



ERICSSON

# TECHNOLOGY FOR GOOD

Ericsson Sustainability and Corporate Responsibility Report 2013

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ABOUT ERICSSON

Ericsson is a world-leading provider of communications technology and services. We are enabling the Networked Society with efficient real-time solutions that allow us all to study, work and live our lives more freely, in sustainable societies around the world.

Today there are more than 6.7 billion mobile subscriptions globally. Ericsson plays a key role in using innovation to empower people, business and society. Since the company was established in 1876 we have been a leader in telecommunication. We provide services, software and infrastructure within Information and Communication Technology (ICT) for telecom operators and other industries.

We are committed to working with our customers and partners to expand the borders of telecommunications for the benefit of people everywhere. Our business involvement extends from technology research, through development of networks and applications, all the way to managing operations.

Our business includes four segments: Networks (the infrastructure that is the basis for all mobile communication), Support Solutions (software for operations support systems and business support systems, TV and media management, and m-commerce), Global Services (managed services, consulting, and systems integration, customer support, network design and optimization and network rollout), and Modems.

ABOUT THIS REPORT

This report, together with additional information available online, summarizes our 2013 sustainability and corporate responsibility (CR) performance and our future strategy.

Sustainability and CR are central to Ericsson's core business and our commitment to the triple bottom line of responsible financial, environmental and socio-economic development. Our approach seeks to heighten our positive impact and minimize negative impacts, and we take a full value chain perspective. CR is about managing environmental, social and ethical risks, while creating positive business impacts for our stakeholders and our business. Conducting business responsibly through high standards is a top priority.

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

**UN Global Compact Advanced**  
In 2013, Ericsson reported for the second year in a row according to the UN Global Compact (UNGC) Advanced Level criteria.


**Report Boundaries**  
Unless otherwise stated, all information and data pertains to activities undertaken from January 1, 2013, to December 31, 2013. The report covers the Ericsson Group, i.e. Telefonaktiebolaget LM Ericsson and its subsidiaries. The Ericsson Annual Report 2013 provides information on Ericsson's structure, nature of ownership and legal form, subsidiaries, as well as changes regarding size, structure and financial performance.


**Technology for Good**  
In the Networked Society, Ericsson is the leading advocate of Technology for Good. Mobility and broadband continue to transform societies, and in five years 90% of the world's population will have access to mobile communication. With this scale, we have an unprecedented opportunity to help address global sustainable development challenges. Technology for Good is the overarching theme of this report.


ENGAGE WITH US


This report and additional content can be found at [www.ericsson.com/sustainability](http://www.ericsson.com/sustainability), including 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.


[Ericsson Annual Report](#)


[Facebook-technologyforgood](#)


[Technology for Good photos](#)

[Ericsson Sustainability and CR report](#)

[twitter@ericssonsustain](#)

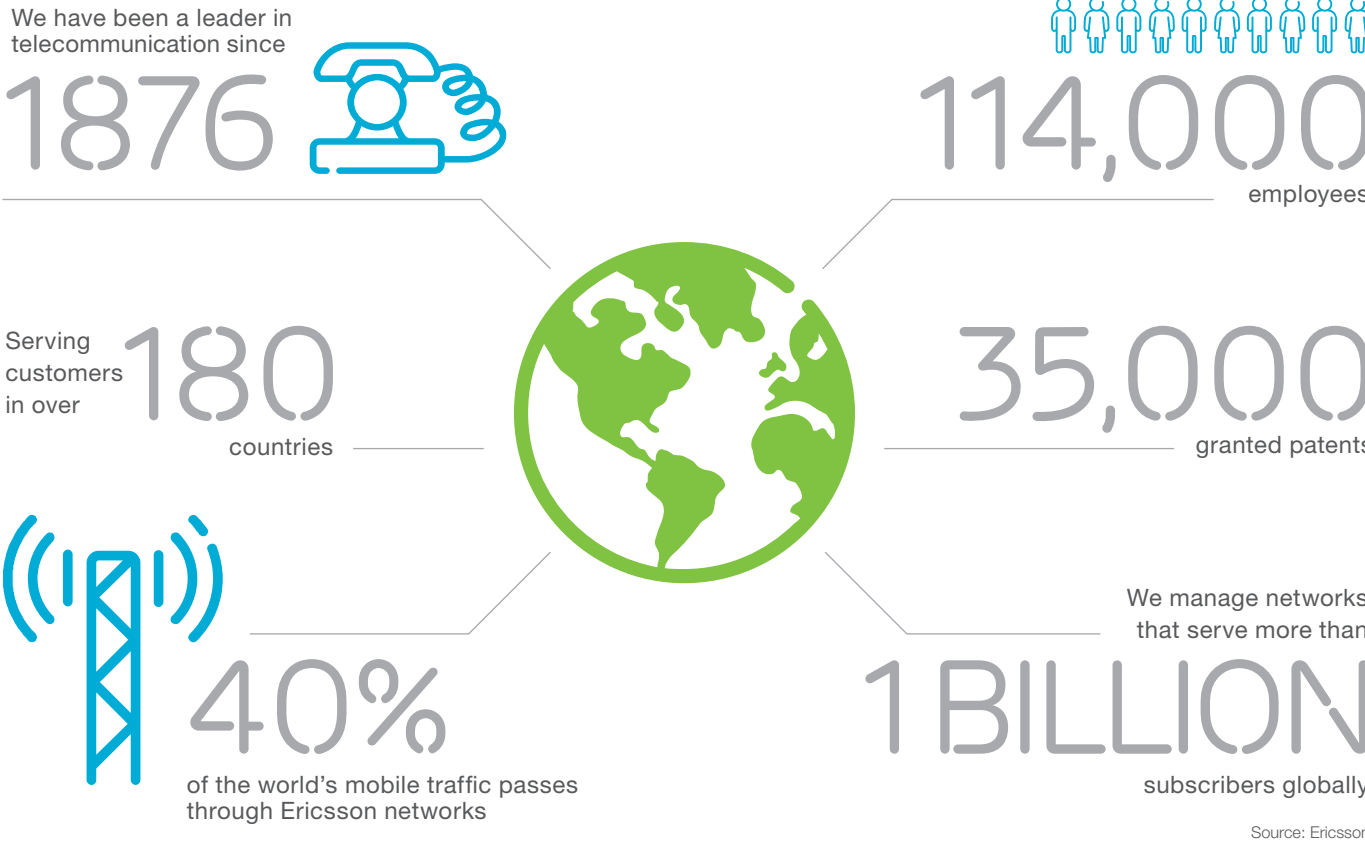
[Technology for Good online pinboard](#)


[Technology-for-good-blog](#)

[Technology for Good videos](#)

For reporting of suspected violations of laws or the Ericsson Code of Business Ethics, please email: [reporting.violations@ericsson.com](mailto: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](mailto:corporate.responsibility@ericsson.com)






### EXTERNAL ASSURANCE AND GRI APPLICATION LEVEL

This Report has been assured by PricewaterhouseCoopers, see Assurance Statement on pages 57-58. The scope of the assurance by external auditor PwC includes an audit on Ericsson's own CO<sub>2</sub> 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

2013 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.



AA1000  
Licensed Assurance Provider  
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Dear stakeholders,

Today we see increasing evidence that broadband, mobility and the cloud are creating the Networked Society – where anything that can benefit from being connected will be connected in the future. In our changing world, ICT is a powerful lever for advancing sustainable development. Millions are benefiting from the unprecedented growth in connectivity. Broadband is optimizing delivery of education and health care, fostering financial inclusion, and reinventing cities with intelligent grids, smart transportation and more.

#### Pursuing common goals

Our Sustainability and CR Report describes our vision and strategy for contributing to sustainable development through our core business and the achievements we have made in the past year in reaching our long-term objectives. We are able to leverage this impact through our global public-private partnerships, united by a shared vision and common goals.



#### With opportunity comes responsibility

Our business success, and our ability to be a trusted partner, depends on our strong governance system and global commitments to conduct our business responsibly. The world is constantly changing, and we are updating our policies accordingly. I put great emphasis on employee understanding and adherence to our Codes. Ericsson continues to support the ten principles of the United Nations Global Compact. In 2014, we reaffirmed our commitment to the updated World Economic Forum Partnership Against Corruption Initiative Principles.

While ICT enables human rights such as freedom of expression, challenges can emerge with unintended use of technology. We have policies and processes to support our business in mitigating risks. We contribute to stakeholder dialogue to find ways to manage risks and maximize ICT's positive role in society.

#### Securing long-term success

Sustainability is increasingly integrated in our core business strategy. We focus on top level targets and report annually on our performance. I firmly believe that our commitment to sustainability and CR enhances our competitiveness, and the actions we take today will enable positive business outcomes in the future.

There are many opportunities still to be explored, and the road ahead is not without challenges. I am certain that the Networked Society is key to the transformative solutions that will lift billions of people from poverty and shape a world built on a smarter, more sustainable, low-carbon economy.

Hans Vestberg  
President and CEO

Dear stakeholders,

In the two decades that Ericsson has reported on our sustainability and corporate responsibility performance, there have been many changes, yet what remains constant is the importance of being transparent, factual and engaging in how we present our progress.

Stakeholder engagement has grown in importance over the years, and in the Networked Society, will only become more evident. Stakeholder engagement helps us in three key areas: Do we address the right impacts and issues? Do we have the right priorities? And do we take sufficient actions? While formal stakeholder engagement sessions are valuable, the Networked Society enables new ways to make our voices heard, with instant and continuous feedback via social media.

#### Embracing the opportunities

Sustainability and CR reporting has evolved from a 1990s' focus on environment to a shared value approach that recognize the opportunities that come with mature sustainability programs. This underlines materiality – emphasizing what really matters to our business and society.

The Global Reporting Initiative has become a standard for large international companies. External assurance is another intrinsic ingredient for transparency and credibility. Over time, it has helped us to improve the quality of our reporting. While high-quality data is vital, we strive to balance this with real stories of how mobility, broadband and the cloud are impacting lives and the economy.

#### A strong foundation essential

At the end of the day, a report is only a snapshot of performance. It will fall short without strong governance systems and processes. These are crucial to enable us to conduct our business responsibly, and to guide our efforts in the direction that will do the most good, and minimize negative impacts. We have systematically improved the robustness of our processes over time and operationalized them, so that if an issue does arise, we can support the business in the best way to make informed decisions. With this foundation, we can more easily take on new future requirements, for reporting and for sustainability and CR performance.

#### Eyes on the horizon

The impact of ICT on human rights will rise in importance, bringing challenges as well as opportunities. We must redouble our efforts to rethink resource use in the future and ICT plays an important role. While there is work ahead, over 20 years, Ericsson has come a great distance in the sustainability journey and I look forward to the opportunities the future will bring.

Elaine Weidman-Grunewald  
Vice President, Sustainability and Corporate Responsibility



20 years of Sustainability leadership

2013 SUSTAINABILITY AND CR PERFORMANCE  
AT A GLANCE



CONDUCTING  
BUSINESS  
RESPONSIBLY

85,000

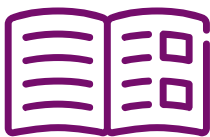


employees took  
anti-corruption  
training

#1

Ranking on  
Folksam's Corporate  
Responsibility Index  
for human rights

Over  
20  
YEARS



of sustainability  
reporting

1<sup>ST</sup>

Industry  
Human Rights Impact Assessment  
in line with UN Guiding Principles on  
Business and Human Rights



Ericsson received our top ranking  
for responsible business 2013.

The company is well prepared to  
address issues around human rights in its operations  
through policies and governance as well as regular  
reporting of its progress in this area with concrete  
and measureable goals.”

Carina Lundberg Markow,  
Executive Officer Corporate Governance, Folksam



ENERGY,  
ENVIRONMENT,  
CLIMATE

3

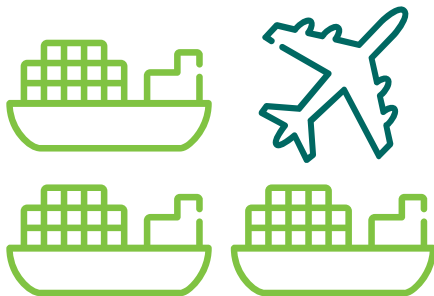
year partnership with  
UN-Habitat on cities

#3

Ranking on  
Greenpeace's  
CoolIT  
Leaderboard

40%

energy savings with the  
Ericsson Psi coverage solution



Over 75% of products were shipped  
by surface transport



Ericsson's leadership in the  
Broadband Commission for Digital  
Development working group on the

post-2015 agenda, was instrumental in creating an  
advocacy platform for broadband in the context of  
sustainable development.”

Dr. Hamadoun I. Touré,  
Secretary-General, International Telecommunication Union,  
Co-Vice Chair of the Broadband Commission for Digital Development



COMMUNICATION  
FOR ALL

40,000



students benefiting from Connect  
to Learn in 14 countries

250,000

Refugees registered on Refugees  
United platform



500,000

People connected in the  
12 Millennium Villages in Africa

We set a goal to positively impact



2,5 MILLION

people through Technology for Good  
initiatives by 2016



Achieving the Millennium Development  
Goals is only possible when people  
everywhere have access to the tools

that make a healthier, safer and more sustainable world  
possible. Ericsson is a partner in this effort by putting  
technology and global progress in the hands of the  
people who desperately need and want it, and placing  
this conversation at the top of the global agenda.”

Kathy Calvin,  
President and CEO, UN Foundation



# SUSTAINABILITY CORE TO THE BUSINESS

Ericsson's sustainability strategy is fundamental to the core business and our vision of the Networked Society.

Sustainability and corporate responsibility will play a key role in moving towards the Networked Society.

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

## Integrated across the business

The Sustainability and CR Strategy is integrated in Ericsson's business strategy, target setting and risk management process which involves regions, business units and Group functions (see illustration) and is executed across the business.

The Ericsson Group Management System includes key Sustainability and CR policies which apply across the more than 180 countries where we conduct business. Our [Sustainability policy](#) and the [Code of Conduct](#) policy outline our commitments, including the Global Compact principles, and the UN Guiding Principles for Business and Human Rights. Our [Code of Business Ethics](#) summarizes the Group's basic policies and directives governing its relationships, setting out how the Group maintains high ethical standards responsibly.

The Code of Business Ethics is periodically acknowledged by all employees.

## Driving results

The Ericsson Sustainability and CR Steering Group is comprised of senior executives which ensure alignment and integration of Sustainability and CR work within Ericsson and approve the strategy and targets that support our commitments. We report on a range of objectives and achievements for our most material issues.

## OUR SUSTAINABILITY AND CR STRATEGY

Our Sustainability and CR Strategy remains firmly in place and rests on five pillars:

- 1 Be a trusted partner to our stakeholders by managing our CR risks and using this as a competitive differentiator.
- 2 Lead in energy efficiency, consumption and environmental performance for telecom networks and services.
- 3 Continuously improve Ericsson's own sustainability performance.
- 4 Advocate the role of broadband, mobility and the cloud in shaping a low-carbon economy and sustainable urbanization.
- 5 Drive the socio-economic value proposition of mobility, broadband and cloud and its role in shaping society.

## STRATEGY, TARGET SETTING AND RISK MANAGEMENT CYCLE

The annual strategic, target setting and risk management cycle is part of Ericsson's strategy process, which is well established within the Group and involves regions, business units and Group functions.



Source: Ericsson

## Ericsson's Long-Term Objectives

Ericsson reports on its annual progress on objectives and achievements, as well as long term objectives, on pages 54-56. All of our objectives are aimed at continuously improving our sustainability and CR performance.

# STAKEHOLDER ENGAGEMENT DELIVERS VALUE

In engaging with stakeholders, we gain insight and greater momentum to address shared sustainability aims.

