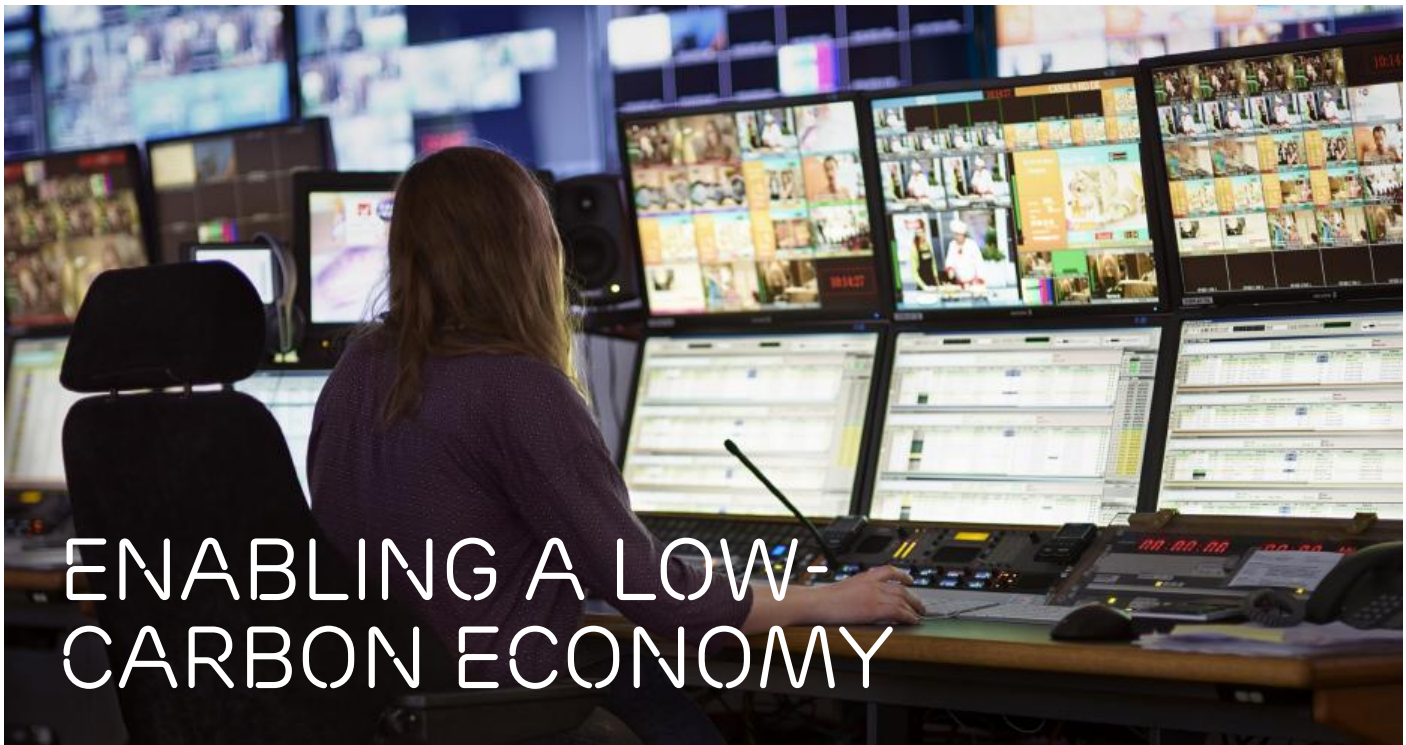
ENABLING A LOW-CARBON ECONOMY

The Networked Society is creating new opportunities for ICT-enabled solutions to accelerate the path towards a low-carbon economy and sustainable cities.

In an unprecedented shift for society, Ericsson predicts that by 2018, 3G and LTE/4G will represent over 50% of all active machine-to-machine subscriptions. And 4G device penetration will soar from 3% today to 20% to 30% in 2020.

Providing innovative solutions
Ericsson solutions contribute to the low-carbon economy. For utilities, our solutions include smart metering and smart grid communications, enabling higher levels of renewable electricity and reduced household energy consumption.

Within transport, connected vehicles, ships or public transport contribute to safer, more efficient traffic flows, among other benefits. Real-time data enhances disaster and emergency management and enables quicker response.

⊙ Cities at epicenter
Nowhere are these ICT-enabled solutions more evident than in the world's fast-growing cities. But far more can be done to capture the opportunities enabled by connectivity and tap into new levels of efficiency and innovation in support of sustainble development.

By 2050, 7 out of 10 people will live in cities. Already today cities account for over 70% of global greenhouse gas emissions and 60–80% of global energy consumption, according to UN-Habitat.

⊙ Citizen field engineer concept
In 2014 Ericsson and UN-Habitat conducted a social impact assessment of a new approach to address water quality, availability and affordability in Nairobi, Kenya. The concept, Citizen Field Engineer, developed by Ericsson, builds on resources and skills in the local community to enable and improve service delivery and infrastructure maintenance in informal settlements where city authorities often have a weak presence. Under the concept, sensors and connected infrastructure are used to monitor water supply and water quality and community residents can become citizen field engineers to performing maintenance tasks on the physical infrastructure and receive mobile payment for their work. The water service provider can use sensor data to identify and locate point sources of pollution. Looking at how this theoretical concept would apply in Kibera, Nairobi's largest informal settlement, it was found to have potential to improve water availability and quality, water governance as well as improve gender equality.

Smart parking and lighting
In Águas de São Pedro Digital Cities, Brazil's first digital city, we are working with mobile operator Telefonica to enable digital ser-

vices and an integrated urban network. For example, CO_2 emissions can be reduced via intelligent sensors and controls that tailor energy consumption more precisely to demand. Ericsson is providing smart lighting and smart parking solutions and system integration for the project.

Smarter public transport in Chile
To optimize the public transport system in Santiago, Chile, Ericsson is conducting a pilot with mobile operator Entel to provide location-based services technology that will allow Subtrans, Chile's transport department, to monitor the movement of Entel users in the Transantiago bus and metro system. The data will be used by Subtrans to manage the system's resources more efficiently and quickly detect areas for improvement. The data is generated by the mere use of Entel's network while moving through the city; in no circumstances are any subscribers individualized.

Measuring ICT's impact
More research will help identify indicators measuring ICT's societal impacts. As a member of the ITU Technical Focus Group, "Smart and Sustainable Cities," we are helping to develop a methodology to assess ICT's environmental impact in cities. Standardized frameworks can support integration of ICT services in smart cities and measure outcomes.

HOT CONSUMER TRENDS

Sustainability is increasingly top of mind for consumers in use of technology, according to Ericsson ConsumerLab's "10 hot consumer trends for 2015."

> **Helpful homes.** Consumers show high interest in having home sensors that alert them to water and electricity issues, or when family members come and go.

> **Smart citizens.** The idea of smart cities is intriguing – but a lot of that intelligence may actually come about as a side effect of the changing everyday behaviors of citizens. As the internet makes us more informed, we are in turn making better decisions. Consumers believe traffic volume maps, energy use comparison apps and real-time water quality checkers will be mainstream by 2020.

> **The sharing economy.** As the internet enables us to efficiently share information with unprecedented ease, the idea of a sharing economy is potentially huge. Half of all smartphone owners are open to the idea of renting out their spare rooms, personal household appliances and leisure equipment as it is convenient and can save money.

> **My information.** Although sharing information when there is a benefit is fine, smartphone owners see no point in making all of their actions open to anyone. Some 47% of smartphone owners would like to be able to pay electronically without an automatic transfer of personal information. Some 56% of smartphone owners would like all internet communication to be encrypted.

The 2014 Networked Society City Index

The index ranks 40 cities and measures their ICT maturity in terms of leverage from ICT investments in economic, social and environmental development: the "triple bottom line" effect.

One of the key findings from the report is the fact that cities with a low ICT maturity tend to be improving their ICT maturity faster than high-performing cities, indicating a catch-up effect. Many cities also have the opportunity to leapfrog others by avoiding expensive and increasingly obsolete physical infrastructure and instead moving straight into innovative applications using advanced mobile technology.

SMART CITIZENS

A 2014 online survey by Ericsson ConsumerLab found that using the internet to offer smarter, more informed choices could alleviate urban concerns around health, communication and traffic. Smartphone users aged between 15 and 69 were surveyed from Beijing, Delhi, London, New York, Paris, Rome, São Paulo, Stockholm and Tokyo representing 61 million citizens. Among the key findings:

> 76% want sensors in public spaces that let them know what areas are crowded and best avoided

> 70% want to compare energy use with neighbors to optimize behavior

> 66% want real-time control of drinking water quality

> 74% want interactive street signs and bike/car sharing.
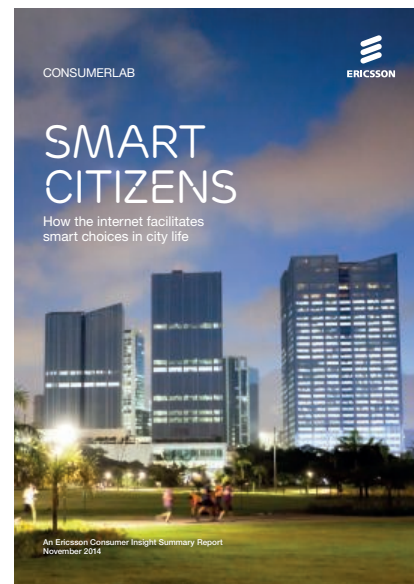
>70% of smartphone owners believe that

TRAFFIC VOLUME MAPS

ENERGY USE COMPARISON APPS

WATER QUALITY CHECKERS

will be mainstream by 2020.