Our ability to positively impact on sustainability is enhanced through continuous dialogue and engagement with a wide range of groups and individuals. Through engagement, we maximize our ability to create value for society and address shared challenges as well as better manage risks and realize our strategic aims. A successful stakeholder engagement involves listening and learning on both sides. Complementary skills and competencies are brought to the table in order to leverage influence and achieve greater scale.

Ericsson's stakeholders include employees, investors, customers, suppliers, governments, civil society and communities. We engage, for example, through joint projects and initiatives; volunteer programs for employees; customer meetings; investor meetings; surveys, membership in industry groups and representation on decision-making bodies or academic research. Interactions with

stakeholders are part of the day-to-day operations of our business. Sometimes these are consultative, where we seek insight; on other occasions, they lead to collaboration. Sustainability challenges are too complex for any single entity; cross-sector or industry collaboration is often the only way forward.

We use social media to extend the conversation to a larger group of stakeholders through our [Technology for Good blog](#) and [Facebook](#) page, among other channels (see page 3).

Insights gained are taken into account in our materiality process and inform our strategy. In each of our three focus areas, actively engaging with stakeholders is key to achieving our objectives. A table of our stakeholder activities is available online. Examples of our engagements on global issues are highlighted below.

### Responsible business

- > Business Learning Program of Shift, an independent, non-profit center for business and human rights
- > World Economic Forum Partnership Against Corruption Initiative
- > Conflict-Free Sourcing Initiative of the Electronics Industry Citizenship Coalition and Global e-Sustainability Initiative
- > On gender diversity, Battle of the Numbers, Women Up, and the European Round Table of Industrialists

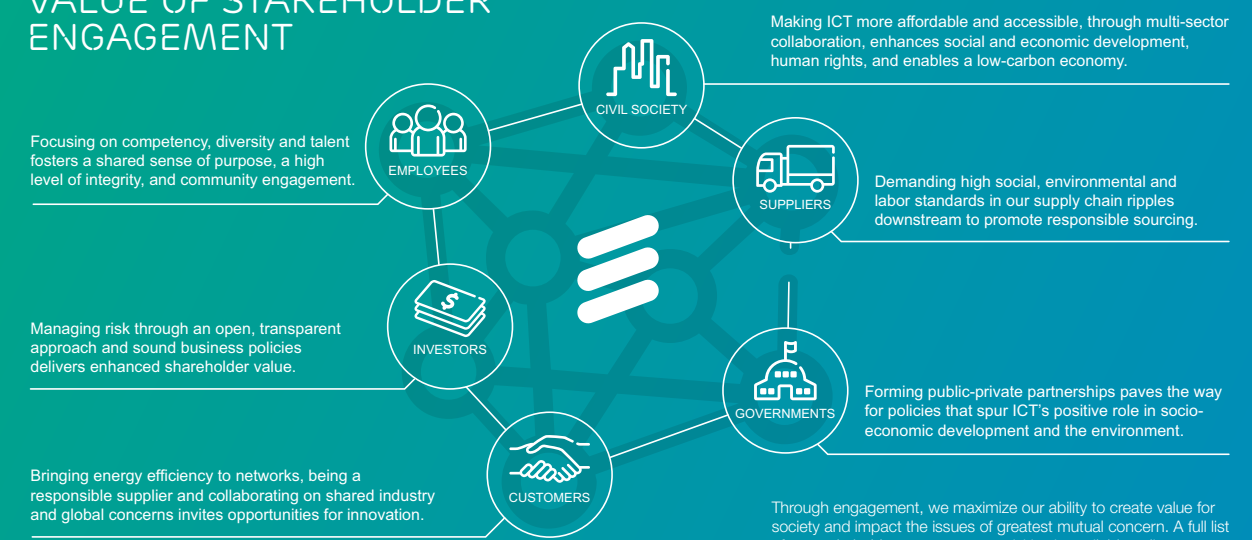
### Energy, environment and climate change

- > UN-Habitat research collaboration
- > European Institute of Innovation and Technology and EU-funded research projects on ICT sector energy efficiency
- > UN STEP (Solving the e-waste Problem)
- > UNFCCC Momentum for Change Initiative on climate change.

### Sustainable development

- > UN Global Compact Advanced
- > UN Sustainable Solutions Development Network Leadership Council
- > UN Broadband Commission for Digital Development
- > GeSI Board
- > Networked Society Forum, our own forum for thought leadership
- > Several public-private partnerships on ICT for development

## VALUE OF STAKEHOLDER ENGAGEMENT

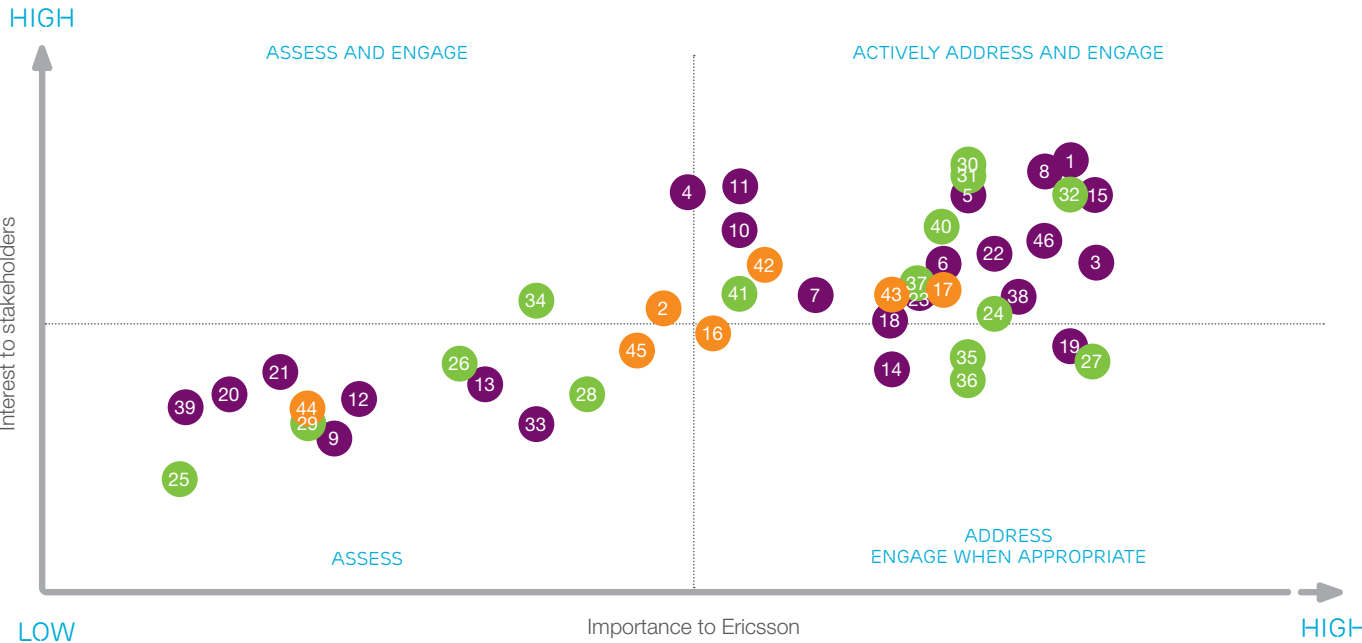


# PRIORITIZING OUR SUSTAINABILITY IMPACTS

Our materiality assessment charts the issues most relevant to Ericsson and to our stakeholders to determine priorities and guide decision-making.

A materiality assessment is a vital element in our sustainability and CR strategy, reporting, target setting and risk process. It determines the relative significance of various social, environmental and economic issues for our business, stakeholders and society as a whole.

Because what counts as material changes over time, Ericsson periodically reviews issues to ensure we are up to speed on what matters most to our business and our stakeholders. Prioritizing helps us make better decisions and gives input to our strategic choices.



- Conducting business responsibly
  - 1. Anti-corruption
  - 3. CR risks assessment
  - 4. Whistle-blower process
  - 5. Misuse of ICT
  - 6. Cybersecurity
  - 7. Radio waves and public health
  - 8. Human rights
  - 9. Child labor
  - 10. Information security
  - 11. Right to privacy
  - 12. Forced labor
  - 13. Freedom of association
  - 14. Policy engagement and advocacy
  - 15. Responsible sourcing
  - 18. Tracing of conflict minerals
  - 19. Diversity and inclusion
  - 20. Accessibility for disabled
  - 21. Non-discrimination and equal opportunities
  - 22. Occupational health and safety
  - 23. Employee engagement
  - 33. Responsible land use
  - 38. ICT socio-economic impact
  - 39. Product information and labeling
  - 46. Responsible tax
- Energy, environment and climate
  - 24. Electrical and electronic waste management
  - 25. Biodiversity
  - 26. Emissions (effluents, air emissions other than GHG)
  - 27. Environmental legal compliance
  - 28. Waste management (office and production)
  - 29. Water consumption
  - 30. Ericsson carbon footprint
  - 31. Climate change
  - 32. Product energy performance
  - 34. Use of renewable energy
  - 35. Hazardous substances avoidance
  - 36. Efficient use of materials (excluding hazardous)
  - 37. ICT contribution to low-carbon economy
  - 40. Energy consumption (Ericsson own activities)
  - 41. Smart cities
- Communication for all
  - 2. Disaster response
  - 16. Access to education
  - 17. Digital inclusion
  - 42. Transparency
  - 43. Access to communication
  - 44. Access to healthcare
  - 45. Peace building and conflict resolution

**Assess:** Audit, review, monitor and/or follow the evolution of an issue. Disclose performance according to stakeholder demand.

**Address:** Manage efforts to tackle an issue. Investigate, steer and/or implement new governance procedures to ensure business sustainability and accountability.

**Engage:** With stakeholders and lead discussions via positive advocacy to demonstrate the positive socio-economic and environmental effects of mobility, broadband and the cloud.

## Prioritizing issues

Ericsson ranks issues in order of importance to give input to the strategy process and to set strong objectives. Previous materiality assessments provide the starting point. We take into account upstream and downstream material issues across the value chain. Life cycle assessment (LCA) helps us identify opportunities to decrease negative environmental impacts.

We “actively address and engage” on issues deemed most material to Ericsson. Issues in which we “assess and engage” are those rising on both Ericsson’s and stakeholders’ agenda and we report on our performance in these areas. With another set of issues, we “address and engage when appropriate.”

The issues which fall under “assess” are important and we have procedures in place to ensure that we are working according to our stakeholders’ expectations on these issues. We find that our stakeholders 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.

## New issues

A 2013 report from the NGO Swedwatch looked at the tax practices of Swedish companies in developing countries. It found no evidence of unethical or illegal tax avoidance with any of the companies, but urged greater transparency and dialogue, which Ericsson supports. Ericsson sees payment of taxes as a responsibility but one that brings positive socio-economic impacts through our global presence, employment creation and use of local suppliers. Ericsson complies with tax rules and payment obligations through our global business operations. This is ensured through a robust and tightly controlled governance system handling tax strategy and compliance which is

carried out by Company Control Hubs. The Hubs each have a Tax Management Unit responsible for the legal entities and branch offices in its region. The hubs are governed by Group Function Finance. Ericsson’s policy is to pay just corporate income taxes wherever we do local business, based on a fair and sound local profit level supported by external benchmark studies.

## MATERIALITY PROCESS

Ericsson takes into account relevant reporting guidelines, and industry commitments such as the [Global Reporting Initiative](#), Life Cycle Assessment methodologies, the [UN Global Compact](#), the [UN Guiding Principles on Business and Human Rights](#) and our commitment to the [Millennium Development Goals](#).

The stakeholder perspective is incorporated via inputs such as investor and customer surveys, our annual employee Sustainability and CR poll and wider dialogue. We rank stakeholders according to their significance to the business and have identified shareholders and investors, customers, and employees, civil society/NGOs, governments and media as our main audiences.

We validate materiality by correlating short-listed issues with the views and concerns of stakeholders and via internal consultations across a variety of business functions.



## OUR KEY ISSUES

Through the materiality assessment, we have concluded that our most material issues are grouped in the following areas.

### BUSINESS ETHICS

- > Conducting business with transparency and integrity
- > Anti-corruption
- > Respecting human rights
- > Assessment and management of related risks
- > Responsible sourcing
- > Health and safety of employees and suppliers
- > The role of ICT in information security, privacy

### EMPLOYEE ENGAGEMENT

- > Engaging employees in the integration of Sustainability and CR into our business
- > Employee volunteers in Technology for Good initiatives
- > Clear employee understanding of policies and directives

### ENERGY AND ENVIRONMENT

- > Energy consumption, materials management, and climate change related to the energy and environmental performance of our products
- > The environmental impact of Ericsson’s activities: travel, product transport and facilities
- > ICT to deliver transformational solutions for smart and sustainable cities

### CLIMATE CHANGE AND URBANIZATION

- > Climate change and the growing challenges and opportunities around urbanization
- > The role of ICT to deliver transformative solutions to sustainable cities

### ACCESSIBILITY AND AFFORDABILITY OF MOBILE COMMUNICATION

- > ICT’s impact on socio-economic development
- > Greater access to communication
- > Digital and financial inclusion
- > Access to education
- > Humanitarian response

How we actively address our most material issues is described in the following three chapters of the Report: [Conducting Business Responsibly](#); [Environment, Energy and Climate](#); and [Communication for All](#).





# CONDUCTING BUSINESS RESPONSIBLY

## EMBEDDING RESPONSIBILITY

Our aim is to act with responsibility, accountability and transparency as we help to build the Networked Society.

Ericsson considers access to communications a basic human need. As a Swedish company in existence for 138 years, with a global presence, we understand the importance of doing business sustainably and creating the long-term value and trust that are critical to ongoing business success. We do this by listening and responding to our stakeholders, by building on a strong culture of values, by caring for people and the environment and by acting responsibly to protect the Ericsson brand.

Our Code of Business Ethics sets the tone for how we conduct business globally. We have zero tolerance for corruption and bribery, and have set high standards for responsible sourcing, health and safety and human rights across our operations.

### Rising expectations

ICT is becoming fundamental to people, business and society; this makes conducting business responsibly and leading with strong values equally vital to enabling the technology's full potential. New challenges arise, with freedom of expression and the right to privacy rising in importance among stakeholders. Ericsson is working proactively to deal with these challenges in a responsible manner and make a positive contribution to society. This includes our engagement in a two-year business-learning program with Shift on human rights, with a particular focus on implementing the United Nations (UN) Guiding Principles for Business and Human Rights across our business operations, (see page 19).

### Governance framework

Ericsson has Group-wide policies, processes and directives in place for responsible sourcing, environmental management, anti-corruption

and human rights. The Ericsson Group Management System (EGMS) includes the [Code of Business Ethics](#), [Code of Conduct](#) and [Sustainability Policy](#), and a commitment to uphold the UN Global Compact Principles and the [UN Guiding Principles for Business and Human Rights](#). Policies are embedded into our operations and supported by employee awareness activities including training. Our Global Assessment Program, monitored by assurance provider Intertek, audits application of policies and directives, management of risks and objectives achievement.

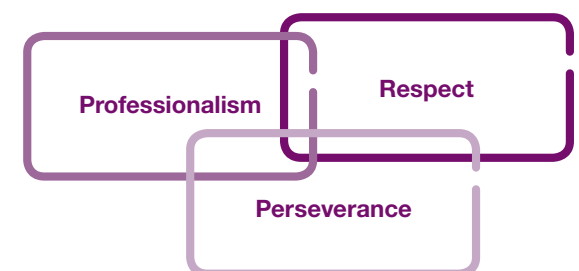
### Top-level commitment

Sustainability and CR objectives are included in the top level Ericsson Group 2013 balanced scorecard. Additional targets and long-term objectives relating to specific areas are highlighted on pages 54-56.

A cross-functional Sustainability and CR Steering Group meets regularly to follow up on strategic and operational issues and the Ericsson Board of Directors is briefed twice a year on sustainability and CR matters. During 2013 Board of Director briefings were held on sustainability and CR strategies and risks, performance of internal operations, human rights progress and strengthened Sales Compliance Board processes.

## 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.





# RESPECTING HUMAN RIGHTS

ICT has great potential to promote and enable human rights around the world, but possible negative impacts must also be addressed head-on.

The Networked Society empowers people to realize their human rights more fully and in new and innovative ways, from greater freedom of expression and assembly, to enhanced economic, social and cultural rights such as greater financial inclusion, improved access to health and education and even improved safety and security.

Yet new societal challenges and ethical dilemmas emerge as ICT is increasingly integrated into nearly every facet of our lives. One of the main purposes of ICT is to foster the free exchange of views and information – which supports human rights such as freedom of expression, and freedom of assembly. The technology can assist governments to fight crime and respond to emergencies, but in some cases it can also be misused to restrict human rights in unintended ways. Stakeholder awareness of these possible risks is growing and the extent of national security surveillance in both democratic and repressive regimes is a topic of great interest in society today.



## Ericsson is actively integrating the United Nations Guiding Principles on Business and Human Rights into our governance framework.

**Strengthening our approach**  
Ericsson actively works to integrate the [United Nations Guiding Principles on Business and Human Rights](#) (UNGP) into our governance framework. The Principles provide guidance on respecting human rights, which means that a company should avoid infringing on the human rights of others as well as addressing adverse impacts with which a company may be involved.

With the aim of embedding a human rights framework across the company, during 2013 Ericsson completed the first of a two-year engagement with the Business Learning Program of the non-profit center

for business and human rights, [Shift](#). For Ericsson, there are four specific aims: strengthen our human rights framework; develop a Human Rights Impact Assessment (HRIA) process; increase internal competence; and gain an external view on how we implement our human rights commitment.

The increasingly complex dilemmas surrounding human rights and ICT require a better and broader understanding of the ICT value chain from multi-stakeholder perspectives. To bring greater understanding of the issues, Ericsson produced the report, ["ICT and Human Rights – An ecosystem approach."](#)

It was first presented at the Stockholm Internet Forum in May 2013, and intended as a springboard for multi-stakeholder dialogue and collaboration to minimize the risks of misuse of technology while maximizing its potential to further human rights (see illustration page 15).

### CODE OF BUSINESS ETHICS

**Our Code of Business Ethics reflects the UN Guiding Principles on Business and Human Rights. The work on strengthening human rights is continuously evolving and our Codes are regularly reviewed and updated.**

# ENSURING SALES COMPLIANCE

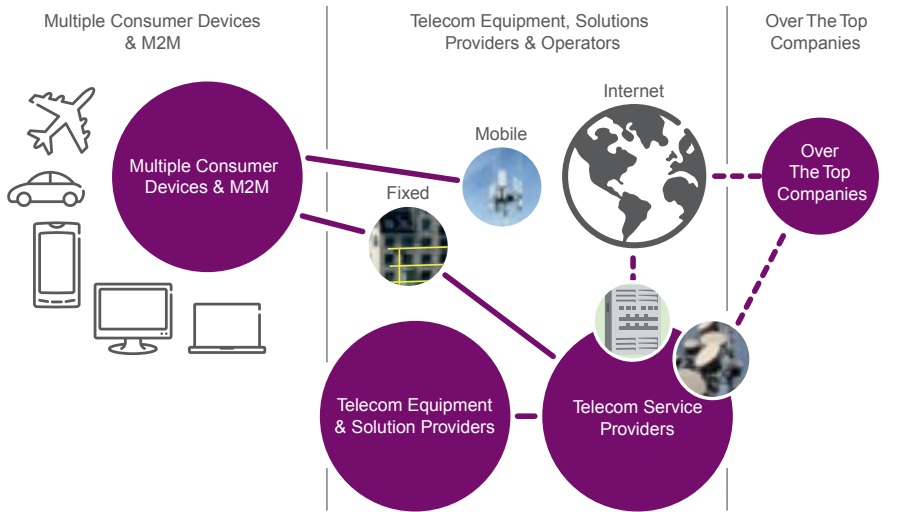
Ericsson's Sales Compliance Board provides a cross-functional forum for dealing with human rights risks as an integrated part of the Sales Process.

The Sales Compliance Board considers human rights in its decisions and proactively makes case by case risk assessments of business when deemed necessary. It uses three core criteria to evaluate human rights risks associated with unintended use of functionality: the type of product, service or know-how, the market, as well as the customer. In 2013 the Sales Compliance Board was fully operational and reviewed more than 200 cases, of which more than 90% were approved.

**Special Business Areas**  
Ericsson has a Group policy and processes for handling of products, services and know-how that require special attention, for example, lawful interception, which is a legal requirement in most markets. Ericsson does not engage in the sales of Law Enforcement Monitoring Facility equipment or military classified products.

**Trade compliance**  
Ericsson has a Group-wide trade compliance process for managing compliance with relevant export control, customs and other trade laws and regulations including sanctions. An automated 'sanctioned parties' screening (utilizing black lists from the

## THE ICT ECOSYSTEM



Source: Ericsson

UN, the US and the EU) is used to ensure compliance with sanctions, embargoes and other export control regulations.

**Syria and Iran**  
Due to the ongoing conflict in Syria, we conducted only limited business there to support existing customers.

In 2010, Ericsson decided to not conduct any new business in Iran. The sale of infrastructure-related products in Iran was planned for phase out during 2013 and the business activities were anticipated to

consist of the provision of services under existing contracts, or with respect to equipment already delivered and the collection of software license related revenues under existing agreements. In light of recent international developments related to Iran, Ericsson has decided not to execute on this phase out policy. Our intention is to engage with existing customers while evaluating the human rights situation. To support our approach to responsible business, it was decided by the Sales Compliance Board that a Human Rights Impact Assessment will be conducted.

## SALES COMPLIANCE PROCESS





# TRUST IN THE NETWORK

Concerns about human rights, privacy and security need to be addressed to realize the full potential of the Networked Society.

In an increasingly connected world, it is important that ICT networks are robust and reliable and that the information they carry is secure in order to reinforce, not undermine, human rights. Yet concern around surveillance, mining of personal data and cyber-attacks is rising.

Cyber-attacks come in a variety of forms, including information and identity theft, fraud, denial of service and malware targeting users or organizations. Perpetrators include “hacktivists,” organized crime, groups practicing industrial espionage, or even non-malicious users inadvertently spreading viruses.

**A growing political agenda**  
With heightened public awareness of online security challenges, there is growing focus on updating legal and social codes of conduct. A 2013 UN Special Rapporteur report on the promotion and protection of the right to freedom of opinion and expression underlined the urgency of studying new modalities of state surveillance of communications and aligning relevant national laws with human rights standards.

An Ericsson white paper, “[Guiding Principles for Security in a Networked Society](#),” calls for multi-stakeholder collaboration to address concerns. The US, European Union and India have all released new or updated cybersecurity strategies in the past year. Governance, security and privacy questions emerge around increased use of big data – for example, who owns and can access data and where it is stored. It is vital that the right to privacy is protected so users and their data is secure and rights are protected.

**In-built security**  
Trust and safety are fundamental to our vision of the Networked Society and Ericsson works actively to ensure appropriate levels of security in our products and services. To mitigate threats like denial-of-service attacks, theft or manipulation of network data, a range of tools is deployed to ensure security functionality, proper implementation of security solutions and safeguarding of network operations. Ericsson receives real-time updates on threats and vulnerabilities and takes action to protect our customers’ networks.

As well as meeting international standards for telecom products and management of

networks, we draw on best practice and our own vast experience in improving the security of networks we manage, serving 1 billion subscribers.

**A shared responsibility**  
Achieving a secure and trustworthy network requires a combination of technical solutions, processes, operations and effective legislation. Ericsson is actively engaged in dialogue on emerging standards to ensure continued free flow of information while protecting ICT infrastructure and the right to privacy. One example is the [3rd Generation Partnership Project](#), a collaboration of telecommunications standardization bodies developing a [Security Assurance Methodology](#) for standards and security requirements for products and development processes.

To fulfill the potential of the Networked Society, networks and services must protect consumer and enterprise privacy and keep their information secure. Stakeholders must therefore work together to ensure end-to-end security across borders, ecosystems and between products and services from different vendors and providers.

# TAKING A STRONG STANCE AGAINST CORRUPTION

Ericsson’s [anti-corruption program](#) was strengthened in 2013, and an updated e-learning launched for employees.

Ericsson is fully committed to fighting corruption. Identified by the World Economic Forum as a major impediment to conducting business, corruption is estimated to cost more than [5% of global GDP \(USD 2.6 trillion\)](#). It discourages investment, increases costs of products, and undermines democracy and legal systems. Ericsson believes fair competition is essential to free markets and this requires a level playing field that is not possible when corruption is present. We consider the fight against corruption of the highest importance.

Fair competition is essential to free markets. A level playing field is not possible when corruption is present.

The anti-corruption index published by Transparency International shows high risk for corruption in many countries where Ericsson operates. To manage risks and meet rising stakeholder expectations for integrity, Ericsson takes a strong stance against corruption and bribery: zero tolerance.

**Raising awareness and competence**  
A Chief Compliance Officer heads the anti-corruption compliance program. All employees are expected to take an anti-corruption e-learning course that informs, identifies problematic situations, and helps evaluate appropriate courses of action. Certain personnel such as sourcing, legal and other relevant personnel (such as regional leadership teams) receive additional specialized training.

An updated e-learning was launched during 2013, targeting all employees except Field Service Operation employees (FSO) and approximately 85,000 of employees had completed the training by year-end. The FSO (approximately 13,000 employees) will be required to take the course during 2014.

The Anti-corruption Program is continually monitored by Ericsson’s internal audit function and evaluated annually by the Audit Committee of the Board. Both employees and third parties can report suspected violations of the Group’s [Code of Business Ethics](#) which is available publicly on the Ericsson website.

**Strengthening the approach**  
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. Reported violations of law or the

[Code of Business Ethics](#) are handled centrally by a Group Compliance Forum, supported at regional level. A new directive on the handling of reported violations has been adopted.

**Industry partnership**  
Since 2012, Ericsson has been a member of the [World Economic Forum Partnership Against Corruption Initiative](#) (PACI), where we engage in ongoing dialogue with industry partners on corruption issues. This global, multi-industry, multi-stakeholder anti-corruption initiative seeks to raise business standards and contribute to a competitive, transparent and accountable society. PACI helps foster a high-level exchange between business and governments and requires members to sign on to a set of Principles, committing to among other things, a zero tolerance towards bribery and corruption. Ericsson has also committed to support the revised Principles, updated in early 2014.

## CONCERN OVER PRIVACY HIGH

70% of respondents considered online security a concern

59% worried about online surveillance

56% cited privacy as a concern

Source: Ericsson ConsumerLab, February 2014, “[Privacy, security and safety online](#)”.



Elaine Weidman-Grunewald speaking at the Social Good Summit on Big Data and Social Good, September 2013.



# IN MYANMAR, BALANCING RESPONSIBILITY WITH OPPORTUNITY

In Myanmar, we take a thorough and inclusive approach to understand our impacts and contribute positively to socio-economic development.



School children in Yangon, Myanmar.

In 2012, for the first time since 1998, Ericsson re-established a presence in Myanmar, a country undergoing democratic and social reform. Extending access to ICT is expected to boost socio-economic development and enhance basic human rights. Just 1 million of Myanmar's 60 million people enjoy the benefits of a mobile phone and less than 400,000 have Internet access, according to a 2012 study commissioned by Ericsson, although this is changing rapidly.

### Recognizing the challenges

Ericsson anticipates involvement in the provision of telecommunication equipment and services to mobile operators. The telecom sector faces challenges in Myanmar, which placed 157 out of 175 on Transparency International's Corruption Perception Index for 2013, and respect for human rights remains a concern.

Examples of potential human rights risks facing the ICT sector that have been identified by the non-profit organization, Shift include: strengthened police or military control over villages; crony and/or corrupt subcontractors; land-grabbing associated with network

coverage; forced labor in public infrastructure; lack of grievance channels; security crackdown on public protests; Internet-related privacy infringements; and increased corruption and discrimination around ICT access.

### Assessing impact

To be a force for positive change while minimizing human rights risks, Ericsson is assessing impacts, raising awareness and taking preventive measures. In 2013, Ericsson initiated a Human Rights Impact Assessment (HRIA) in accordance with the [UN Guiding Principles on Business and Human Rights](#), with assistance from Shift.

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. It aims to provide a framework for ensuring that Ericsson is respecting human rights within the scope of our business operations and describes the social, operational and human rights context for doing business in Myanmar.



Mobile phones are quickly becoming a part of city life in Yangon, Myanmar.

### Human Rights Impact Assessment: Steps

The human rights impact assessment (HRIA) covers several different steps such as the identification of actual and potential business operations, a country profile; scanning and identification of all potential human rights impacts for action; assessing the likelihood and severity of potential human rights impacts; prioritization of potential human rights impacts; additional stakeholder engagement; and mitigation measures integrated into Ericsson operations.

### Prioritized areas

Our HRIA resulted in a number of priority areas including:

- > Local awareness of human rights
- > Sourcing and supply chain management
- > Managed Services
- > Network Rollout
- > Lawful interception

Within each area, mitigation plans have been put into place, including training, processes for validating work orders, detailed work instructions and local guidelines. Also, during 2013, face-to-face training on responsible business practices were conducted for all employees in Myanmar, including anti-corruption.

### Stakeholder consultation

Ericsson met with customers, government and community representatives, local and international NGOs to discuss business and human rights issues. Input from the consultations will be inte-

grated in early 2014 and the HRIA will be finalized. The framework will be developed further for use within Ericsson. We are also collaborating with the [Myanmar Centre for Responsible Business](#) which will build on our HRIA to conduct an impact assessment of the ICT sector in 2014.

### VIEWPOINT



The ICT sector faces specific human rights risks, including: companies' downstream relationships among business customers and end-users, whose actions it can be hard to influence; the fast-moving nature of technology; and the often challenging nature of relationships with government.

Companies establishing business in countries like Myanmar have to work out how to avoid involvement in corruption and human rights abuses; understand the concerns and expectations of new employees, workers of local suppliers, and communities; work within legal frameworks that are often weak or poorly enforced; and consider how to anticipate risks should democratic reforms unravel. Yet the opportunities are there to model and contribute to a different way of thinking and working."



Caroline Rees,  
President, Shift

### IN RECOGNITION

In 2013, Ericsson received a "Corporate Social Responsibility Special Recognition Award" from [Télécoms Sans Frontières \(TSF\)](#), the world's leading emergency telecommunications non-profit organization. Ericsson was acknowledged for collaborating with respected human rights stakeholders to assess the human rights situation and socioeconomic impact that telecommunications brings to Myanmar.





# STRONG FOCUS ON RESPONSIBLE SOURCING

Assessing and monitoring the social and environmental performance of our suppliers is critical to ensure our high standards are met.

The supply chain is of key strategic importance for our business and Ericsson places a high priority on sourcing responsibly. All suppliers must comply with high social and environmental requirements as set out in Ericsson's [Code of Conduct \(CoC\)](#) – the same Code that applies to our own operations worldwide.

Managing our supply chain responsibly is critical to delivering on our business goals, meeting our Code of Conduct requirements, and mitigating risk. We work with suppliers to enable them to comply with Code requirements and offer free [online training](#) in 13 languages.