Source: Ericsson ConsumerLab report 10 hot consumer trends 2015

INTELLIGENCE IN THE GRID

For the utilities industry, connectivity offers a chance to explore new business models that enable greater use of renewable energy and help consumers cut energy use.

In a drive for efficiency, the energy industry is increasingly looking to connectivity to address challenges and opportunities around sustainable development throughout its value chain, from extraction of resources all the way through to consumption of electricity in homes and buildings. In many countries, utilities are keen to manage energy load and boost network efficiency to avoid having to invest in additional power generation. They also want to empower consumers to better manage consumption.

Intelligent grid
With smart grids and smart meters, utilities can monitor their assets more intelligently, enable consumers to better manage electricity use, and greatly reduce the complexity and cost of integrating use of renewable energy.

Many utilities are making substantial investments in ICT – both in terms of technology and new business models ranging from smart grids and metering deployments to full-scale IT transformation projects. It is all part of a wider shift towards distributed, intermittent renewable energy generation, greater system energy efficiency, consumer involvement, peak demand reduction and development of electrical vehicles.

Ericsson has been a solutions provider for the utilities industry for several years.

To date, Ericsson has provided smart metering and smart communications systems for utility customers in eight countries across Europe (France, Italy, Estonia, Sweden, Spain, Ireland, Finland and the UK), Canada and Australia. Significant utility contract announcements in 2014 include Landis & Gyr and Con Edison, with earlier announced contracts ongoing with E.ON, Elektrilevi, Acea and Hydro Quebec. The business represents a mix of managed services, smart metering as a service and smart meter deployment projects.

WHAT IS A SMART GRID?

Smart grids use ICT to gather and act on information about the behavior of suppliers and consumers using the grid. This information can improve the efficiency, reliability and sustainability of electricity production and consumption. Utilities are rapidly introducing remote control and automation technologies that transform delivery systems into smart grids and customers' meters into smart meters. This requires communication network solutions, as well as operational and business management support solutions.

BRINGING SMART METERS TO ESTONIA

Two years into an eight-year contract with Estonian electricity supplier Elektrilevi, more than half of the 630,000 total smart meters planned for Estonia have been installed. The project includes installation of a central automatic meter reading system (AMR) for data gathering and integration into Elektrilevi systems, as well as AMR managed services during the rollout period.

Customers receive smart meters that can be read remotely, allowing them to save energy and money by adjusting energy purchases and consumption based on daily electricity prices. Smart meter customers also get more accurate and timely bills. In future, smart meters may help the utility find and eliminate power outages more quickly.

Elektrilevi is using the smart meters to suit customers' individual needs, since Elektrilevi receives data from every connection point. Other benefits to Elektrilevi include lower costs and risk, improved network operation and maintenance and regulatory compliance in both the EU and Estonia.

Ericsson integrated the meter and data management operations support systems and will operate the smart metering network on Elektrilevi's behalf. After 2016, Ericsson will provide maintenance for three years and Elektrilevi has the option of extending the maintenance contract until 2025.
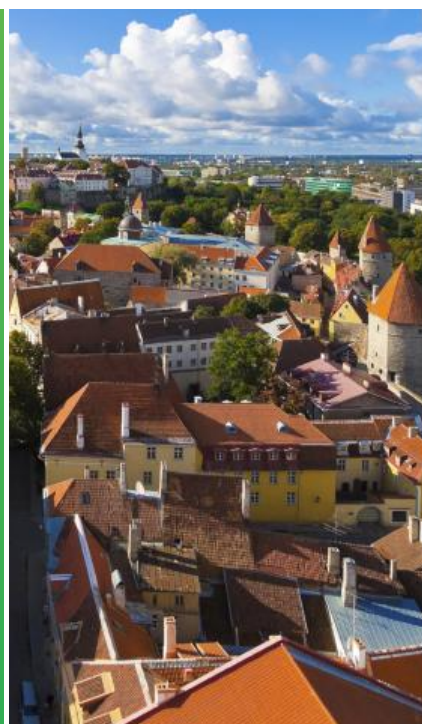
TRANSPORT SHIFTS GEARS

With continued global growth projected for transportation and mobility, tackling associated environmental challenges and driving efficiency gains, reduced emissions and improved safety is vital.

Environmental and climate change concerns combined with pressures on reliable energy supply are causing the transport sector to shift gears towards more sustainable mobility solutions.

We offer a number of solutions to contribute to this new direction. For the automotive industry, this includes enhanced driving safety supported by new telematics and data analytics, along with infrastructure for electric vehicle charging.

Exchanging information, traffic and road data can help drivers make better choices and avoid dangerous situations. Cooperative driving provides real-time information about driver intentions so they can avoid risks when changing lanes. Additionally, our solutions enable active support in critical situations – automated systems can help avoid imminent collisions.

Shared hazard information and intelligent traffic management help authorities improve safety.

Partnering with automakers
We are working with a number of companies in the automotive and ICT sectors, including Volvo Cars, to realize these possibilities.

Connected bike helmet
In a ground-breaking collaboration, Ericsson, Volvo, and protective gravity sports gear manufacturer POC presented proof of concept in 2014 for an innovative safety technology connecting drivers and cyclists for the first time. The cloud-based technology connects cyclists through a connected helmet with car drivers. By sharing and comparing each other's positions the two road users can get alerts of close encounters to avoid possible collisions.

Together for safer roads
According to the World Health Organisation, road traffic crashes are the 8th leading cause of death worldwide. We are one of ten founding members of Together for Safer Roads, launched at the UN in 2014 to improve road safety, reduce road traffic collisions and help the UN fulfil its goal of halving road deaths during the Decade of Action for Road Safety. A primary goal of the coalition is to foster cross-sector collaboration to identify and scale best practices.

Smarter shipping
In the shipping industry, our solutions give companies new ways to cut fuel costs and revolutionize cargo management with less waste of perishable goods.

The intelligence enabled by ICT provides the insight and solutions for fleet operators and shipping companies to reap substantial operational efficiency gains. Speed and position monitoring of planned routes are done efficiently, leading to potential fuel savings.

MOBILITY AT SEA IMPROVES EFFICIENCY

Maersk Line, the world's largest ocean carrier, was looking for a system that could monitor the reefer containers onboard. Ericsson provided a GSM communication network on Maersk's vessels as well as internet for its fleet. The solution combines mobile and satellite technology with global reach in professional managed services.

For Maersk, benefits of the solution include:
> The ability to see the position, speed and direction of the vessels
> Transfer of data from refrigerated containers to a back-end system.
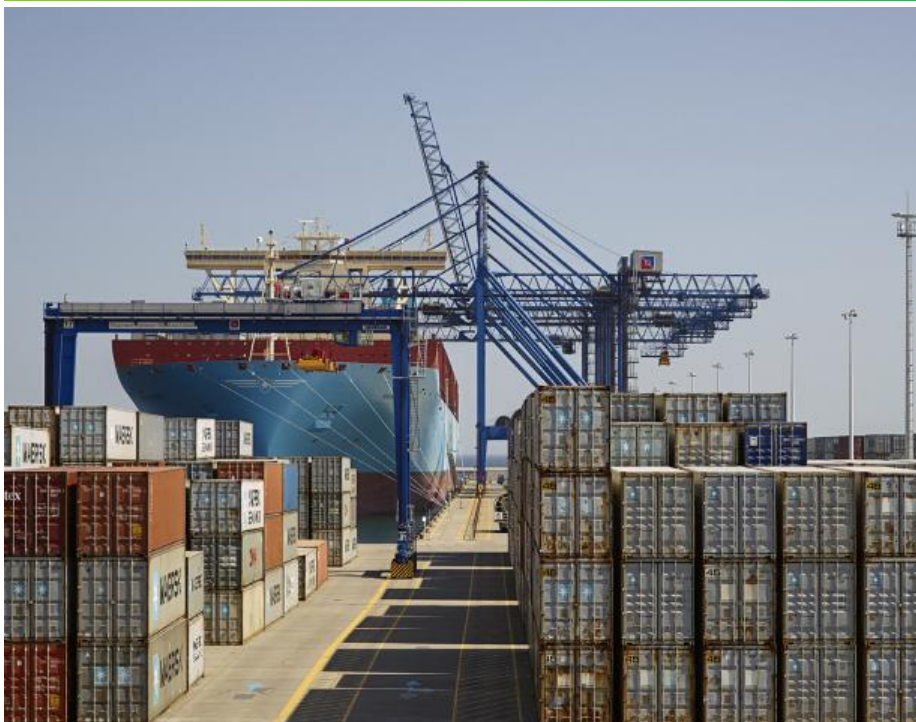
COMMUNICATION
FOR ALL

CONNECTING THE UNCONNECTED

ICT is increasingly recognized as an essential means of boosting social and economic development. We need to scale for impact in order to make the full range of possibilities in the Networked Society affordable and accessible to all.