**Code of Conduct a key factor**  
At Ericsson, compliance with the Code of Conduct is an important part of the supplier evaluation criteria. In recent years, we have consolidated our supplier base to fewer suppliers and focused heavily on quality and performance in the selection process. Within the Sourcing team, 190 staff are trained as Code of Conduct auditors with representation all regions.

Using a risk-based approach, high-risk portfolio areas and highest-risk markets are prioritized for assessments and monitoring. Ericsson performs regular audits and works with suppliers to ensure continuous improvements.

Our aim is to continue business with suppliers who can successfully address areas of improvements. When supplier audits reveal non-compliance, corrective actions are initiated to close non-compliance and a plan put in place for follow up.

Year on year, analyses of our auditing activities demonstrate significant improvements.

Critical findings among 46 selected high risk suppliers audited in both 2012 and 2013 declined by 68%.

Critical areas vary between regions and supplier categories but prioritized risk areas include working at heights, road and vehicle safety, anti-corruption, working hours, labor rights and environmental management, and communication of requirements further down the supply chain is key.

In 2013 the CoC program is expanded to a broader Responsible Sourcing Program with enhanced risk assessment, tracking and improvement activities.

# TRACING THE ORIGIN OF CONFLICT MINERALS IN THE SUPPLY CHAIN

Ericsson is working with our suppliers to source minerals in a way that contributes to economic growth and development rather than to conflict.

Our products contain various metals, including tantalum, tin, tungsten and gold. These metals have become known as '[conflict minerals](#)' because they are in part sourced from eastern provinces of the Democratic Republic of Congo (DRC) where a long civil war is ongoing. Illegal armed groups control some of these mines and transit routes to fund their violent operations.

Ericsson's position is that the extraction of raw materials should not directly or indirectly support armed groups. Ericsson believes it is essential to establish mechanisms that enable conflict-free sourcing of tin, tantalum, tungsten and gold within the DRC and elsewhere, so that these minerals can be sourced in a way that contributes to economic growth and development in the region rather than to conflict.

First-tier suppliers of Ericsson identified to be within scope have been queried with the EICC/GeSI Reporting Template on smelters in their supply chains.

Ericsson is an "issue leader" of the [Digital Europe](#) group on conflict minerals which is active on the EU level. We are also a member of the CFSI driven by GeSI and EICC.

We believe that being proactive is an important part of being a responsible business partner and strengthens the business, as traceability requirements are likely to be even higher in the future.

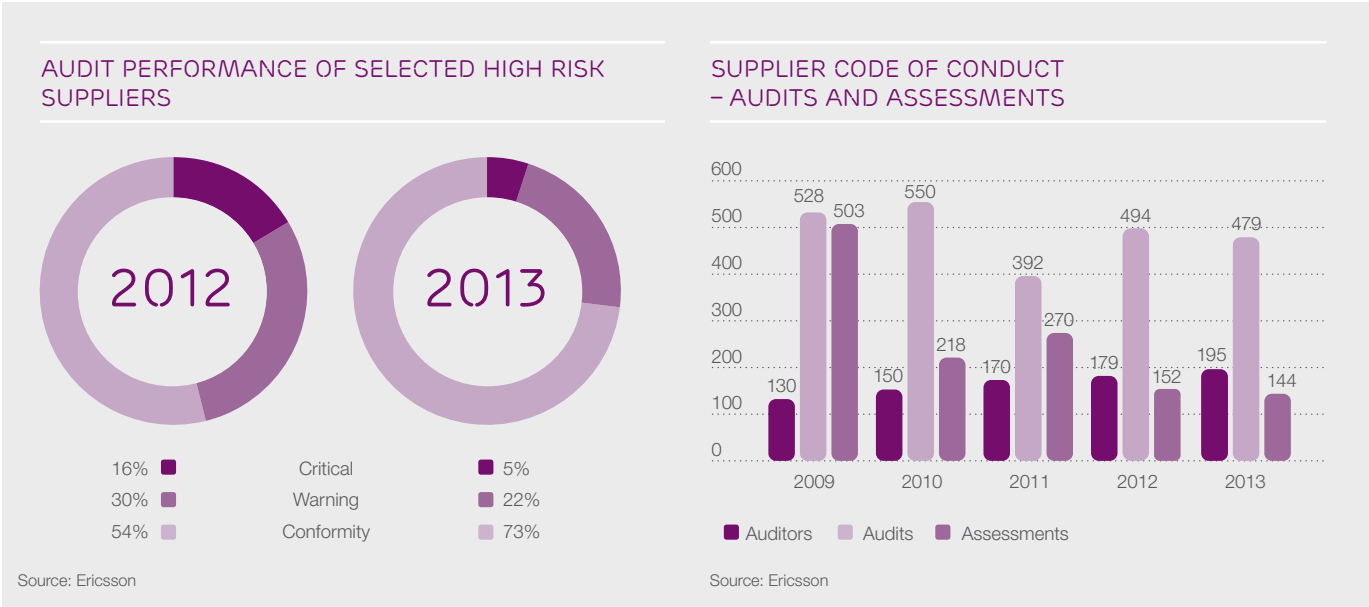
## INDUSTRY COLLABORATION

To share best practice, Ericsson regularly hosts supplier seminars on Code of Conduct. Seminars in 2013 included events in Myanmar and Bangladesh. Ericsson also participated in benchmarking and best practice sharing at the annual meeting of the Joint Audit Cooperation ([JAC](#)). JAC is made up of ten telecom operators: Belgacom, Deutsche Telekom, France Telecom, KPN, Swisscom, Telecom Italia, Telenor Group, TeliaSonera, Verizon and Vodafone, all of whom are Ericsson customers. JAC members conduct Corporate Responsibility audits of their suppliers, including Ericsson factories, and share results. Several Ericsson and supplier sites have been audited by JAC auditors during the past three years, with satisfactory results.

## Ericsson believes it is essential to establish mechanisms that enable conflict-free sourcing.

Broad industry cooperation is needed to achieve these objectives. Ericsson is a founding member of the [Global e-Sustainability Initiative](#) (GeSI). GeSI, in collaboration with the [Electronics Industry Citizenship Coalition](#) (EICC), has developed the [Conflict Free Sourcing Initiative](#) (CFSI) to enable "conflict-free sourcing" from the DRC.

Under the US Dodd-Frank Act, transparency on the origin of conflict minerals is required from all companies registered with the U.S. Securities and Exchange Commission. Ericsson has chosen to not ban minerals from the Democratic Republic of Congo but rather to focus on sustainable sourcing of these minerals. During 2013 we have taken steps to increase the transparency regarding conflict minerals in our supply chain. Thanks to our longstanding use of materials declarations we have considerable insight into where these minerals are used in our products and which suppliers to survey.



USES	TANTALUM (TA)	TIN (SN)	TUNGSTEN (W)	GOLD (AU)
Examples of usage in Ericsson products.	Small amounts used in certain capacitors.  Among Ericsson used capacitors less than 2% contain tantalum.	As solder in printed circuit boards. Tin has replaced lead as common solder metal. Almost all Ericsson printed circuit boards are soldered with tin solder.	Small amounts in specific electronic components, mainly oscillators.	Gold-plating of printed circuit boards and connectors.

# OCCUPATIONAL HEALTH AND SAFETY

Ensuring a safe, healthy working environment is an essential part of conducting business responsibly.

Providing a safe and healthy workplace is of fundamental importance to Ericsson. Our ambition is zero fatalities and our long-term objective is based on continuous improvements over time in order to reduce the number and severity of Occupational Health and Safety (OHS) incidents.

The Ericsson Group Management System (EGMS) is certified to the OHSAS 18001 standard. The OHS system helps to protect our employees and others engaged in company business, as well as our customers. The OHSAS 18001 standard includes requirements on securing safety for the public, and this is also included in our OHS framework. All operations undergo internal audits as well as regular third-party assurance audits. Risk assessment is carried out annually through strategic risk analysis.

In 2013 each Region carried out locally tailored awareness campaigns. These focused on different issues such as work-life balance, workplace stress, smoking cessation and the importance of nutrition and exercise.

**The right mindset**  
Our approach is based upon three values – Awareness, Prevention and Care. Ericsson emphasizes training in order to raise OHS awareness among our employees and our suppliers’ employees. We conduct occupational health and safety training at Ericsson, including incident management for line managers, incident investigation techniques for specialists, and further specialized training for high-risk occupations.

In line with our value chain approach to Conducting Business Responsibly, Ericsson’s suppliers and their employees are also included in the commitment to create a safe and healthy working environment. This is described in the [Supplier Occupational Health and Safety contractual requirements](#) covering high risk areas such as “Climbing and working at heights”, “Driving and Vehicle Safety”, and “Working with Electricity”. The standards continuously undergo reviews and are updated as needed. In 2013, we implemented additional requirements such as headrests in vehicles, limitations on loading weight, demands on how to tow a trailer, and lighting conditions when climbing.

All incidents are investigated for root causes. During 2014, we will implement a reporting tool that further improves the quality of incident investigation and enables follow up on corrective and preventive actions. The tool will provide important analytical capabilities.

- Addressing serious incidents**  
In 2013, there were 14 workplace fatalities, all involving suppliers’ engaged at Ericsson operations. Six of these involved climbing incidents, six involved driving incidents, and two people died while working with electricity. Any workplace fatality is unacceptable and Ericsson is taking concrete steps to address this, including:
- A program “Zero Incidents in High-Risk Environments” was established in early 2014, to reduce severe incidents internally and in the supply chain by further enhancing sub-contractor management, assessment criteria, inspections and consequence management. The 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.
  - New limits on working hours were defined in the updated Ericsson Code of Conduct. This is especially important for employees working with high-risk activities.
  - A driving program focused on safe driving will be conducted at global and local levels.
  - Actively working to reduce the amount and severity of incidents is in line with our ambition to have zero fatalities.

## RADIO WAVES AND HEALTH

Science reviews by the [World Health Organization](#) and other expert groups conclude that electromagnetic field (EMF) levels within limits prescribed by national authorities cause no adverse effects to human health.

Ericsson applies stringent product testing and installation procedures with the goal of ensuring that radio wave exposure levels are below established safety limits. We provide customer information, installation procedures and EMF compliance distances for all radio base station products, including small-cell products.

Ericsson works closely with other manufacturers in the [Mobile Manufacturers Forum](#) to address radio waves and health. Since 1996 we have co-sponsored over 100 studies related to electromagnetic fields and health. Fact sheets and FAQ on the issue are available on our [website](#).

# OUR PEOPLE STRATEGY FOCUSES ON HAVING THE BEST TALENT

Supported by our core values, we are building a high-performing and engaged workforce to lead our industry.

The focus of our people strategy is to have the best talent in the industry: build skills and competence and invest in leadership.

For Ericsson, business success and making a positive difference in the world go hand in hand. Our strong commitment to sustainability and corporate responsibility as well as the use of technology to help employees to achieve their career goals all contribute to attracting and retaining employees.

**Strategic approach to talent**  
Ericsson’s approach to talent is about attracting, developing, and retaining the best talent in the industry. To achieve this, we focus on four critical areas: talent acquisition, talent management, workforce

## 88%

of employees had an Individual Performance Management Discussion

planning and competency development, and building a high performing workforce.

Our talent acquisition strategy uses a variety of methods to reach potential hires. We have a strong and active social media presence, which connects us to experienced hires and new graduates. In 2013, we introduced a new employee referral program and saw a 50% increase in the number of referrals from Ericsson employees.

A high-performing workforce is motivated and has the skills needed to be successful in a competitive workplace. To help achieve this we have implemented a career and competence framework.

It is a global and integrated approach that enables employees to identify their competency gaps and development needs, and to take relevant training to reach career goals. We also encourage employee mobility by exposing employees to customers and cultures, which helps foster innovation.

One of the strongest drivers of employee engagement at Ericsson is our innovative, collaborative and values-driven work environment.

Employees are also given opportunities to work with our many Technology for Good initiatives. Both resonate strongly with our employees and are reflected in our employee engagement score, which at 77%, is in the top quartile of the global benchmark, made up of 250 companies.

## MANAGING TRANSITIONS RESPONSIBLY

An important aspect of conducting our business responsibly is to ensure fair labor practices for our employees, as described in our Code of Conduct. We also follow the standards and requirements of each country in which we operate.

Our aim is that the transitions associated with staff reductions or restructuring are managed responsibly. Our approach is to engage with employees and their union representatives as applicable in an open and transparent dialogue aimed at minimizing the negative impact of such decisions. We seek to find mutual agreements with unions and provide support to affected employees in finding new jobs, through job coaching, outplacement agencies, etc.

In countries where employee representation structures are not present, Ericsson employees can express their views through annual employee surveys or in some cases, through open employee meetings.

EMPLOYEES (NUMBER)					
	2013	2012	2011	2010	2009
Year end	114,340	110,255	104,525	90,261	82,493
Average	116,630	112,758	103,130	91,825	86,360
Average employment, years	8.0	7.6	7.5	8.0	8.0
Full time	113,184	109,071	103,524	89,251	81,391
Part time	1,156	1,184	1,001	1,010	1,102
Temporary employees	493	766	901	978	693
Employees who have left Ericsson	13,025	12,280	10,571	10,066	9,147
Employees who have joined Ericsson	17,110	18,010	24,835	17,834	12,900
Employees working on overseas assignment	990	1,094	1,184	1,240	1,428

Source: Ericsson



# IN GLOBAL MARKET, DIVERSITY AND INCLUSION IS A NECESSITY

A diverse and inclusive workplace taps into the best of global talent, fosters innovation, and gives us a competitive edge.

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. Diversity and inclusion spurs innovation, which in turn supports our business strategy.

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. Diversity must be supported by a truly inclusive workplace, in which individuals are acknowledged and valued for all the different perspectives, ideas and experiences that they bring to the workplace.

### Global Diversity and Inclusion Council

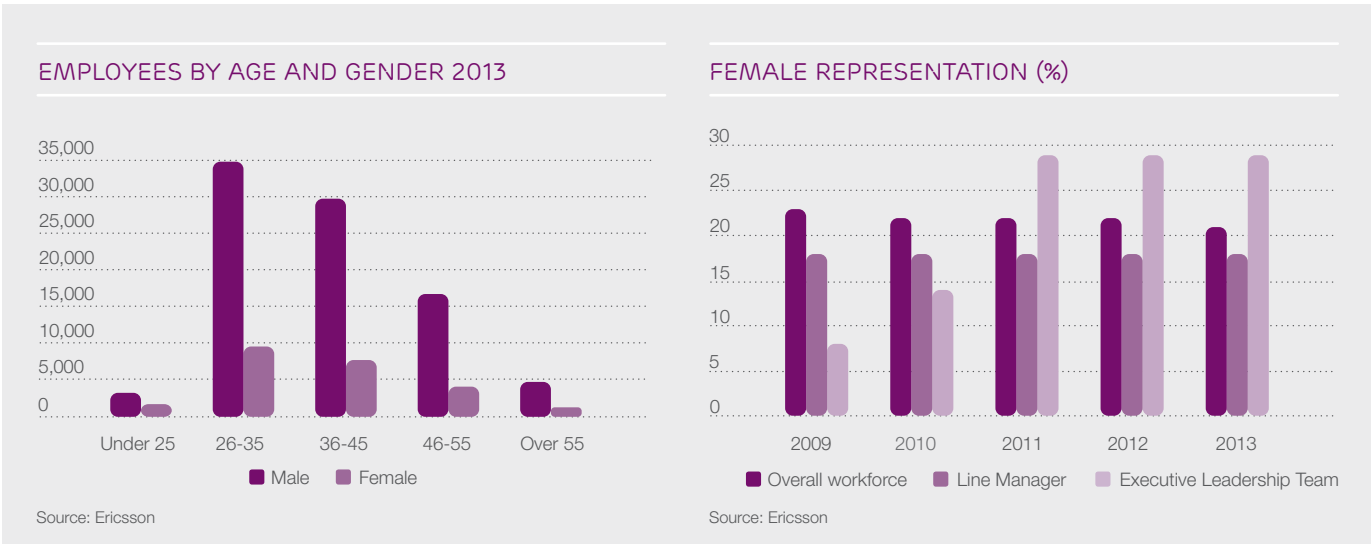
In 2013, we further strengthened our approach by forming a Global Diversity and Inclusion Council and appointing a Head of Diversity and Inclusion. The Council is comprised of business leaders representing regions, business units and Group functions across the company. The Council will review, approve and monitor activities and programs addressing diversity and inclusion. It will report its progress to the CEO and the Executive Leadership Team twice a year, and the Board of Directors as appropriate. There will also be councils at regional and local levels mirroring the global agenda, but with local priorities and activities as their scope.

### Focus on gender

Increasing gender diversity is a critical area of focus for Ericsson. Women make up a growing portion of the global talent pool and are entering the workforce at advanced educational levels. We also need to continue our efforts to attract more women to the ICT industry, as women have traditionally been under-represented in engineering and technology fields.



We set a long-term goal that by 2020, one third of our employees should be women. This is also in support of our commitments as members of the European Round Table of Industrialists, a high-level industry group which signed a voluntary target in 2012 to increase the number of women in decision-making roles. In the past few years, we have made steady progress in increasing the number of women at senior-level positions. A quarter of the Executive Leadership Team were women in 2013, a substantial increase in the past five years; the same percentage have nationalities other than Swedish. Similarly, the number of women in the top 250 most senior positions also continued to rise (see graph below).



# THE SKILLS TO LEAD IN A RAPIDLY CHANGING INDUSTRY

Building competence is necessary to ensure our people have the right skills to meet the challenges of a fast-changing industry.

Ericsson operates in a fast-changing industry. Market dynamics are shifting as we expand our global presence, enter new markets and evolve in new business areas. Our competence planning, tightly integrated with talent management ensures that we develop the right competencies and capabilities at all levels of the organization.

### Closing the gaps

In 2013 we migrated from our stand-alone Learning Management System to a global and integrated learning management system. It provides a holistic view of talent management and competence development. The new system supports employees in identifying skill gaps and providing suggestions on how to close these gaps.

### Developing competencies

Maintaining our key competencies in technical areas is critical. We have substantially increased our investments in targeted global learning programs especially focused on emerging technology trends. We focus on providing necessary skills so our employees can better solve our customers' business problems, help them improve top-line revenue growth and margins, and enhance customer satisfaction. To this end, we have launched world-class



## Over 1.9 million total hours were spent on employees' formal learning – online or classroom based.

learning programs to develop high-quality products and services for our customers as well as deliver excellent system integration, network rollout and managed services operations.

### Creative tools for learning

We leverage technology within the organization to foster innovation, collaboration and ease of learning. Using Ericsson Academy, employees can download and watch

podcasts on multiple devices, collaborate and share best practices with their colleagues, at any time and anywhere. Having sufficient time for learning is a key challenge as employees try to balance demanding

jobs with family, friends and leisure activities. That makes it all the more important to make learning as convenient, effective and accessible as possible.

### Video sharing and virtual campus

In 2013 we piloted Ericsson Play, our corporate video-sharing platform, which Ericsson will roll out globally during 2014. It enables employees to create videos to share with each other on different topics.

We also piloted our virtual campus in 2013 which allows virtual training from home or another location, easily connecting employees with one another. The virtual campus will be globally available during 2014.

An online Idea Box is also a resource for innovation to which any employee can contribute. The best ideas, whether it is for a more efficient process, a way to save costs or protect the environment, are captured for implementation.

Our longer-term ambition is to provide an end-to-end learning environment that includes both formal and informal learning, with a focus on leveraging technology so that our employees can share information, collaborate, and quickly find answers to questions and ensure their success. Our employee survey shows high levels of satisfaction with training, results that are above the industry norm.





# ENERGY, ENVIRONMENT AND CLIMATE

## A LIFE-CYCLE APPROACH BENEFITS THE ENVIRONMENT AND ECONOMY

We aim to minimize the negative environmental impacts of our activities and products in operation, while delivering solutions to enable the low-carbon economy.

The ICT sector is responsible for about 1.3% of the global GHG emissions measured in CO<sub>2</sub>e, and it is only expected to grow to about 2% in 2020, in spite of the expansion of the sector, due to advances in technology, and industry efforts to reduce energy consumption.

Across the sector, there is strong focus on energy efficiency and reducing energy consumption in mobile networks to innovating to provide transformative ICT solutions that help offset total global CO<sub>2</sub>e emissions.\*

Ericsson takes a full life-cycle approach (LCA), through raw material extraction, manufacture, transport, use, disassembly and end-of-life. In assessing our life-cycle carbon footprint and potential climate change impacts, we focus on the following three areas:

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

Our LCA consistently confirms that Ericsson's most significant environmental impact is the energy used by our products in operation. Our main aim is therefore to provide energy-efficient products,

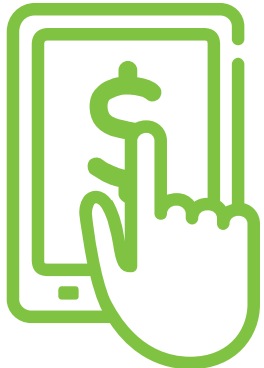
services and solutions that help customers optimize their networks (see page 31). We also seek to reduce the carbon footprint of our own performance (see page 29).

### Enabling the low-carbon economy

The Networked Society offers many solutions that lower energy consumption and conserve resources, and contribute to tackling climate change. By replacing physical products with services, and helping people to use resources more efficiently, ICT-based solutions can improve basic services while reducing CO<sub>2</sub>e emissions. For example, connectivity can significantly improve fuel usage in public transport systems, improve logistics and reduce fuel consumption in cargo transport.

According to the report, [SMARTer 2020 from the Global e-Sustainability Initiative \(GeSI\)](#), the role of ICT in driving a sustainable future, ICT can reduce global greenhouse gas emissions by 16.5%, saving \$1.9 trillion in energy and fuel costs and cutting 9.1 gigatonnes of CO<sub>2</sub>e emissions.

With the right investments, regulatory frameworks, and changes in consumer behavior, ICT can play a central role in realizing the low-carbon economy.



\* Carbon dioxide equivalent; the internationally recognized measure of greenhouse gas emissions.



# LOOKING AT THE CARBON IMPACT OF INCREASED CONNECTIVITY

Ericsson’s research into the energy performance of ICT networks aims to maximize energy efficiency in the Networked Society.

Ericsson’s vision is to connect not only people but also an estimated 50 billion devices, via machine to machine (M2M) and cloud-enabled services and technologies that can facilitate rapid development of solutions like smart grids, intelligent transport and smart buildings.

The estimated total carbon footprint for the ICT sector in 2020 will be about 1,100 million tonnes CO<sub>2</sub>e of which mobile networks and devices account for 25%, according to the [Ericsson Energy and Carbon Report](#) (2013). Improving energy efficiency is essential to offset growth in user numbers, data volumes and network capacity (see page 30).

### Smartphones take off

In both mature and emerging markets, smartphones have pushed up the demand for capacity. According to the [Ericsson Mobility Report](#), smartphones accounted for 25% to 30% of global mobile subscriptions at the end of 2013, a figure expected to grow to 60% by 2019.

These trends make it crucial that the telecom industry continues its efforts to reduce total energy consumption in mobile networks while continuously improving performance so that it can cater for increasing traffic and the next billion subscribers.

### Impact of M2M

The impact of the growth in connected devices was analyzed in the [Ericsson Energy and Carbon study](#). Using a scenario that looked at the carbon footprint of the industry, the study found that even with a high

uptake of connected devices, the additional CO<sub>2</sub>e from manufacture and operation of new communications modules will not be significant compared to growth projections. Rather this highlights the enabling benefits of the networked society in terms of CO<sub>2</sub>e reduction potential, efficiency gains and overall benefits to society.

### Joint studies bring new insights

A recent study that Ericsson conducted with telecom operator Telia-Sonera on the carbon footprint of the ICT sector in Sweden shows that the sector’s footprint is about 160 kg per capita, or 1.2% of Sweden’s total footprint. The majority of the footprint originates from user equipment, particularly PCs, followed by third-party enterprise networks and data centers, and then access networks. User equipment accounts for more than 50% of the carbon footprint, due to emissions from manufacturing abroad.

A life cycle assessment [study with Sony Mobile](#) looked at the global warming potential for a smart phone. Given a three-year use time and the conditions of the study, the total CO<sub>2</sub>e emissions, including the mobile network and accessories, was about 120 kg CO<sub>2</sub>e assuming medium usage and a global electricity mix. The smart phone itself accounts for a total of about 50 kg CO<sub>2</sub>e during its life time.

## ERICSSON'S CARBON FOOTPRINT AND LCA

Last year we reached our [five-year target](#) to reduce carbon footprint intensity by 40% one year ahead of schedule. 2013 is the fifth and final year of this target which focuses on: Ericsson’s own activities and the life cycle impacts of our products in operation. Results for the five-year target are below (see also graph):

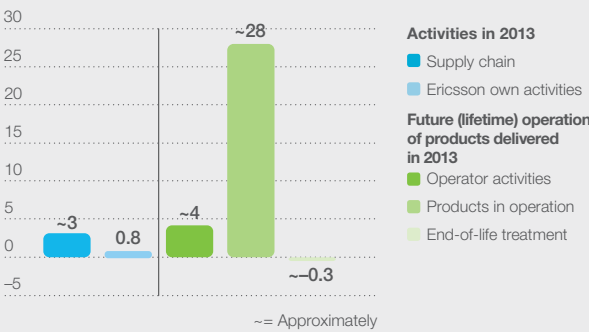
- > a 56% reduction in direct emissions intensity from our own activities, including facilities use, product transportation and business travel
- > a 47% reduction in indirect emissions intensity from life cycle impacts of our products in operation

In 2012 Ericsson set an objective to maintain absolute CO<sub>2</sub>e emissions from business travel, product transport and facilities at 2011 levels up to 2017. This translates to a reduction of 30% CO<sub>2</sub>e per employee. For 2013, the full-year reduction was 10% CO<sub>2</sub>e per employee.

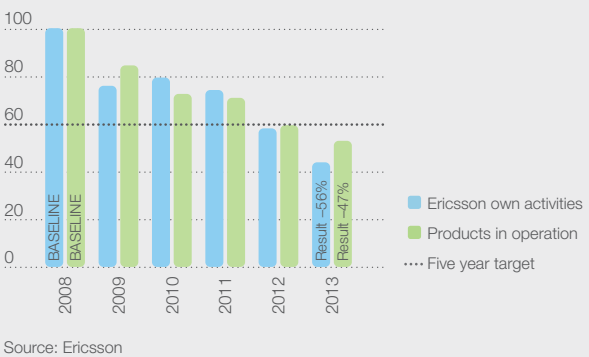
### Historical milestones of LCA at Ericsson

In the early 1990s Ericsson undertook the first life cycle assessment study of a printed circuit board for a switch. As our knowledge grew, we then began to focus on assessing complete products, such as a radio base station. In the late 1990s we started to work with operators to build LCA models of complete networks. Our first LCA of a mobile terminal identified that the energy consumption of the charging units, which were often continually plugged in, contributed significantly to the total life cycle impact. Insights such as this led the mobile industry to be one of the first to develop smart chargers with very low standby consumption. Our continued research shows that energy consumption during the use phase remains to be the major contributor to the impact of ICT, and we consistently focus here.

ERICSSON LIFE CYCLE ASSESSMENT CARBON FOOTPRINT 2013 (MTONNES CO<sub>2</sub>E)



CARBON FOOTPRINT INTENSITY TARGET: FIVE YEAR RESULT (PERCENT)



Ericsson's global ICT data center in Sweden.

## LIFE CYCLE ASSESSMENT AT ERICSSON – A 20 YEAR PERSPECTIVE

Ericsson has a long history of working with LCA. This has evolved from a product-based perspective in the early 1990s, to broader systems thinking which today includes estimates on ICT’s potential to offset CO<sub>2</sub> emissions from other sectors.



# NEXT HORIZON FOR ENERGY PERFORMANCE: 5G NETWORKS

Ericsson plays a leading role in industry research focused on improving the energy efficiency of next-generation mobile broadband systems.

In the evolution of the Networked Society, the next-generation 5G mobile communication systems will be instrumental. The communication network and service environment of 2020 and beyond will be richer and more complex than today and ICT will be used by many industry sectors increasingly focused on energy performance. For the ICT sector itself, one of the challenges is to handle this large growth of data with unprecedented energy performance.

The pioneering EU three-year research project [EARTH](#) (Energy Aware Radio and

**Sustainability, security and privacy are increasingly relevant to technology leadership in the networked society.”**

Ulf Ewaldsson



Ulf Ewaldsson, Chief Technology Officer.

neTwork technologies), in which Ericsson played a leading role, set a target to reduce the energy consumption of mobile systems by a factor of at least 50% compared with the current ones. In 2012, EARTH successfully concluded, showing solutions with a potential to reduce energy consumption in LTE/4G networks by up to 75%, and establishing new best practice for energy efficiency evaluation of 4G systems. This knowledge is now being transferred to product development, while the research now turns further into the future focusing on 5G.

**Laying foundation for the future**

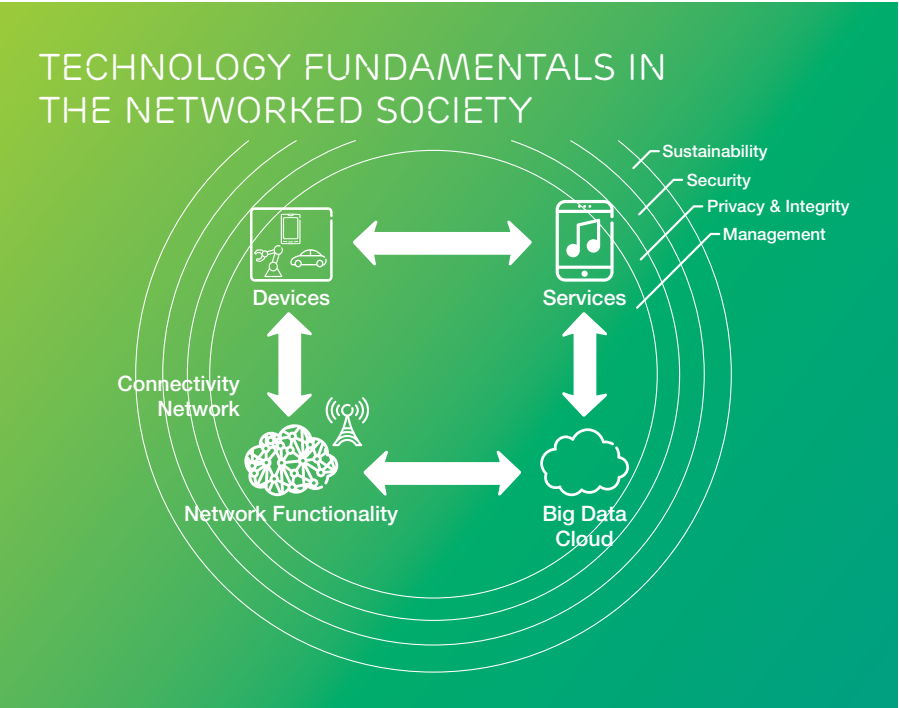
Ericsson is leading the EU-funded [METIS](#) research project (Mobile and wireless communications Enablers for Twenty-twenty (2020) Information Society). The first international and large-scale research activity on 5G, it began in 2012 and will run until 2015. The objective is to lay the foundation for a future mobile and wireless communication system for 2020 and beyond in which energy performance is among several impor-

tant design criteria. The 29 partners include telecom products and solutions providers, operators, and the automotive industry.