From boosting livelihoods and promoting financial inclusion and gender equality to improved access to health, education, government services and more, ICT is an essential part of every aspect of our lives. It also helps advance equality, democracy, governance and freedom of expression.

Today those benefits are available to more people than ever before with the rapid growth of mobile communications.

Smartphones are becoming increasingly affordable. This means people in regions with low levels of internet penetration, such as sub-Saharan Africa, will be able to take advantage of full connectivity for the first time via their smartphones.

Connecting the unconnected
Despite these positive trends, an estimated 2.5 billion people remain unconnected to mobile devices, and 4.4 billion of the world population still do not have access to internet. In a business as usual scenario, 1.7 billion will still be unconnected to mobile devices in 2020. This digital divide is more prevalent in rural areas and affects the least-developed countries and marginalized populations disproportionately.

In connecting the unconnected, there are huge opportunities for business, and society, but this transformation will not happen on its own. Through use of our technology, we combine mobility, broadband and cloud services to improve access to healthcare, education and livelihoods around the world. If affordable and fully accessible, the internet extends opportunities to all, allowing everyone to benefit from the digital age on more equal terms, which leads to positive impacts for business, people and society.

Greater efforts are needed by industry and governments to close this gap as market forces are not sufficient in the near term in order to address the three main barriers to progress: infrastructure, affordability and usage.

While strong economic growth in the developing world has helped lift millions out of poverty, global population growth, modern lifestyles and consumption are now stretching the limits of the planet's resources. ICT has radically transformed communication and daily life, opening up new possibilities for helping to put the world on a more sustainable path.

Making a difference
We apply our innovation and technology to develop solutions in response to global challenges; the use of M-Commerce as an innovative business platform to address financial inclusion is just one example.

In our belief that technology is a force for good, we are also committed to making a contribution, in partnership with others, to address the many humanitarian crises the world faces, from refugees to health and education to disaster relief.

> 85% of the growth in 3G and 4G connectivity will be in Asia Pacific, the Middle East and Africa."

MEASURING OUR IMPACT

In 2013, Ericsson set an objective to positively impact 2.5 million people directly through our Technology for Good™ initiatives by 2016. In 2014, we exceeded that goal, positively impacting over 4 million people. This has inspired us to revise our objective to 5.5 million people positively impacted by 2016.

While often difficult to establish exact causality between ICT and a specific outcome, we have a number of ongoing monitoring and evaluation activities. For the time being, we have determined that the most reliable indicator to track our progress is to measure the number of people positively impacted by our Technology for Good programs, the additional people covered by Ericsson-enabled mobile broadband networks in low-and medium-HDI (Human Development Index) countries, as defined by the UN Development Programme, and the number of people with increased access to financial services resulting from deployment of Ericsson technology and solutions.

MOBILE MONEY MEETS NEEDS OF UNBANKED

Mobile commerce is creating a new financial ecosystem to address the needs of the world's unbanked population, creating unprecedented opportunities for inclusion.

The World Bank reports that some 2.5 billion people are unbanked, the majority in emerging markets and developing countries. And yet 70% of the world has access to a mobile phone.

Studies show that broader participation in the financial system can reduce income inequality, boost job creation and directly help people better manage risks and absorb financial shocks.

Mobile financial services can also empower marginalized groups such as rural women by providing the confidentiality and convenience they require. In developing countries 37% of women have access to a bank account compared to 46% of men.

Ericsson is driving the next generation of mobile commerce development by connecting banks, operators, money transfer organizations, and payment and loan providers. This industry-leading work is creating a more flexible, transparent and open financial ecosystem that helps key stakeholders speed the launch of mobile financial services to drive financial inclusion.

◉ Partnering with Peru's ASBANC
In 2014, ASBANC, Peru's National Bank Association, selected Ericsson to design and implement its Mobile Money project, the country's largest private initiative for financial inclusion. ASBANC estimates that 2.1 million Peruvians will own and benefit from a mobile wallet by 2019.

The initiative with ASBANC is significant. In addition to the 13 major banks of Peru, bank agents and mobile operators plan to get connected to the Mobile Wallet Platform to create an m-commerce eco-system in Peru to address the financial needs of the unbanked population.

The platform will feature easy-to-use and secure next-generation mobile financial services, capable of hosting all services from different financial and commercial institutions to secure interoperability.

The Ericsson M-Commerce solution includes the development of the mobile money platform, systems integration, learning services, managed services and support.

One m-wallet, multiple uses
People will be able to use their m-wallets for banking, payments and remittances between banks, shops, employers, government institutions and customers, all carried out on a single, secure platform. Available in indigenous languages as well as Spanish, the service aims for universal inclusion and appeal. The solution is expected to be implemented in phases and available in the Peruvian market in 2015.

Ericsson's M-Commerce solutions are already deployed with mobile operator MTN in Uganda, Rwanda, Nigeria, Swaziland and Zambia. Ericsson is working with operator Millicom's Tigo platform in Senegal.

Overcoming challenges
For m-commerce to gain traction in regions with low financial inclusion, a number of factors must be addressed. These include regulation linking mobile operators and financial institutions, supportive government policy, consumer education and local system capacity.

Mobile financial services enable small-scale entrepreneurs to accept convenient mobile payments.

BRINGING 4G TO
THE PERUVIAN AMAZON

In 2014, Ericsson implemented the first rural connectivity project in Latin America to provide internet to Amazon communities with 4G/LTE technology, together with mobile operator Telefonica Peru. The aim is to further social inclusion, foster economic growth, and contribute to a better quality of life for thousands of people.

This is the first project in Latin America to use 4G technology as fixed wireless internet access in remote rural areas with difficult geography, such as that of the Amazonian jungle – going a long way in bridging the digital divide for people living in these communities.

Many socio-economic benefits
Government entities in the Peruvian Amazon, such as schools and healthcare centers, will gain internet access via 4G/LTE during 2015. With over 500,000 square kilometers, the Peruvian Amazon has some of the greatest biodiversity and largest amount of old-growth forest in the world.

Providing internet access will not only help with reducing the digital gap and fostering economic growth, but also provide people in these isolated areas the advantages connectivity can offer in terms of education, job creation and a better quality of life.

For the first time, these remote and inaccessible areas will be connected not only with the rest of Peru, but also with the whole world.

Remote rural areas in the Amazon will now benefit from internet access through mobile connectivity.

CONNECTING COMMUNITY
KIOSKS IN AFRICA

Ericsson will provide mobile solutions for Coca-Cola's EKOCENTER™.

Ericsson, The Coca-Cola Company and German start-up Solarkiosk are piloting a project to leverage the role of ICT in improving socio-economic development for rural villagers in Africa, with a focus on empowering women. Ericsson will provide mobile broadband solutions for Coca-Cola's EKOCENTER™, a modular community market that is run by local woman entrepreneurs and also provides safe water, solar power and internet access.

The kiosk will serve as a hub where free and fee-based services can be offered, ranging from education, healthcare, finance, information and entertainment. Many of these services cannot be delivered without connectivity. The ultimate goal of the pilot is to empower the local community and find commercially viable solutions that can scale.

Using solar power
Ericsson will deploy its solar-powered Managed Rural Coverage solution to provide telecom services in the rural areas where the kiosks are located. The community will enjoy 3G services that will be run using solar energy, generated through the kiosks designed and built by Solarkiosk. Ericsson's TV Anywhere service will provide news, information and entertainment and health and education capabilities. Together, the solutions make the kiosk a connected hub for the community.

Pilot in Rwanda
The first connected EKOCENTER™ will be piloted in Rwanda in 2015 with Tigo. Based on the results, there are plans to launch connected kiosks in several sites in Rwanda and other African countries.

EXTENDING THE REACH OF CONNECT TO LEARN

One of the world's most pressing global challenges is ensuring access to education, which is a fundamental human right. Despite major progress over the past decade, many young people, particularly girls in developing countries, lack access to secondary education.

👁 Society loses out, too. Countries with educated populations have better health, educational, social and economic outcomes. Connect To Learn was conceived to address some of the challenges relating to secondary education access and quality. It is a global education initiative launched in 2010 by the Earth Institute of Columbia University, Millennium Promise and Ericsson to scale up access to quality secondary education, in particular for girls, by providing scholarships and bringing ICT to schools in remote, resource-poor parts of the world, over mobile broadband. To date the initiative is launched in 21 countries and benefiting some 50,000 students.

In support of the SDGs
Initiatives such as Connect To Learn can play a key role in helping achieve future Sustainable Development Goals (SDGs). Proposed SDG 4 (4.1) sets out that "by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes." Ericsson is taking an active role promoting access to ICT and broadband in the SDG
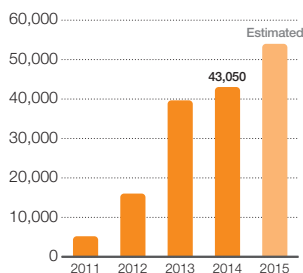
Grade nine students in Bhutan, part of a pilot e-learning project "iSchool."

process, as a member of the UN Sustainable Development Solutions Network and the Broadband Commission on Digital Development.

Scaling up girls' education in Myanmar
Ericsson and the UK Department for International Development (DFID) and partners have joined forces as part of DFID's Girls' Education Challenge to support girls' education in Myanmar (also known as Burma). It aims to improve access to the internet, delivering teacher training and enabling students to experience a 21st century education. The collaboration with the UK government and DFID is Ericsson's first public-private partnership with a government. Through the unique constellation of partners, we believe it is one meaningful way to bring scale and impact to Connect To Learn.

In Myanmar, only 54% of secondary school-aged children are enrolled in secondary school, according to the World Bank. As the population of Myanmar begins to enjoy the benefits of mobile communications, the intention is that students will not be left behind.

Connecting more than 30 schools
Leveraging Connect To Learn, the initiative will allow more than 30 secondary schools to be connected to the internet through mobile broadband, with deployment to the schools set for 2015. Professional development programs for teachers, educational content for students, and child-friendly computing solutions to improve

literacy and numeracy among females are among the aims.

Ericsson is working with UNESCO, the Earth Institute at Columbia University, Finja Five, Qualcomm Incorporated, through its Qualcomm© Wireless Reach™ initiative, and the external evaluator EduEval to deliver the program.

Up to 600 scholarships will also be provided to marginalized girls. The deployments are supported by mobile operator Myanmar Posts and Telecommunications and will benefit 11,000 students in the first two years.

Reaching remotest Bhutan
We partnered in 2014 with the Government of Bhutan, the Ministry of Education and Bhutan Telecom to roll out a pilot e-learning project "iSchool."

Based on Connect To Learn, the project aims to provide access to quality education to 250 grade nine students at six schools in remote areas of Bhutan. Ericsson is deploying videoconference and communications technology; Bhutan Telecom will provide high-speed mobile broadband. If successful, the initiative is planned to extend to some 200 schools.

Extending outreach in Sri Lanka
In Sri Lanka, a partnership between Ericsson, Mobitel and Open University of Sri Lanka brings ICT and computer literacy education to teenage girls in farming communities in Sri Lanka.

Connect To Learn
Number of students

Source: Connect To Learn

LAUNCH IN NORTHERN GHANA

Girls in Ghana take advantage of cloud-managed education through Connect To Learn.

In Ghana, Connect To Learn is being launched in the Millennium Village in the Northern Ghana SADA region with mobile operator Tigo, which will benefit over 7,000 students, in four secondary schools. This will build upon Connect To Learn's girls' scholarship program, which was launched in SADA in 2013. The launch of Connect To Learn follows Ericsson's deployment of a 3G network to eight sites in the SADA region, in cooperation with Tigo.

Today over 500,000 people in 12 countries in sub-Saharan Africa are benefiting from connectivity in engagement with the Millennium Villages Project (MVP). This connectivity has made it possible to introduce Connect To Learn as well as other services that benefit villagers, for example within health and small businesses development, which is improving livelihoods.

CURRENT CONNECT TO LEARN DEPLOYMENTS
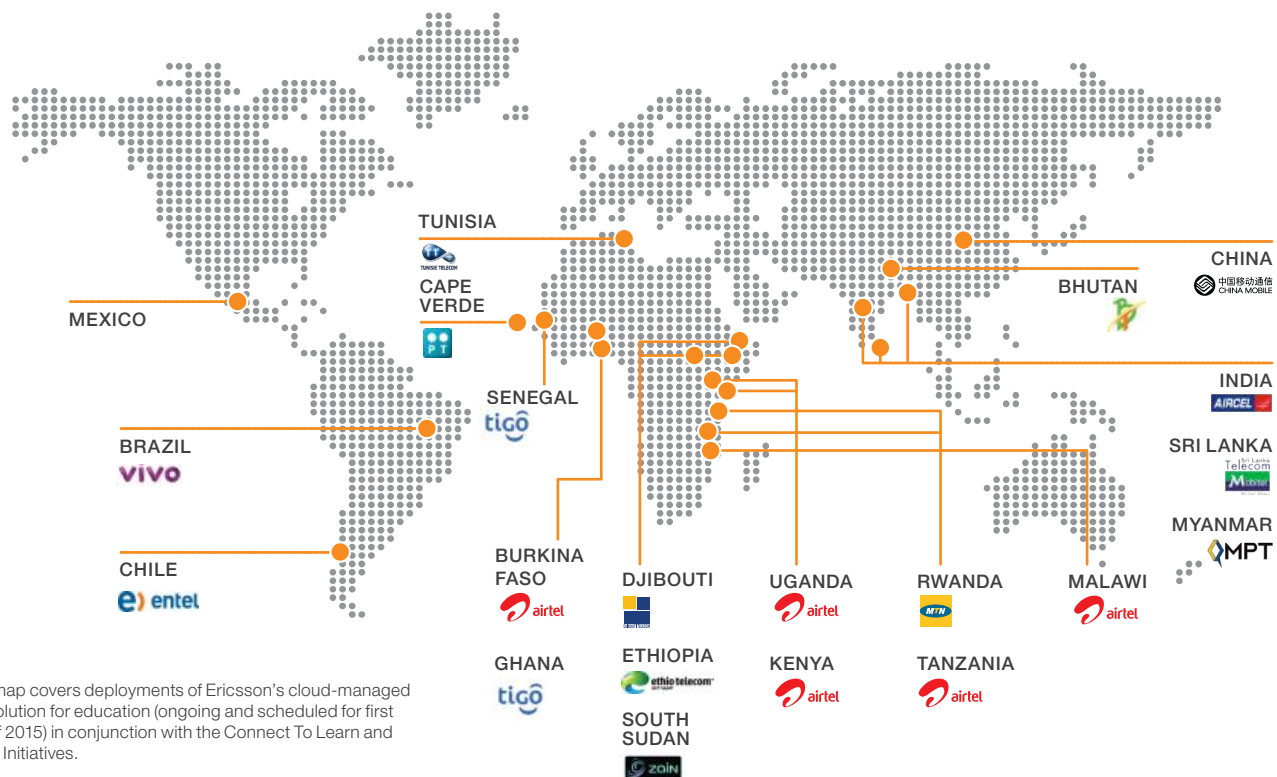
This map covers deployments of Ericsson's cloud-managed ICT solution for education (ongoing and scheduled for first half of 2015) in conjunction with the Connect To Learn and WPDI Initiatives.

ERICSSON RESPONSE

Our employee volunteer program Ericsson Response has responded to natural disasters and humanitarian crises since 2000; in 2014, an important mission was bringing critical communications support to West Africa during the Ebola crisis to aid humanitarian workers on the ground.

Ericsson Response is a global initiative of around 140 specially trained employee volunteers which provides communications expertise, equipment and resources to

Ericsson Response has been supporting community health workers on the frontline of the Ebola crisis.

assist humanitarian relief organizations in responding faster and more effectively when disaster strikes. Since its formation, employee volunteers have been deployed in over 40 relief efforts in 30 countries.

Ericsson Response supports UN and humanitarian workers with emergency telecoms support as a leading partner of Emergency Telecom Cluster (ETC). During 2014, Ericsson Response volunteers continued to assist humanitarian workers in missions including: the aftermath of the devastating typhoon in the Philippines; assisting aid workers in Internally Displaced Persons (IDP) settlements in both South Sudan and Iraq; as well as engaging in the Ebola response.

Emergency telecoms in west Africa

To support Ebola relief efforts in west Africa, Ericsson Response has been requested to support the ETC and their role in the UN Mission in Ghana and Senegal, as well as supporting connectivity in common operational areas in Sierra Leone, Ghana and Guinea.

The deployment of some 15–20 of our WIDER (Wireless LAN in Disaster and Emergency Response) solutions are supporting up to 65 sites in West Africa, including emergency treatment units and connecting thousands of humanitarian workers to the internet.

Transforming humanitarian response

The spread of Ebola, the Syrian refugee crisis and the less high-profile crisis in South Sudan all present different challenges to those working with humanitarian response. The challenge is knowing what technology to leverage, and how to best make use of data and partners. Just as many industries are experiencing data, mobility and cloud transformations, modern technology is increasingly seen as a way to improve the effectiveness and efficiency of humanitarian response. Ericsson has worked with humanitarian response and Technology for Good™ for more than 15 years, helping organizations to address humanitarian and sustainability challenges.

VIEWPOINT

"Right now we are facing an unprecedented number of humanitarian crises around the world. It's more important than ever that we look for new solutions to take on these challenges. We're looking at refugee displacement in Syria, a major crisis in South Sudan, and in West Africa we're fighting the Ebola outbreak. Ericsson's commitment in responding to the great many humanitarian crises around the world will be a tremendous benefit to our joint ability to create new partnerships and respond more effectively to people on the ground. We believe our two organizations can be extraordinarily powerful in bringing new solutions to the field and to the frontline where we most need them."

Allan Freedman, Advisor, Public Private Partnerships & Innovation

International Rescue Committee

NEW PARTNERSHIP

In 2014, Ericsson and the International Rescue Committee entered a partnership aimed at connecting and providing support for those impacted by health crises, natural disaster and conflict-driven humanitarian crises.

The partnership initially will focus on the use of mobile phones and applications designed to support Ebola infection-prevention efforts at primary healthcare facilities in Liberia and Sierra Leone. Specifically, the technology will enable IRC teams to more accurately and efficiently capture and monitor data related to the facilities' Ebola preparedness and response.