Ericsson is a partner in [5GReen](#) – Towards Green 5G Mobile Networks, a project within the European Institute of Innovation and Technology ICT Labs. Partners Ericsson, KTH (the Royal Institute of Technology in Stockholm), Aalto University in Helsinki, and Telecom Italia are focused on enhancing the energy performance of 5G mobile networks.

In 2013, a new [5G Infrastructure Public-Private Partnership](#) was launched with the EU. In this long-term research initiative, stakeholders from the ICT sector and research institutes are investigating solutions, architectures, technologies and standards for 5G communication infrastructures, with specific attention to energy efficiency.

These initiatives aim to identify solutions to meet future societal needs in a way that is affordable and sustainable, and low energy consumption is key.



The Networked Society.

# ENERGY-INTELLIGENT NETWORKS

Through innovative products, solutions and services, Ericsson helps operators reduce energy consumption and increase energy efficiency in networks.

Building energy-efficient networks is about taking a holistic approach to prioritize energy performance throughout the entire system. It requires using the right products and solutions with precision while maintaining superior network performance.

**Modernizing the network**

Modernization of the network can yield significant energy savings. Operator Swisscom has set a goal to make its network operations 20% more efficient by 2015, compared to 2010, and already uses 100% renewable energy for its operations. To help reach Swisscom's goal, Ericsson swapped 2G and 3G equipment for efficiency-maximizing multi-standard technology focusing on LTE. Swisscom estimates that modernizing improvements will save energy and cost of 15 million kWh annually, equivalent to the energy use of 3,000 homes. As its network continues to expand, the move to LTE provides users with the latest bandwidth services, yet entails minimal additional impact to network energy consumption.

Similarly, [Orange's network in Jordan](#) will see lower energy consumption, cost and reduced environmental impact with the agreement to have Ericsson upgrade the operator's existing packet core and its radio access network by replacing the older radio base stations with Ericsson's latest RBS 6000 family of base stations.

**Adapting to traffic variations**

The large variation in traffic load over a network presents great opportunities for energy savings through scaling of capacity. It is more common for the load in cellular networks to be low rather than high. As described in a recent [Ericsson Review](#) article, "Radio Network Energy Performance: Shifting focus from power to precision," typically, half of the network sites carry only 15% of the total traffic while 5% of sites carry 20% of the traffic. In addition, traffic growth tends to increase most at times and locations where it is already high while growth is much slower where loads are already low.

Most networks therefore feature low traffic loads most of the time and in most locations. While the industry normally focuses on performance at peak loads, in fact energy consumption is dictated by how well a radio base station performs at a low load. Reduction in power consumption can be achieved through improved adaptation to traffic variations. Ericsson provides capacity solutions that meet the varying traffic needs in operators' networks for both high-traffic and low-traffic nodes.

**With AIR, energy savings**

In some radio base station solutions, hardware is mounted in the tower or inside the antenna, such as in the [Ericsson Antenna Integrated Radio \(AIR\)](#) products. When compared with standard base stations using passive antennas, the AIR solution eliminates feeder losses and has a simplified cooling system, resulting in a 40% reduction in energy consumption and energy cost. [Operator SMART](#) in 2013 became the first in Southeast Asia to deploy AIR.

**Unique Psi-coverage solution**

The Ericsson [unique Psi-coverage](#) solution is an innovative solution providing cost-efficient broadband coverage in areas with light to moderate traffic volume. The solution uses a single radio unit to provide the same 3G coverage as an ordinary base station equipped with three radio units. Deployment across 11 markets over 18 months demon-



## UNDERSTANDING CUSTOMERS' ENERGY CHALLENGES

When building high-performing networks, telecom operators take into account many design aspects, including how to achieve top user performance as traffic continues to grow, as well as the best possible energy performance.

Mobile operators worldwide are looking for ways to address energy-related opex and network energy consumption in all aspects of their business, with scalable and adaptable solutions that are both energy efficient and cost efficient. This is due in part to increasing energy bills but also because energy has become a strategic issue for most nations.

Of the total network operating expenses, energy accounts for 10 to 15% in mature markets and up to 50% in developing markets. In some developing and growing markets, particularly in remote rural areas, availability of power and reducing reliance on diesel is a top industry concern.





Ericsson Radio Dot System launched in September 2013.

strated energy consumption reductions of 40% on node level without sacrificing user performance. Consumption reduction on such a scale is fundamentally achieved through less hardware both in terms of fewer modules and in terms of adapting the capacity of the remaining modules to the actual capacity demand.

Vodafone was first to launch the solution in Egypt in 2012. Currently, Robi Bangladesh has the largest deployment with over 1,000 sites. The lower energy consumption makes 3G coverage more affordable for people living in rural areas.

**Radio Dot delivers more efficient indoor coverage**  
At present, more than 70% of mobile traffic is generated indoors. The need for indoor connectivity in environments where large numbers of people gather and consume large amounts of data, such as stadiums, shopping centers and multi-story office blocks will increase with mobile data traffic projected to increase 10 times from 2013 to 2019. An in-building environment presents a special set of challenges for mobile operators, concerning complexity, scalability and service continuity. Current indoor solutions are built mainly for voice coverage and do not meet the growing capacity demands of apps. Providing coverage to major parts of buildings has been challenging, for reasons such as high costs and limited scalability.

In 2013, a game-changing product for indoor coverage, the [Ericsson Radio Dot System](#), was introduced. It reduces power requirements by more than 50% compared to traditional Distributed Antenna Systems, (DAS), as well as prolongs battery life of end-user devices used in enterprise environments, such as smartphones and tablets. The Radio Dot enables a reduction in cabling costs up to 60% since it only needs a regular Ethernet cable to provide both power supply as well as radio signals. Sometimes, this cable may even already be available and can be re-used.

**Remote Site Management**  
Another way to tackle energy-related costs for a site is through [Ericsson Remote Site Management](#). By adding intelligence to the site infrastructure, it enables energy-efficient solutions such as hybrids of solar, wind, and fuel cells, to be managed remotely from the Network Operational Centre. In this way the energy related OPEX for a site can be reduced by up to 90%. This includes not only using energy-efficient sources but also reducing as many as two out of three site visits.

By optimizing the battery health, the solution can also triple the battery lifetime and reduce unnecessary battery swaps. The hybrid energy system is able to store and retrieve energy in and from battery banks using solar or other renewable energy sources.

In many countries with no electricity grid, or an unstable grid, diesel generators are the only source of energy, running 24/7 and consuming diesel with negative environmental impact. Remote Site Management is aimed at reducing the running time of the diesel generator by adding or replacing it with alternative energy sources.

During 2013, demand for solar-hybrid solutions has continued to increase globally. Energy management systems, such as the Ericsson Remote Site Manager, are key to the successful deployment of hybrid solutions. For off-grid RAN (Radio Access Network) sites, solar-die-

sel-battery hybrids offer reductions in diesel consumption (and related OPEX and CO<sub>2</sub> emissions) of up to 80% compared to 24/7 use of diesel generators.

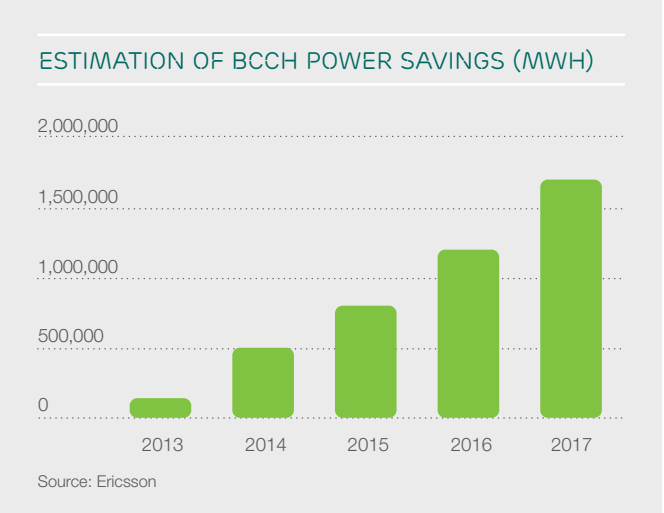
**Improving energy consumption in installed base**  
Replacing old hardware with new is not the only option for improving energy performance. Ericsson is active in deploying software features that place various mobile network components into low-power or stand-by mode in line with traffic conditions with the result of reducing overall network energy consumption. Software features are important in that they allow Ericsson to help customers to save energy for existing mobile networks equipment. This is especially important for the huge installed base of GSM.

Ericsson offers a family of power saving software features for GSM networks. Building on the BTS Power Savings software feature that switch off radio carriers and Timeslot Power Savings features that switches off timeslots on one carrier, Ericsson's BCCH (Broadcast Control Channel) Power Savings software feature enables even further savings in GSM networks through allowing timeslots to use low power on the carrier that delivers the control signaling.

In addition, capacity-enhancing features can be combined with power saving features to help to further increase the efficiency of the network.

**Energy savings via the cloud**  
Cloud computing is gaining momentum as a substitute for traditional IT infrastructure, due in large part to its on-demand model for providing computing resources. Designed for demanding telecom environments, the Ericsson Business Support Systems (BSS) portfolio running on a virtualized cloud-based infrastructure lowers costs through improved scalability, automation and energy efficiency.

Cloud-based architecture makes it possible to consolidate virtual machines to physical servers, and turn off unused physical servers to save energy. In one case, Ericsson assisted a European mobile network operator with such a solution from the BSS portfolio. With 90% of the applications running in a virtualized environment, 60% less power and cooling was required.



### IN RECOGNITION

Ericsson placed 55th overall on the Corporate Knights 10th Annual Global 100 Most Sustainable Corporations in the World ranking for 2014, which published on January 22nd and is launched annually at the World Economic Forum in Davos.

### RURAL COVERAGE DRAWS FROM SOLAR ENERGY

**Managed Rural Coverage**, is a service provided by Ericsson. It allows operators to provide telecommunication services such as voice and data to even the most remote rural areas within their markets. Usually these areas have little or no access to telecommunication. The technical solution consists of a mobile telecommunication base station with low-power consumption, using solar energy and a satellite connection for the transmission. Pilot sites have been implemented in Africa and Latin America and show promising results.

# REDUCING ERICSSON'S OWN IMPACTS

We work to continuously improve the sustainability performance of our own operations – a key priority is reducing carbon intensity per employee.

Our aim is to reduce our carbon footprint from direct operations while improving productivity and achieving a cost-benefit balance. We do this by: reducing energy use in facilities (offices, production sites, data centers and test labs) and prioritizing purchase of green certified energy when practical; 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.

Our long-term objective is to maintain absolute CO<sub>2</sub>e emissions from Ericsson's own activities for business travel, product transport and facilities energy use at 2011 levels up to 2017. This means reducing CO<sub>2</sub>e per employee by 30% over five years. In 2013, Ericsson exceeded its 5% target; achieving a reduction of 10% CO<sub>2</sub>e per employee.

In 2013, 78% of outbound freight went by surface rather than air, part of a strategic shift.

### Facilities energy use

Our facility strategy is three-fold: to decrease square meters per employee and enhance workplace functionality; shift from older to newer, more energy-efficient buildings; and implement internationally recognized [Leadership in Energy and Environmental Design](#) (LEED) green building requirements. Ericsson facilities in India, US, Hungary and Sweden are certified as LEED Gold. Green buildings result in better indoor environmental quality, improved energy and water efficiencies, and optimized use of materials. During 2013, the green building-rated area for Ericsson had increased to 9.6% compared to 5% at year-end 2012. We are also implementing more flexible ways of working, including 'free seating', teamwork work-spaces and greater use of video-conferencing.

In Sweden, we have had 100% green-certified electricity since 2008. In 2013, the total share of certified green electricity in our facilities measured and calculated was 35% globally and 79% in Europe.

### Data centers to save energy

In 2013, [Ericsson announced plans to build three high-tech, energy efficient global ICT centers](#) over the next five years; two in Sweden and one in Montreal. One center in Sweden began initial operations in 2013; the other comes on board in 2014 and Montreal in 2015. Ericsson estimates that the centers' leading-edge design will cut energy consumption up to 40%.



### Product transportation

We have made a strategic shift from air to surface freight to reduce emissions from our product transport. In 2013, 78% of outbound freight went by surface, exceeding our 75% target. Making changes in the distribution supply chain such as optimized packaging, scheduled departures and increased rail will enable Ericsson to reduce our CO<sub>2</sub>e transport footprint. Ericsson also uses the [Clean Shipping Index](#), an online tool which gives a rating to ships and shipping companies based on their levels of emission of CO<sub>2</sub>, nitrogen oxides (NOx), sulphur oxides (SOx) and particulate matter (PM), in our procurement process.

### Business travel

This year, emissions from air travel actually grew by 9% per employee due to changing business mix, however emissions from air travel have declined by 16% per employee compared to the 2011 baseline. We deploy and promote the use of our own technology and communication and collaboration tools such as [Ericsson Visual Communication](#), a high-quality video conferencing solution, as a substitute to travel. In 2013, the number of video conferencing rooms grew by 18%.

### Fleet vehicles

Our vehicle fleet is increasing in significance as our Managed Services business grows. Therefore, we have set a new target to reduce CO<sub>2</sub>e/km which will be aided by a telematics pilot, purchasing vehicles with smaller engines, and trials on various renewable fuels.

### Environmental numbers

#### ENERGY CONSUMPTION (GWH)

	2013	2012	2011	2010	2009
Electricity	845	808	830	650	651
District heating	47	56	60	93	95
Other energy	96	121	130	100	97

#### PRODUCT TRANSPORTATION (MTONNEKM)

	2013	2012	2011	2010	2009
Air transport	294	452	481	346	226
Road transport	264	372	360	257	300
Sea transport	309	338	99	58	165

#### BUSINESS TRAVEL (MPKM)

	2013	2012	2011	2010	2009
Air travel	1,320	1,200	1,400	1,250	1,003
Road travel	77	74	129	90	90
Fleet vehicles	390	339	-	-	-
Commuting	430	415	375	300	295

#### PRODUCTION AND OFFICE WASTE (TONNE)

	2013	2012	2011	2010	2009
Total	16,100	29,512	31,045	23,863	20,788
Recycling	6,025	13,500	16,300	11,100	9,521
Energy	5,215	9,900	8,400	6,600	6,089
Landfill	4,510	5,400	5,400	5,100	4,456
Hazardous	150	712	945	1,063	722

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 = Million transport work  
KTonne: One thousand tonne  
Mtonne: One million tonne  
GHG: Greenhouse Gas

Source: Ericsson

### Emissions (CO<sub>2</sub>e)

#### EMISSION FACTORS USED IN THE CONSOLIDATION

Aspect	Emission factor	Source
Electricity	Country specific	International Energy Agency
Electricity, Sweden	0.0007 kgCO <sub>2</sub> /kWh	Sites in Sweden uses "Good environmental choice" from Telge Kraft.
Green electricity	0.0010 kgCO <sub>2</sub> /kWh	
District heating, Other regions	0.22 kgCO <sub>2</sub> /kWh	Chalmers Industrial Technology Average. Site specific when available.
District heating, Sweden	0.10 kg CO <sub>2</sub> /kWh	Chalmers Industrial Technology / "Boverket" (Swedish Building Adm.)
Fuels GHG protocol (for each typical fuel)		
Air travel	0.12 kgCO <sub>2</sub> /pkm	GHG protocol (average for long/medium air travel). DEFRA GHG indicators for long haul air travel.
Car travel	0.16 kgCO <sub>2</sub> /pkm	"Vägverket" (average car in the EU) (Vägverket = Swedish Road Adm.)
Air transports	0.65 kgCO <sub>2</sub> /tonnekm	Based on an investigation of air transport by Ericsson.
Road transports	0.08 kgCO <sub>2</sub> /tonnekm	GHG protocol, average Swedish road transports according to Swedish Road and Transport Research Institute.
Ship transports	0.017 kgCO <sub>2</sub> /tonnekm	Average of Maersk Line and Ericsson typical TEU, TEU = Twenty foot container eq. unit.