The partnership also will provide technology and services that enable displaced families to reconnect with one another. It will start in South Sudan, together with Ericsson's long-term partner Refugees United. The organizations will collaborate on common projects, advocacy and knowledge sharing over the longer term. The public-private partnership will capitalize on respective strengths and help create real impact on the ground.

RESPONDING TO THE EBOLA CRISIS

Mobile phones can empower health workers who are fighting the current outbreak of Ebola in West Africa. We are contributing to Ebola infection-prevention efforts in a number of ways, primarily by supporting community health workers.

As part of the initatives led by the Earth Institute and the International Rescue Committee (IRC), Ericsson is helping to empower community health workers in West Africa.

Helping health workers on the frontline
Ericsson supplied more than 1,600 mobile phones pre-loaded with m-health apps to health workers in communities affected by Ebola, for use by the IRC and the UN Population Fund. A survey management tool and a patient record-tracking tool were among the apps.

⊙ Ericsson employees volunteered to set up the phones with health apps before they were shipped to West Africa, removing complexity in the field, as part of a new employee volunteer pilot in Sweden (which also involves mentoring of high school students).

Multi-stakeholder effort
The effort in West Africa contributes to the 1 Million Community Health Workers (CHW) Campaign hosted by the UN Sustainable Development Solutions Network, in which Ericsson is represented. The goal is to use ICT to help community health workers, often on the frontline during disease outbreaks, to do their job more effectively and link the rural poor to the broader healthcare system.

RECONNECTING FAMILIES

An online family reconnection platform, easily accessed by mobile phone, is helping refugees locating loved ones.
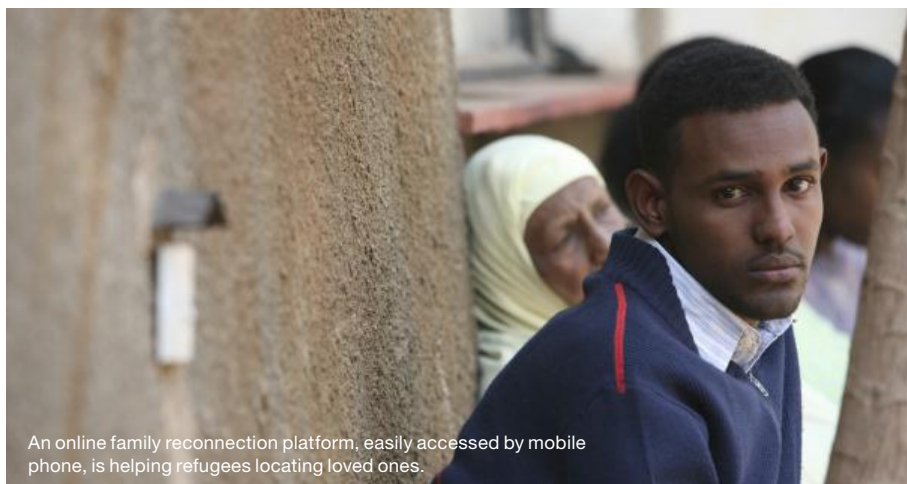
According to the UN Refugee Agency (UNHCR), for the first time since World War II, there are more than 50 million forcibly displaced people in the world. From Syria to South Sudan, a historic and daunting refugee crisis is unfolding. Technology can play an important role in addressing the needs of the world's growing number of refugees.

Reconnecting loved ones
Since 2010, Ericsson has been the lead technology partner to Refugees United (REFUNITE), a non-profit organization founded in 2008 to help displaced persons locate missing family and loved ones.

Ericsson has supported the development of an online family reconnection platform, providing technical expertise, and engaging with mobile network operators and employees for on-the-ground support.

The mobile phone platform combines a simple, low-tech user interface, like text message services such as SMS and USSD, with high-tech back-end search algorithms and analytics. For the user, it is cost-free, and works over low bandwidth connections on the most basic devices so that refugees can register themselves and access the service.

⊙ **Aiming to reach 1 million**
Since its formation, REFUNITE has assisted thousands of forcibly displaced families, with hundreds of family reconnections as a result. By end of 2014, the database had approximately 350,000 registered users – an increase from approximately 250,000 in 2013, largely thanks to digital registrations. The goal is to register 1 million people separated from family by end of 2015.

By bringing on board a number of mobile network operators in countries of concern it has been possible to reach more families in refugee environments, on a scale that REFUNITE would not have been able to accomplish on its own.

Assisting Syrian refugees
Since 2010, a coalition of mobile operators in Africa and the Middle East has supported the project, including Safaricom in Kenya, Vodacom DRC in Democratic Republic of the Congo, MTN in Uganda, Zain Group in Jordan and South Sudan, Asiacell in Iraq and AVEA in Turkey.

In February 2014, the reconnection platform was launched to help reach Syrian refugees living in Jordan, Turkey and Iraq.

The REFUNITE platform is available to families via a mobile application with toll-free lines and SMS awareness campaigns and at www.refunite.org.

Refugees United
Number of refugees registered
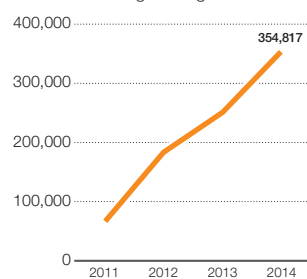
Source: Refugees United

TRANSFORMING YOUNG LIVES ON PATH TO PEACE

👁 Access to mobile technology can provide fresh perspectives and new, life-changing skills for youth in conflict-affected countries. Ericsson together with the Whitaker Peace and Development Initiative (WPDI) seeks to break cycles of violence and conflict through youth education aimed at peace building.

Drug trafficking and gangs in Mexico, and conflicts like the civil wars in South Sudan and Uganda can have devastating effects on youth. In such conflict-prone areas, 60% or more of the population affected are children and youth. By working together, WPDI and Ericsson, as technology partner, help to equip young people with the tools and skills they need in order to affect real change via peaceful means in their home communities.

WPDI was founded in 2012 by actor Forest Whitaker, UNESCO Special Envoy for Peace and Reconciliation and UN Advocate for Children Affected by War. It has already made strides in community empowerment of violence-affected youth in its programs in the United States, Latin America, and in Africa. WPDI's training focuses on conflict transformation; ICT training, which Ericsson provides, to help youth get connected with a larger world and and build needed ICT skills for future jobs; life skills such as meditation and yoga, and community project development assistance.

Youth Peacemakers
The Youth Peacemaker Network (YPN) is a key part of WPDI. YPN's goal is to foster young leaders in conflict regions such as in South Sudan, or in post-conflict situations as in northern Uganda. YPN agents contribute to positive change by fostering reconciliation and conflict prevention in the local communities of their county. ICT helps the youths from all the sites connect to each other and share experiences.

A lifeline in South Sudan
The YPN was established in South Sudan in late 2012 and the tragic outbreak of civil war in December 2013 put the project on hold. The youth participants were, however, able to create some early warning systems based on friendship, inclusion and a commitment to peace, regardless of ethnicity or racial lines. Thanks to computers and phones provided as part of the program, they informed each other on the whereabouts of violent outbursts as they were happening; they shared information about rumored attacks, and reports about the safety levels of roads. Through their network, the youths could advise each other on which routes to travel, and how to get to safety.

The project restarted in 2014 in Eastern Equatoria state, a more stable region and progress included the launch of computer centers and vocational training.

Harmonizer in Mexico
WPDI launched the three-year Harmonizer Program in Tijuana, Mexico in 2014. Harmonizer is aimed at conflict transformation in urban settings where violence has had an impact. The program concluded its first stage with the graduation of 34 youth in leadership, ICT usage, and skill development in conflict resolution and well-being. Harmonizer is slated to expand to the state of Chiapas in Mexico in 2015. Some 35 Ericsson volunteers in Mexico are supporting the youths by teaching ICT and social media skills to help promote the program.

Hands-on training in Uganda
As part of the Harmonizer program, throughout 2014 Ericsson has worked with the Hope North school to provide hands-on ICT training for youth affected by Uganda's civil war and to help build vocational skills. The training covered use of the internet, social networks and staying safe online, as well as communication and entreprenurial skills.

Actor Forest Whitaker, founder of WPDI and UNESCO Special Envoy for Peace and Reconciliation, shares one of many moments of connection with youth in Mexico.

BREAKING DOWN BARRIERS

Ericsson has teamed with Facebook and other partners with the goal to make internet access available to the two-thirds of the world who are not yet connected.

There are still many regions in the world where connectivity is not taken for granted and where slow networks with insufficient capacity are a common issue.

The goal of Internet.org, a partnership between Ericsson, Facebook and other technology companies, including Samsung and Qualcomm, is that everyone in the world should benefit from the opportunities of connectivity. Together, the companies brainstorm initiatives that will support the furthering of connectivity worldwide, and pool their resources to implement these initiatives.

Innovation Lab
Ericsson and Facebook have partnered on the Internet.org Innovation Lab, which opened on Facebook's Menlo Park campus in February 2015. It provides the test environments and expertise for optimizing applications, networks, devices and services for the next five billion internet users.