#### DIRECT (KTONNE)

	2013	2012	2011	2010	2009
Total	357	355	260	204	201
Energy (S1)	20	30	32	30	26
Fleet vehicles (S1)	66	62	-	-	-
Energy (S2)	270	263	228	174	175

#### INDIRECT (KTONNE)

	2013	2012	2011	2010	2009
Total	472	554	621	443	361
Business travel (S3)	172	159	189	164	134
Product transportation (S3)	229	326	370	229	180
Commuting (S3)	71	69	62	50	47

#### OTHER INDIRECT (MTONNE)

	2013	2012	2011	2010	2009
Total	28	26	24	18	19
Products in operation (S3) – future (life time)	28	26	24	18	19

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

Source: Ericsson



# TAKING BACK E-WASTE

Ericsson is committed to proper handling of electronic waste.

Waste from electrical and electronic equipment (WEEE), globally known as e-waste, is a growing problem. Global e-waste reached 48.9 million tonnes during 2012 and is [expected to increase 33% by 2017](#). More than 80% of this is not treated in proper e-waste recycling facilities.

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.

Ericsson's Ecology Management and Product Take-Back program takes responsibility for products at the end of their life to ensure that this waste does not end up in trade-restricted areas, landfill, or in places where unethical business practices are taking place.

### A global, proactive approach

Our proactive approach is intended to address the risks associated with e-waste – such as improper handling and treatment, transport, emissions to the environment and risk to human health.

More and more countries are preparing e-waste legislation, often based on the EU's Waste from Electrical and Electronic Equipment (WEEE) Directive. Ericsson started working with the e-waste issue in advance of the 2005 EU Directive, and we have a global proactive approach that exceeds EU regulations since that time.

Our approach, we make our program available to all Ericsson's customers globally free of charge, not only in markets required by law.



### PRODUCT TAKE-BACK (T-B) AND END-OF-LIFE TREATMENT (TONNE)

	2013	2012	2011	2010	2009
e-Waste treated	9,872	8,248	5,567	5,672	9,772
Reuse, %	0	1	5	2	3
Recycling, %	95	94	88	91	89
Energy, %	2	4	5	6	6
Landfill, %	2	2	2	1	3

Source: Ericsson

### Emphasis on re-use and recycling

When we take back our products, we re-use or recycle more than 98% of the materials. This reduces the need to use the diminishing reserves of global natural resources.

We also continued to expand our ecology management program: product take-back and recycling targets have been increased significantly from 8.2 thousand tonnes in 2012 to 9.9 thousand tonnes in 2013.

EU WEEE Directive requirements concerning take-back as a percentage of equipment put on market (PoM) for 2016 is 45% and 85% by 2019. During 2013, approximately 6% of e-waste was taken back versus put on market, while continuing to ensure less than 5% of e-waste treated by the Ecology Management Program is disposed of in landfill.

### Careful selection of recyclers

To handle and process e-waste, Ericsson utilizes a small number of carefully selected e-waste recyclers who provide global coverage and economies of scale through subsidiaries and partners around the world. Due to the sensitivity and environmental risks associated with processing and handling e-waste, using a few proficient recyclers helps Ericsson achieve economies of scale and makes it easier to control proper handling. We audit our recyclers and their sub-suppliers at least annually on aspects like code of conduct.

### Raising the bar

We set a long-term objective to "Achieve 50% of e-waste take-back vs. Equipment Put on Market in 2017 while continuing to ensure less than 5% of e-waste treated by Ecology Management Program is disposed of in landfill," primarily through increased customer awareness and better integration of decommissioning services with the Ericsson take-back process. We also participate in global organizations focused on improving the handling of e-waste such as the UN StEP (Solving the E-waste Problem).

# RESHAPING OUR WORLD WITH LOW-CARBON ICT SOLUTIONS

Greater utilization and uptake of ICT is critical for the transformative change needed to create the low-carbon economy.

The ICT sector is playing a major role in advocating the need to put the world on the path to the low-carbon economy. According to [SMARTer2020](#) from GeSI, ICT technology can reduce global CO<sub>2</sub>e emissions with 16.5% by 2020 corresponding to 9,1 Gtonnes CO<sub>2</sub>e emissions. As the world faces increasing environmental challenges, it is essential to shift economic development onto a more resource-efficient growth. ICT can reduce energy use, cut greenhouse gas emissions and build resilience to the effects of climate change.

### Unlocking efficiency gains

This can be achieved in a variety of ways, from smarter, more sustainable cities to enabling smart grids to reducing travel and transportation by substituting and optimizing existing travel and transportation systems. Industries will be increasingly digitalized, with nearly every industry rethinking how mobility, big data and the cloud will transform and optimize their business.

Dematerialization is presenting a major opportunity to shift from a product to service economy, reducing waste and saving resources, and inspiring innovation, on both the individual and enterprise level. For businesses, the transformation means a digital version of a product can be delivered immediately when requested, or reinvented, or created more efficiently. The financial services and insurance industries, for example, leverage electronic bookkeeping to keep track of financial transactions, dramatically reducing the need for paper records. In natural resource-intensive industries, digitization or dematerialization can substitute or eliminate the need for an emissions-intensive product or service.

### Changes in consumer habits

On the individual level, ICT has changed consumption habits which have often reduced the flow of products and materials in society, the increasing digital consumption of music and films is an example. By replacing physical products with services, and by helping people to use resources more efficiently, ICT-based solutions can improve

basic services while reducing CO<sub>2</sub> emissions. In many aspects of life, the world is being reshaped by mobility and connectivity. As urban populations grow, ICT can be an enabling technology to sustainable growth.

Ericsson recognizes that concerted action by policymakers to reinforce the right incentives and frameworks will be critical to powering the Networked Society and we are engaging with partners that can help bring insight, scale and innovating solutions to the challenges.



Commissioners Dr. Hamadoun Touré, Hans Vestberg, and Carlos Slim Helú, at the 8th Broadband Commission for Digital Development Meeting in New York, September 2013.

## FROM PLAN TO ACTION

Despite growing use of national broadband plans as key policy instruments to accelerate the use of ICT to hasten the low-carbon economy, many countries overlook opportunities to leverage ICT to address urbanization, climate change and other sustainable development challenges. This is a finding of a 2013 report, "[Transformative Solutions for 2015 and Beyond](#)" published by the Broadband Commission Task force on Sustainable Development, led by Ericsson. The report analyzed 138 national broadband plans on how they used ICT to further sustainable development. For instance, the USA,

Ecuador and Singapore all identified in their plans ICT investments to support efficient energy generation, distribution and consumption through use of smart meters. The report found that broadband-enabled solutions can reinvent business models and allow countries to 'leapfrog' from high GHG-emitting technologies to low-carbon development. The report is backed by a call to action – a manifesto signed by each Broadband Commissioner, urging future sustainable development discussions to acknowledge and leverage existing technology.



# ERICSSON'S THINK TANK NEST SPOTLIGHTS URBANIZATION CHALLENGES

Reinventing urban life was at the heart of the 2013 NEST Forum. One result was the announcement of an Ericsson and UN-Habitat collaboration.

NEST – the Networked Society Forum brings together thought leaders from every walk of life to discuss and tackle topics of vital interest to society. Hosted by Ericsson, it is an incubator for new ideas and solutions on how to leverage the power of ICT to help benefit people, business and society around the world. In 2013, NEST gathered over 100 leaders within government, planning and ICT to discuss how to tap into mobility, broadband and the cloud to address urbanization challenges.

### Ericsson partnership with UN Habitat

One result of NEST in 2013 was the announcement that Ericsson will enter a three-year collaboration on sustainable cities with UN-Habitat – the agency mandated by the United Nations to promote socially and environmentally sustainable towns and cities. Ericsson and UN-Habitat will jointly cooperate to conduct collaborative research and specific projects which aim to provide valuable insights for city leaders and policymakers on sustainable urbanization. We will also explore how to design clear policies and implement tools around ICT's role to create more sustainable, better integrated and connected cities and towns.

### Increasing urban resilience

The research aims to explore sustainable urbanization and collaboratively develop best practices on the role of ICT to make cities more environmentally, socially and economically resilient. Scenarios will deepen our understanding, as will development of methodologies and indices to assess ICT's impact on urban sustainability. We will also look at urban residents' experience of ICT-enabled solutions.



Kathy Calvin, President and CEO UN Foundation, at Ericsson's NEST event, November 2013.

# CREATING MOMENTUM FOR CHANGE

A new initiative launched by the UN Framework Convention on Climate Change spotlights ICT as a sector with a strong role to play in tackling climate change.

Ericsson actively engages with stakeholders and policymakers to drive initiatives that will accelerate broadband's potential to transform cities, increase efficiency, spur innovation, and enhance quality of life; in all these discussions, climate change remains an overriding concern.

Two years ago at the global climate change negotiations, COP17 in Durban, South Africa, Ericsson, along with mobile operator Vivo, were recognized for one of the ten most inspiring examples of how ICT solutions can reduce CO<sub>2</sub> emissions, as part of the newly launched UN Framework Convention on Climate Change (UNFCCC) Momentum for Change initiative. The recognition was for the connected bus solution in Curitiba, Brazil, with an electronic ticketing and fleet management system enabled by mobile broadband which reduced fuel consumption. In 2012, at COP 18 in Qatar, Ericsson participated in the GeSI launch of the SMARTer2020 report.

### ICT recognized by UNFCCC

These two events led to a new area of collaboration in 2013 under Momentum for Change: ICT Solutions, in partnership with GeSI, underscoring the critical role the ICT sector plays in addressing climate change. Launched at COP-19 in Warsaw, Poland,



Matilda Gennvi Gustafsson, Sustainability Director, speaking at the launch of the ICT pillar within UNFCCC Momentum for Change, at COP19 in Warsaw.

the collaboration is intended to serve as an inspiration for the global community to raise ambition and encourage action on climate change through ICT. Ericsson is a member of the Advisory Board of the Momentum for Change initiative within UNFCCC.

and building resilience. The most inspiring, innovative and successful activities will be selected as Momentum for Change Lighthouse Activities, which will be recognized and celebrated during the COP20 in Lima, Peru, in December 2014.

Starting in 2014, people, institutions and companies can submit examples of how the ICT sector is addressing climate change

## VIEWPOINT

Joan Clos,  
Executive Director of the United Nations  
Human Settlements Programme (UN-Habitat)



How can we best capture the opportunities and minimize the challenges of urbanization?

"Traditional approaches to planning and management of cities have been reactive. UN-Habitat's approach to planned city extensions avails practitioners and city administrators the opportunity to plan cities in a proactive and sustainable

manner, promoting accessible and affordable public transport, robust infrastructure and services, and mixed-land use. Above all, sufficient land in all planned city extensions should be allocated to public space."

What is your view on how ICT sector can contribute to smarter and more sustainable cities?

"The ICT sector is a game changer in most disciplines. For urbanization, ICT facilitates the mass collection of information, allowing us to understand how people use their cities, encouraging more informed, data-driven decision making. For urban citizens, strong ICT infrastructure encourages increased productivity and efficient flow of information and services."



## BOOSTING THE TRIPLE BOTTOM LINE

The Ericsson Networked Society City Index 2013 surveys 31 major world cities and measures their ICT maturity in relation to their triple bottom line of social, environmental and economic impact. In this way, it offers a broad perspective on sustainable development and provides city officials, businesses and citizens with a tool that can be used to exploit emerging possibilities associated with a connected world. This fourth edition ranks Stockholm, London and Singapore as the top three cities. Data presented shows that advances in ICT create opportunities for economic growth through efficiency gains in both production and services. Stockholm's top ranking is due to its well-developed ICT infrastructure, with a high penetration of smartphones and high-speed connections.



# A NEW URBAN VISION: THE SMART, SUSTAINABLE CITY

According to UN-Habitat, in 2050 cities will account for 70% of the world's population. Cities need a sustainable path to handle growth.

While cities face challenges such as poverty and environmental degradation, the world's top 600 cities generate about 60% of global GDP, although currently home to only 22% of the world's population. As more people move to cities, there will be growing pressures on public transportation, water and air quality, employment, urban planning, and growing income gaps.

Through our ICT-enabled solutions and initiatives with partners, Ericsson is actively working on ways to empower inclusive, productive and resilient cities, with ICT as the core of basic urban infrastructure. Mobility, broadband and the cloud can help transform urban communities to be more inclusive and enjoy a better quality of life while being climate-smart and resource-efficient. The number of cities seizing these opportunities is growing rapidly.

### Smart buildings in Paris

Ericsson has entered a public-private partnership driven by the [Agence Parisienne du Climat](#) (an agency of the city of Paris), in which Ericsson will develop a software platform to promote better energy performance of buildings. The program, Coach CoPro, was launched in October 2013. Ericsson is partnering with public transport and utility providers to deploy an online platform to serve 1,000 apartment buildings by the spring 2014. The apartment owners will benefit from a convenient service, tailored to their needs, that gives them more control over the costs and energy usage related to home heating. This is expected to lead to a 40% reduction in energy costs for the apartment buildings.

### Sensing the pulse of the city

Ericsson is participating in the [SmartSantander](#) project, aimed at implementing and testing smart city solutions in a real environment. In the city of Santander in northern Spain, 12,000 devices or sensors are deployed and embedded into the city's infrastructure such as street lights, bus stops or building facades. They provide monitoring on different environmental parameters such as temperature, CO<sub>2</sub>, noise, light and car presence, and participatory sensing enables citizens to both receive alerts and send information to city authorities regarding environmental data, traffic accidents or holes in the pavement. Parking sensors buried under the asphalt have been installed at the main parking areas of the city center so that citizens can use their mobile phones to detect availability of parking. Devices are also deployed in two green zones of the city to monitor irrigation and improve its efficiency.

The same approach is being tested in three additional sites: Lübeck, Germany, Guildford, England, and Pancevo/Novi Sad in Serbia, where Ericsson develops core components and deploys sensors.

### Managing traffic and emergency response

In São Jose Dos Campos, Brazil, city officials needed to modernize the city's public safety, emergency response and traffic management operations and ICT systems as well as integrate the local police, traffic department, and civil defence agencies to improve public safety and operational efficiency. Ericsson provided a solution for traffic management and emergency response control room that

included taking calls and dispatch with real-time geographic information systems, camera locations and traffic information. The solution also included the integration of the various agencies as well as traffic management systems and installation of video cameras for improved public safety. Studies show, in areas where public surveillance cameras were installed, crime rates were reduced by about 70%.

### Emergency Co-ordination Centre of the Future

Telstra and Ericsson have collaborated on the development of a public safety emergency response scenario that shows the potential for a Network Operations Centre to be expanded to support the delivery of emergency response services. The scenario developed highlights how multiple sources of data streams and information can be analysed and combined to enable the co-ordination of actions between different authorities such as police, fire, utilities and even monitor air and water quality. It is Ericsson's view that the Emergency Co-ordination Centre could have a full view of a city's health resource needs and in the smooth response to public safety issues. It is Ericsson's view that the Emergency Co-ordination Centre could have a full view of a city's health resource needs and in the smooth response to public safety issues.