Much like Ericsson's smartphone labs, this location is open to developers to experiment with their app's performance on a global scale, without the cost and complications of traveling worldwide. Apps can be tested in a real-world environment and under conditions which are typical for growth markets. It also gives developers a way to ensure their apps will run in very remote areas and to optimize the apps for customers who are commonly exposed to network capacity and accessibility issues.

Ericsson provides access to simulated network environments, analysis of network performance, and control of networks to implement optimization efforts.

Hackathons spark ideas
To bridge the connectivity gap, apps need to be able to run even with very limited network parameters. While 4G network tech-nology is common in many countries, much of the world still operates on 2G and 3G standards. Ericsson sponsored hackathons in 2014 to provide developers with simulated network environments running networks of various capabilities, so that they could test their work on these other networks. With the insights gained, developers were able to make changes to their apps for better performance the same day.

Optimization with XL Axiata
Also in 2014, Ericsson and Facebook released data on a long-term project that focused on the development of a model for improving networking performance. Through joint testing of Indonesian operator XL Axiata's network with Facebook starting in December 2013, Ericsson identified network issues affecting performance and made alterations to the radio network, DNS servers and content delivery network that resulted in up to 70% improvement in app coverage.

The model developed in this project has been leveraged into Ericsson's App Experience Optimization service, expanding the offering worldwide.

Ericsson has joined Facebook and other companies to address barriers to internet access in Internet.org.
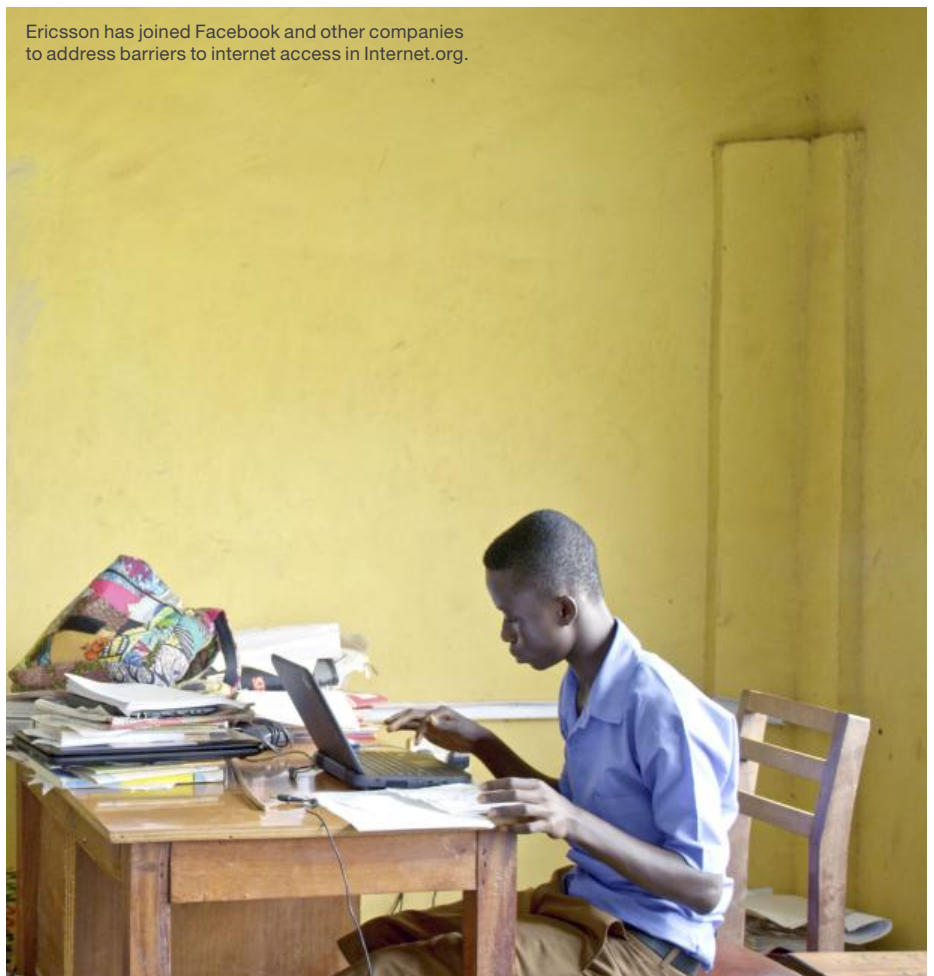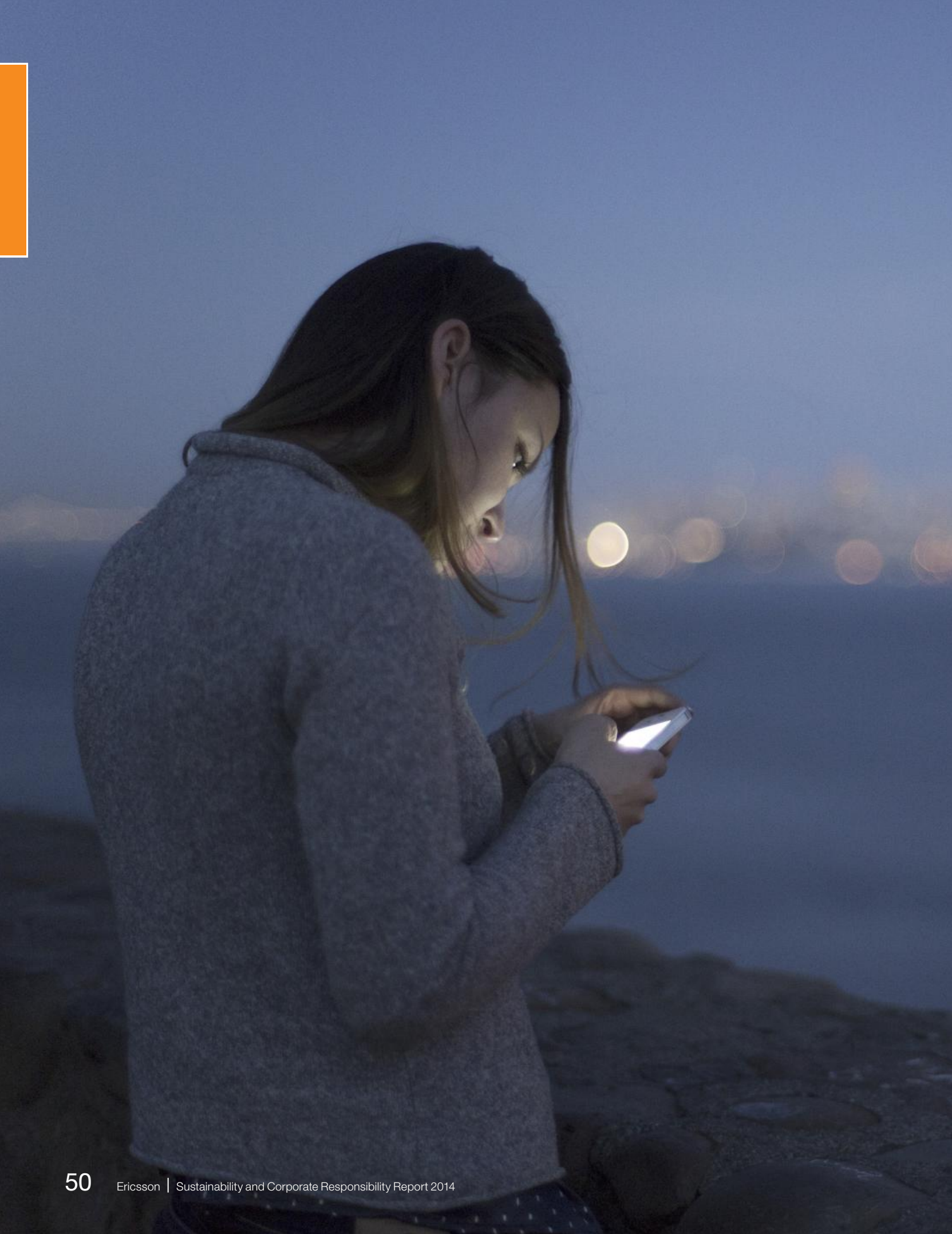
IN RECOGNITION

Global 100 Most Sustainable Corporations in the World
Ericsson is on the 2014 Global100 list announced at the World Economic Forum in Davos in January 2014. The Global 100 is an annual project initiated by Corporate Knights, the company for clean capitalism.

FTSE4Good
FTSE Group confirms that Ericsson has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series, an equity index series designed to facilitate investment in companies that meet globally recognized corporate responsibility standards.

Telecoms.com 2014 Industry Awards
In February 2014, Ericsson received the telecoms.com 2014 Industry Awards "Connecting the Unconnected," in recognition for providing connectivity to address basic human needs through the Millennium Villages Project and Connect To Learn initiative.

Member of the Ethibel excellence
Ericsson has been reconfirmed for inclusion in the Ethibel EXCELLENCE Investment Register since 25/04/2014. This selection by Forum ETHIBEL indicates that the company performs better than average in its sector in terms of Corporate Social Responsibility (CSR).

Newsweek Global Green ranking
In partnership with Corporate Knights Capital and leading sustainability minds from nongovernmental organizations and the academic and accounting communities, Newsweek has ranked the world's largest companies on corporate sustainability and environmental impact. Ericsson is ranked 40 on Newsweek's global green ranking list in 2014.

Verizon
In 2014, Ericsson was awarded Verizon's Top Performance Award for CSR out of 200 suppliers, acknowledged for having robust CSR programs, comprehensive policies, actions and results.

EcoVadis
According to EcoVadis, a collaborative platform used in procurement by 18 of our customers, Ericsson is in the top 2% of suppliers in all categories with a score of 79/100, the EcoVadis Gold level. The platform enables companies to benchmark sustainability performance of suppliers.

CDP
With inclusion in The A List: The CDP Climate Performance Leadership Index 2014, Ericsson is recognized as one of the world's leading companies in tackling climate change. The index has been created at the request of more than 750 investors, representing more than a third of the world's invested capital, to assess companies' efforts to mitigate climate change. Companies on the A List have received top marks for their performance in an independent assessment according to methodology developed by the CDP.

The 2014–15 CDP supply chain program involved 66 corporations with $1.3 trillion in procurement spend. They requested that their suppliers disclose information on how they are approaching climate and water risks and opportunities, generating the largest ever set of such data, from 3,396 companies worldwide, up from 2,868 in 2013. Ericsson scored A.

ASBANC
Ericsson received the 2014 Mobile Money & Digital Global Payments Award for Disruptive Digital Payments for the company's leading work with ASBANC, Peru's National Bank Association, to improve financial inclusion in Peru. The awards program recognizes exceptional achievement and advancement within the mobile money sector, highlighting organizations that have changed the game for digital payments in 2014 and that are disrupting the global payments marketplace.

OBJECTIVES AND ACHIEVEMENTS

In line with our ambition to be a relevant and responsible drive of positive change, we have restructured our objectives and achievements to reflect our efforts to reduce risks and create positive impacts. We have also considered stakeholder feedback in streamlining our performance reporting. In addition to reporting on 2014 objectives, we have merged earlier long-term objectives (2013–2016) into a 2014–2016 time frame. We also report progress on some of the earlier objectives on various pages in this report; the relevant paragraphs are noted with the following icon: See also bottom of p. 53.

Risk reduction objectives

Status 2014	Long Term Objectives (LTO) (2014–2016) *	Objectives 2014	Achievements 2014	Objective 2015
	Identify and mitigate supplier risks related to Responsible Sourcing.	Complete South East Asia Environmental Audit Program and enhance integration of environmental aspects into Responsible Sourcing Program. Achieve 95% completion rate of training "Anti-corruption for Suppliers" by Strategic Sourcing personnel. Broaden Supplier Code of Conduct to a Responsible Sourcing Program with enhanced risk assessment, tracking and improvement activities. Reduce the number of critical findings among selected high risk suppliers audited in 2013 and 2014 by 70%. Establish and launch Zero Incident Program with the target to reduce severe incidents internally and in the supply chain.	The South East Asia Audit program has been completed and the environmental aspects have been more deeply integrated into the Responsible Sourcing Program. We achieved over 90% completion rate of training. We have broadened the Supplier Code of Conduct to a Responsible Sourcing Program with enhanced risk assessment, tracking and improvement activities. The number of critical findings among selected high-risk suppliers audited in both 2013 and 2014 decreased 60%. We established and launched the Zero incident Program (See OHS below).	Close 60% of audit findings.
	Increase completion rate of anti-corruption e-learning for employees and suppliers.		Approx 90,000 employees completed the anti-corruption e-learning for employees. Over 1,100 supplier representatives completed the e-learning Anti-Corruption for Suppliers in 2014.	Continue to deploy anti-corruption training targeting all employees, and selected suppliers, in line with our zero tolerance policy. Secure independent third party to manage whistle blower process.
	Achieve 13% of e-waste take-back vs. equipment Put on Market (POM) while continuing to ensure less than 5% of e-waste is disposed of in landfill. *Note: The long-term target has been revised downward to reflect market reality (see p. 33).*	Achieve 17% of e-waste take-back vs. Equipment Put on Market while continuing to ensure less than 5% of e-waste is disposed of in landfill.	We achieved approximately 6% of e-waste take-back vs. put on market, and less than 2% of e-waste was disposed of in landfill.	Achieve 9% of e-waste take-back vs. Equipment Put on Market while continuing to ensure less than 5% of e-waste is disposed of in landfill.
	Reduce major Occupational Health and Safety (OHS) incidents and track mitigation of risk for major incidents, working toward our long-term goal for zero fatalities.	Establish and launch Zero Incident Program with the target to reduce severe incidents internally and in the supply chain. Launch a new campaign to continue to focus on raising awareness internally of the importance of OHS in each region. At the end of 2014 at least 95% of the incident investigators will be trained in the investigation methodology. Particular focus will be put on incidents related to working at heights and safe driving.	The Zero Incident Program was launched focusing on on high-risk operations including driving and working at heights. This included the development of tools, training, global governance model and escalation procedures for field service work by internal staff as well as within supply chain. At the end of 2014, 97% of the incident investigators that conducted investigations were trained.	Increase reported volume of incidents with 50% in countries with low reporting and train personnel for key roles.
	Secure regional and Business Unit adherence to the Sales Compliance process. Manage Corporate Responsibility risks including human rights risks.	Complete the second year of the Business Learning Program on business and human rights with Shift. Complete a Human Rights Impact Assessment in one additional high-risk country.	Second year of the Business Learning Program on business and human rights with Shift was completed. The Sales Compliance Process is fully operational. Human Rights Impact Assessments in Myanmar and Iran were conducted in accordance with the UN Guiding Principles on Business and Human Rights.	Extend a third year of the Business Learning Program on business and human rights with Shift. Secure regional and Business Unit adherence to the Sales Compliance policy and directive and manage Corporate Responsibility risks. Reduce human rights risks by completing identified mitigation plans in human rights impact assessments for Iran and Myanmar, and initiate HRIA for one additional country.

Positive impact objectives

Status 2014	Long Term Objectives (LTO) (2014–2016) *	Objectives 2014	Achievements 2014	Objective 2015
◖ (Partly achieved)	Demonstrate energy performance improvements in line with the strategy to be the undisputed leader in energy performance.	By 2016 research and evaluate algorithms or technologies that would enable a decrease of total accumulated mobile network energy consumption with 30% in a 2020 scenario, in addition to the concepts provided by the EARTH project (Energy Aware Radio and neTwork tecHnologies – EU research project).	In 2014, algorithms and technologies have been developed that enable a total mobile network energy consumption reduction of about 5% in a 2020 scenario, in addition to the concepts provided by the EARTH project (Energy Aware Radio and neTwork tecHnologies – EU research project). Significant progress was made in the new radio platform, Ericsson Radio System, in improving energy efficiency by 50%.	By 2016 research and evaluate algorithms or technologies that would enable a decrease of total accumulated mobile network energy consumption with 30% in a 2020 scenario, in addition to the concepts provided by the EARTH project. Demonstrate energy performance improvements in customer networks.
● (Target achieved)	Maintain absolute CO_2e emissions from Ericsson own activities for business travel, product transportation and facilities energy use in 2017 at the same level as 2011. Reduce CO_2e emissions per employee by 30% over five years.	Reduce CO_2e emissions per employee by 7% over five years.	Achieved a 10% reduction of CO_2e emissions per employee.	Reduce 6% CO_2e emissions per employee.
● (Target achieved)	Impact positively 5.5 million people through Technology for Good™ initiatives by 2016.	Positively impact 2.5 million people with Technology for Good™ initiatives.	In 2014 we achieved over 4 million people positively impacted by Technology for Good™ initiatives.	Impact positively 4.8 million people through Technology for Good™ initiatives.
◆ (On track)	Ericsson's solutions will reduce societal emissions from selected Industry & Society offerings with 2 times Ericsson's own emissions.	Develop 3–5 cases that show the ICT-enablement potential for the low-carbon economy.	We have estimated 1.4 Mtonne CO_2 carbon reductions in 2014 from selected Ericsson offerings; this represent a ratio of 1.8.	Ericsson's solutions will reduce societal emissions from selected Industry & Society offerings with 2 times Ericsson's own emissions.
◆ (On track)	Reach 30% female employees by 2020.		In 2014, 22% of Ericsson employees were female.	

* Unless otherwise stated.

● Target achieved   ◖ Partly achieved   ◆ On track

Status 2014	Objectives not found above in 2014–2016 LTOs are reported on the following pages. ◉	Page
◖	Increase by 30% the number of technical certifications passed.	22
●	Launch Ericsson Technology for Good™ employee volunteer program.	47
●	Increase awareness of Diversity and Inclusion, by strengthening and increasing the number of employee networks, participating in targeted development programs, and building for the future by encouraging girls to consider careers in ICT.	23
●	Launch Ericsson Play and Virtual Campus to facilitate new ways employees can learn and share.	22
●	Increase number of Global Employee Referrals by 20%.	21
●	Publish first results from partnership with UN-Habitat on sustainable urbanization.	36
◖	Deployed ICT in education projects to an additional 10,000 students.	44
◖	Achieve 650,000 registrations in the Refugees United database.	47
◖	Continue the establishment of a Monitoring and Evaluation framework for evaluating the connection between technology, development and peace with ICT tools and training.	41
●	Establish a globally agreed industry position around the potential of ICT for low carbon economy with key stakeholders.	7
●	Advocacy and support for Broadband Commission for Digital Development's 2015 targets and post-2015 development agenda.	7
●	Document connection between technology, development and peace with ICT tools and training by 2015.	48
●	Be one of the key drivers to increase financial inclusion in an open financial ecosystem, and make it significantly simpler and more affordable to make a financial transaction over a mobile device, whomever or wherever you are.	42

GRI INDEX

Full reporting online

GRI INDEX

GRI	Reporting element	Reference	
SOCIAL PERFORMANCE INDICATORS			
Human rights Performance Indicators			
HR 01	Percentage and number of significant investment agreements that include human rights clauses or that have undergone human rights screening	GRI	■
HR 02	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	GRI	■
HR 03	Hours of employee training on policies and procedures concerning aspects of human rights *	GRI	O
HR 04	Number of incidents of discrimination and actions taken	GRI	■
HR 05	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	GRI	■
HR 06	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	GRI	■
HR 07	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor	GRI	■
HR 08	Percentage of security personnel trained in policies or procedures concerning aspects of human rights	GRI	■
HR 09	Number of incidents of violations involving rights of indigenous people and actions taken *	GRI	■
Labor Performance Indicators			
LA 01	Workforce by employment type, employment contract, and region	AR p.100	■
LA 02	Number and rate of employee turnover by age group, gender and region	AR p.100	■
LA 03	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations *	GRI	■
LA 04	Percentage of employees covered by collective bargaining agreements	GRI	O
LA 05	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements	GRI	■
LA 06	Percentage of total workforce represented in formal joint management worker health and safety committees *	GRI	O
LA 07	Rates of injury, occupational diseases, lost days, absenteeism, and number of work related fatalities by region	S&CR p.25	■
LA 08	Education, training, counseling, prevention, and risk-control programs to assist workforce members, their families, or community members regarding serious diseases *	GRI	■
LA 09	Health and safety topics covered in formal agreements with trade unions *	GRI	■
LA 10	Average hours of training per year per employee by employee category	GRI	■
LA 11	Programs for skills management and lifelong learning that support the employability of employees *	GRI	■
LA 12	Percentage of employees receiving regular performance and career development reviews *	GRI	■
LA 13	Composition of governance bodies and breakdown of employees per category	AR p.144 AR p.152 AR p.96	■
LA 14	Ratio of basic salary of men to women by employee category	GRI	■
Product responsibility			
PR 01	Life cycle stages in which health and safety impacts of products are assessed for improvement	GRI	■
PR 02	Number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts *	GRI	■

GRI	Reporting element	Reference	
PR 03	Type of product information required by procedures and percentage of significant products and services subject to such information requirements	GRI	■
PR 04	Number of incidents of non-compliance with regulations and voluntary codes concerning product information *	GRI	■
PR 05	Practices related to customer satisfaction *	GRI	O
PR 06	Programs for adherence to laws, standards, and voluntary codes related to marketing communications	GRI	■
PR 07	Number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications *	GRI	■
PR 08	Number of substantiated complaints regarding breaches of customer privacy and losses of customer data *	GRI	■
PR 09	Monetary value of significant fines for non-compliance with laws concerning the provision and use of products and services	GRI	■
Society Performance Indicators			
SO 01	Programs and practices that assess and manage the impacts of operations on communities	GRI	■
SO 02	Percentage and total number of business units analyzed for corruption risks	AR p.49 AR p.149	■
SO 03	Percentage of employees trained in anti-corruption policies/ procedures	S&CR p.11	■
SO 04	Actions taken in response to incidents of corruption	GRI	■
SO 05	Public policy positions and participation in public policy development and lobbying	GRI	■
SO 06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country *	GRI	■
SO 07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	AR p.51	O
SO 08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws	GRI	■

GRI Disclosure at a glance

- ■ Fully reported
- ■ Partially reported
- ■ Not material

Source: Ericsson
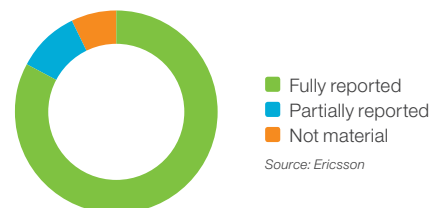
Reference

S&CR	Sustainability and Corporate Responsibility Report
AR	Annual Report
GC	Global Compact Report – Criterion
GRI	GRI disclosure 2014 (online)
*	Additional indicator

Degree of reporting

■	Fully reported
O	Partially reported
NR	Not reported
NA	Not applicable
NM	Not material
C	Confidential

pwc

Auditor's Combined Assurance Report
on Ericsson's Sustainability & Corporate Responsibility Report

To Telefonaktiebolaget LM Ericsson (publ)

Introduction
We have been engaged by the Executive Leadership Team of Telefonaktiebolaget LM Ericsson (publ) ("Ericsson") to perform an examination of the Ericsson Sustainability & Corporate Responsibility (CR) Report for the year 2014.

Responsibilities of the Board and Management
The Board of Directors and Executive Leadership Team are responsible for the preparation of the Sustainability & CR Report in accordance with the applicable criteria, as explained on the inside front cover (page i) of the Sustainability & CR Report, and are the parts of the Sustainability Reporting Guidelines (published by The Global Reporting Initiative, GRI) which are applicable to the Sustainability & CR Report, as well as the accounting and calculation principles that the Company has developed. This responsibility includes the internal control relevant to the preparation of a Sustainability & CR Report that is free from material misstatements, whether due to fraud or error.

Responsibilities of the Auditor
Our responsibility is to express a conclusion on the Sustainability & CR Report based on the procedures we have performed.

We conducted our engagement in accordance with RevR 6 Assurance of Sustainability Reports issued by FAR, as well as AA1000AS (2008) issued by AccountAbility (type 2 engagement). The engagement includes a limited assurance engagement on the complete Sustainability & CR Report and audit of carbon dioxide emissions data regarding Ericsson's own activities on page 27 and 35.

The objective of an audit is to obtain reasonable assurance that the information is free of material misstatements. A reasonable assurance engagement includes examining, on a test basis, evidence supporting the quantitative and qualitative information in the Sustainability & CR Report. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability & CR Report, and applying analytical and other limited assurance procedures. Hence, the conclusion based on our limited assurance procedures does not comprise the same level of assurance as the conclusion of our reasonable assurance procedures. Since this assurance engagement is combined, our conclusions regarding the reasonable assurance and the limited assurance procedures will be presented in separate sections.

Our procedures are based on the criteria defined by the Board of Directors and the Executive Leadership Team as described above. We consider these criteria suitable for the preparation of the Sustainability & CR Report.

In accordance with AA1000AS (2008), we confirm that we are independent of Ericsson. Our review has been performed by a multidisciplinary team specialized in reviewing economic, environmental and social issues in Sustainability & CR reports, and with experience from the Information and Communication Technology sector.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions below.

Conclusions
Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Sustainability & CR Report is not prepared, in all material respects, in accordance with the criteria defined by the Board of Directors and Executive Leadership Team, including adherence to the AA1000APS (2008) principles inclusivity, materiality and responsiveness.

In our opinion the information in the Sustainability & CR Report which has been subject to our reasonable assurance procedures have, in all material respects, been prepared in accordance with the criteria defined by the Board of Directors and Executive Leadership Team.

Other information
The following is other information that has not affected our conclusion above. According to AA1000AS (2008), we have included observations and recommendations for improvements in relation to adherence to the AA1000APS (2008) principles:

Regarding inclusivity
We acknowledge that Ericsson has an inclusive approach to managing key Sustainability & CR risks, and has conducted several stakeholder engagement exercises during the year. We note that Ericsson has documented the stakeholder engagement process for the area of Sustainability & CR in a new group level instruction, and has further developed and implemented stakeholder engagement guidance with particular focus on human rights. We have no specific recommendations regarding inclusivity.

Regarding materiality
We note that Ericsson in 2014 has continued to update and successfully deploy the documented process for assessing material sustainability topics, taking into account relevant new input from stakeholders and various frameworks. While the results of the materiality assessment are clearly presented in the Sustainability & CR Report, we encourage Ericsson to also consider publishing further details on how the actual assessment is carried out, such as a summary of the internal materiality assessment instructions.

Regarding responsiveness
We recognize that Ericsson has a well-established practice of responding in a relevant and constructive manner to significant stakeholder concerns. We appreciate that Ericsson has made significant progress in implementing the UN Guiding Principles on Business and Human Rights, and has adopted a transparent approach in this work, including pioneering the recently released UNGP Reporting Framework. We have no specific recommendations regarding responsiveness.

Stockholm, March 23rd 2015

PricewaterhouseCoopers AB

Peter Nyllinge

Authorised Public Accountant

Fredrik Ljungdahl

Expert Member of FAR

AA1000
Licensed Assurance Provider
000-150

Ericsson employee volunteers in Kista, Sweden engaged in the Ebola response.

ENGAGE WITH US

This report and additional content can be found at www.ericsson.com/sustainability, including more comprehensive information on Global Reporting Initiative indicators.

If you are interested in learning more or continuing the conversation, we also welcome you to engage with us via our Technology for Good™ social media channels and websites below.

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