### How sustainable is a smart city?

To understand if smart solutions actually lead to greater sustainability for a city they need to be assessed. Evaluating ICT solutions in cities is a relatively new area. Agreeing on a methodology is an important step to analyze the environmental and socio-economic potential of ICT solutions. Ericsson participates actively in ongoing city standardization initiatives and research collaborations to see the net carbon impact of their choices. Ericsson Research is developing a methodology that offers both the possibility to make forecasts and to monitor achievements.



A standardized methodology would allow best practice sharing among cities and other stakeholders. Ericsson is currently contributing to the development of such a methodology, and is actively offering input to the standardization work going in the International Telecommunication Union (ITU). Once such a methodology is in place, civil administrators, organizations, businesses and community groups will be better positioned to weigh the impact of smart ICT solutions and their benefits, as a basis for making the right investments.

### New Cities Foundation

The New Cities Foundation (NCF) partnership deepened during 2013. John Rossant, founder and Chairman of NCF participated in Ericsson's NEST event. A new study on urban transportation was initiated during 2013, with an expected result 2014.



Photo courtesy of Stockholm Royal Seaport.

## STOCKHOLM ROYAL SEAPORT

One leading example of urban sustainable development is [Stockholm Royal Seaport](#) in Sweden. The city of Stockholm has partnered with a number of companies, including Ericsson, to create a climate-positive city district by 2030 including 12,000 apartments and 35,000 workspaces. In 2013, Ericsson was asked to take on the project management of the ICT sub-project in the three-year urban smart grid project, led by the utility company Fortum. A study conducted in 2013 on ICT for sustainable transportation for Stockholm Royal Seaport suggested different solutions to substitute and optimize transport, travel and electricity usage on the roads. One of the concrete examples is the Ericsson Zero Site smart street light solution (see page 41).

## THE BRIGHTEST CONNECTION

City populations are growing by 7,500 people per hour, increasing the need for enhanced mobile capacity and coverage in cities. To meet this demand mobile operators need to improve, densify and add many more radio cell sites in dense areas. The Ericsson Zero Site is an innovative solution that integrates Ericsson's cutting-edge suite of small cell products with street light poles. This enables deployment of complete solutions with optimal urban coverage but minimum visual impact.

The Zero Site solution is developed in cooperation with Philips. The benefits of mobile connectivity and LED lighting are combined in a "lighting-as-a-service" model for cities. It allows city authorities to offer space within their connected lighting poles to network service providers for mobile broadband infrastructure.

The Zero Site lights use energy efficient LED technology from Philips, enabling cities to achieve energy savings of up to 50-70% compared to conventional lighting.





# FULL SPEED AHEAD TOWARDS MORE SUSTAINABLE TRANSPORT

From smart commuting and public transport to safer roads and smarter logistics, ICT is key to more sustainable transport.

Climate change and urbanization require smarter transportation solutions. Increased efficiency in cargo transit through improved logistics networks and fleet management represents a significant abatement opportunity. Solutions such as co-modality – in which different modes of transport are coordinated via ICT – and increasing use of machine-to-machine solutions are enabling smarter solutions from private vehicle transportation to public transportation, and within logistics.

### Connectivity for safer vehicles

The automotive and ICT industry are increasingly developing new ways to make cars more connected which can enhance safety and also save fuel by enabling ecodriving.

With [Ericsson Connected Vehicle Cloud](#), drivers can use applications for information, navigation, and entertainment from a smart phone, or a screen in the vehicle designed to minimize driver distraction. Volvo is implementing Ericsson's Connected Vehicle Cloud in which instantaneous information exchange – be it car-to-car or car-to-infrastructure communication – gives drivers traffic information and data to avoid possible dangers.

Volvo, with its Vision 2020, stating that no one should be killed or seriously injured in a Volvo car, is a leading player in connected cars. In addition, Connected Vehicle Cloud enables drivers to automatically book service visits, find and pay for parking or get ongoing guidance for eco driving.

The solution is also aiding the advent of safer and more sustainable vehicles by giving drivers data on nearby electric charging stations, highlighting a car's maintenance needs, and aiding in planning journeys in the most efficient way. Ericsson's experience as a systems integrator and the ability to leverage machineservice capabilities provide a strong position to meet automakers' and operators' needs

### Managing solutions for electric vehicles

ICT will be vital to mass deployment of electric vehicles, given the challenges of charging many cars simultaneously across the electricity grid. With ICT-enabled solutions, real time information can be used to control electric vehicles charging and manage peak energy demand on the grid so

that utilities can handle the added demand with only modest changes to the distribution network.

### SMARTER LOGISTICS AT SEA

Shipping is a growing area of focus. In 2013, Ericsson provided a solution to shipping company Maersk Line with the help of satellite technology company Cobham to create a better overview of the transport of refrigerated containers. Through the combination of mobile GSM and satellite, "mobility at sea," the solution, resulted in a number of benefits, including monitoring of the reefer containers, enhancing ship-to-shore communication personnel and providing position and vessel speed leading to fuel optimizations.

### THE CONNECTED CAR

With Volvo Car Corporation, Goteborg Energi, a leading utility in Sweden, and Viktoria Institute, a nonprofit IT research institute, Ericsson engaged in a two-year project to bring mobile connectivity to electric cars and put choice and control over the charging schedule into the hands of drivers. Called [BeliEVe](#), (Business model innovation for Electric Vehicles), the project explored new business models for helping electric vehicles reach a broad breakthrough.



# AN INTELLIGENT GRID ENABLES RENEWABLES AND SAVES ENERGY

The utilities industry is becoming one of the most connected industries with the fast-growing use of smart grids and smart meters.

By helping facilitate the integration of renewables and enabling the smart grid, ICT can significantly reduce the inefficiencies of the power sector and the dependence on fossil fuels. Smart grids use ICT to gather and act on information about the behavior of suppliers and consumers using the grid. This information can then be used to improve the efficiency, reliability and sustainability of electricity production and consumption in the grid. Utilities are rapidly introducing remote control and automation technologies that transform their delivery systems into smart grids and their customers' meters into smart meters. This requires communication network solutions, as well as operational and business management support solutions.

The evolution of smart grids is a priority in several countries, including many within the European Union (EU) as well as the US. This will eventually create a smart energy network that manages a huge amount of data in 24-hour intervals, creating opportunities for efficient grid and consumption management and seamless integration of locally produced renewable energy into the infrastructure. Currently regulations within EU require utilities to deploy smart metering in order to ensure the first steps towards smart grids and more efficient energy usage.

### Bringing intelligence to the grid

[Ericsson is working closely with customers in the utility industry](#) to enable this transformation. Ericsson has provided smart metering solutions to SP [AusNet](#) in Australia, Hydro-Québec in Canada, Acea in Italy, and Elektrilevi, in Estonia, among others.

For SP AusNet, Ericsson was selected in 2013 to develop and implement a 3G-network enabled communications solution in support of the utility's smart meter program. The solution is expected to help SP AusNet extend its existing smart meter footprint, to incorporate an additional 108,000 meters in outer urban and rural areas in Australia.

A case study on smart metering in Australia conducted by Ericsson found that three main benefits – elimination of manual meter reading, fewer vehicles leased for meter reading, and reduction of energy used in the home – yielded a positive net effect on carbon emissions already even with 1% energy savings in the home (1% corresponds to a saving potential of about 80kg CO<sub>2</sub>e.)

### Putting renewables into the mix

In 2013, Ericsson announced that it will operate more than 600,000 smart metering points in Sweden for E.ON, one of the largest private energy companies in the world. Ericsson's solution will gather data from energy meters and provide collected data to E.ON's internal IT environment. Data will be exported daily rather than monthly, increasing data delivery by 3,000%. The solution supplies E.ON's customers with accurate and up-to-date information on energy consumption.

In Italy, the country's Energy Regulation Agency for Gas (AEEG) has specified minimum standards for remote gas meter reading and management. To help meet these new demands, Ericsson is providing utility Itelgas with a system integration platform for remote reading and management of 150,000 gas smart meters.







# COMMUNICATION FOR ALL

## CONNECTING FOR CHANGE

Mobility, broadband and the cloud can greatly enable socio-economic development. But for everyone to benefit, affordable access is key.

Globally, millions still face extreme poverty, gender inequality and inadequate access to services in areas like health and education — challenges the UN Millennium Development Goals set out to tackle in 2000. While considerable progress has been made, the World Bank estimates that some 1 billion people will still live in extreme poverty in 2015. The UN Secretary-General’s Panel of High-Level Eminent Persons in 2013 called for a new global partnership to eradicate poverty and transform economies through sustainable development.

In shaping the post-2015 Development goals, it is important to leverage mobility, broadband and the cloud as enablers of sustainable development. In 2013, the Broadband Commission for Digital Development established a Task Force, chaired by Ericsson, on Sustainable Development and the Post-2015 Development Agenda to explore how broadband can help achieve future development goals. Its report, “Transformative Solutions for 2015 and Beyond,” underlined the key role ICT and broadband can play in delivering inclusive economic growth. Many governments are adopting national broadband plans to accelerate this process and to bridge the digital divide.

### Overcoming the barriers

The benefits of connectivity through mobility, broadband and the cloud are already helping emerging markets across Africa, Asia and South and Central America improve livelihoods, financial inclusion, health, education, government services, livelihood and more. ICT is also advancing equality, democracy, governance and freedom of expression.

The Ericsson Mobility Report estimated there were 803 million mobile subscriptions in Africa and 354 million in the Middle East in the third quarter of 2013. The fastest growth in mobile subscriptions today is occurring in five countries in emerging markets and developing countries: China, India, Bangladesh, Indonesia, and Egypt. While 80% of subscriptions in the Middle East and Africa were 2G in 2013; the same number will be 3G/4G in 2019, accelerating the potential of ICT solutions, especially with increasing availability of smartphones in lower price ranges.

Affordability and accessibility of ICT remain a serious barrier to sufficient progress, however. The UN International Telecommunications Union (ITU) in the report “State of Broadband 2013,” estimates that broadband is unaffordable to nearly 3 billion people globally. With coordinated policy efforts, this can be addressed.

Research from the ITU confirms that countries with national broadband plans have higher fixed and mobile broadband penetration than those without. Yet many of these plans do not fully capitalize on ICT’s potential to address global challenges such as poverty, gender equality and health. That is why a key recommendation of the “Transformative Solutions” report is for stronger linkages to be made between broadband as a key infrastructure for the 21st century and national development agendas.

In China, every 10% increase in broadband penetration adds 2.5% GDP growth.

Source: “The Broadband Bridge: Linking ICT with Climate Action for a Low Carbon Economy” (2012, Broadband Commission for Digital Development in collaboration with Ericsson).



# GREATER PROGRESS THROUGH PARTNERSHIPS

Public-private partnerships are essential for tackling global challenges: by collaborating on mutual goals, we can achieve greater impact.

Ericsson collaborates with a variety of partners such as UN agencies, mobile operators, NGOs, academia and others who share our vision and can amplify the potential of ICT to progress socio-economic development. Our partnerships are built around initiatives that are scalable, self-sustaining and which help develop new business models for the base of the pyramid.

Our approach to enabling communication is based on these pillars: initiatives linked to our core business; public-private partnerships for higher quality, relevance, reach and outcome; customer engagement to leverage shared value; sustainable, scalable business models for long-term impact, measuring and monitoring and evaluation.

### It takes a village

As lead telecom partner in the [Millennium Villages Project](#), a project of the Earth Institute at Columbia University and [Millennium Promise](#), Ericsson began a long-term commitment to demonstrate that connectivity could play a decisive role in fighting poverty in Africa. Since joining the initiative in 2007, mobile connectivity has been brought to more than 500,000 people in 12 countries across sub-Saharan Africa, improving access to health and education and boosting livelihoods, among other benefits.

### Bringing healthcare to rural poor

The UN Sustainable Development Solutions Network's [One Million Community Health Workers \(CHW\) Campaign](#) is a partnership initiative incorporating the private sector, national governments in Africa, bilateral aid organizations and UN agencies. It aims to train, equip and deploy one million health-care workers in sub-Saharan Africa by end of 2015, using the latest communications technology and diagnostic testing materials to connect the rural poor to the broader health system.

Ericsson's contribution of mobile coverage and more than 2,000 Sony smart phones to CHW's in the Millennium Villages and our

efforts to promote awareness are recognized important aspects of this campaign.

### Improving Internet access

Ericsson is a founding member of [Internet.org](#), a global partnership dedicated to expanding Internet access. Launched jointly by Facebook, Ericsson, Samsung, Qualcomm, Nokia, Opera and MediaTek, members are collaborating on technologies to lower the cost of data delivery, increase efficiency and develop new business models to make mobile connectivity more affordable. In the [Internet.org Innovation Lab](#), a joint initiative of Ericsson and Facebook, emerging market network conditions are simulated so developers can test apps for communities with limited bandwidth and optimize applications, networks, devices and services for the next five billion users.



Community Health Workers in Senegal using m-learning.

## MAKING AN IMPACT WITH TECHNOLOGY FOR GOOD

Ericsson wants to lead the ICT sector in contributing to a sustainable Networked Society and demonstrate the socio-economic value of mobility, broadband and the cloud. To do this we have set an objective to positively impact 2.5 million people directly through our Technology for Good initiatives by 2016.

To track our progress, we will measure the number of people with increased access to financial services resulting from deployment of Ericsson technology and solutions, and the number of 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.

## IN RECOGNITION

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](#) (page 49).



# UNLOCKING THE POTENTIAL OF MOBILE COMMERCE

Ericsson's solutions are boosting financial inclusion, bringing mobile commerce to more countries and enabling transfers around the world.

According to the [World Bank](#), almost half the world's adult population – some 2.5 billion people – are unbanked, the majority in emerging markets. For countries where financial inclusion is low, mobile money solutions such as e-money accounts and e-mobile wallets offer a fast way to improve financial inclusion and close the gap.

By 2016, Ericsson estimates that the [m-commerce market is expected to reach USD 800 billion worldwide](#). More than 50 countries have set targets to improve financial inclusion. In 2013, the World Bank announced a [new initiative](#) to provide universal financial access to all working-age adults by 2020 using technological innovations such as e-money accounts and e-mobile wallets.

Mobile financial services can reduce the costs of transactions by [over 75%](#), improving affordability and accessibility for neglected groups such as rural women, who are 28% less likely than men to have an account. Low-income economies with remote, sparsely populated areas have much to gain from enabling e-banking services.

### Banking transformation underway

Countries such as Kenya, Uganda, the Philippines and Tanzania are already seeing the fruits of greater financial inclusion. Today some 9 million Ugandans use mobile banking to exchange, save and spend money, banking money daily instead of handling cash, reducing both

the risk of theft and the need to travel. Convenience, security and interoperability all contribute to the success of banking the unbanked.

### In Rwanda, m-commerce set to grow

Ericsson's vision is that a financial transaction on a mobile phone should be as easy as sending an SMS. To that end, the Mobile Wallet solution [launched with operator MTN Group](#) provides users with efficient and secure mobile financial services, reducing the need for travel and more convenient and accessible. [The Ericsson Converged Wallet](#) was launched with [MTN Rwanda](#) in November 2013 and has reached new user groups with continued growth. Ericsson is also working on [m-commerce solutions](#) for other markets, including M-Commerce [Interconnect services](#), to enable international remittance. By linking banks, financial service providers, and mobile network operators, we can create a more open financial ecosystem – a payment network that is connected and interoperable across the globe.

### Overcoming barriers

For m-commerce to gain in regions with low financial inclusion, a number of factors must be addressed. This includes necessary regulation in place, supportive government policy, consumer education, and local ecosystem capacity.



Ericsson m-commerce solutions are rapidly expanding in Africa.



By 2016, the m-commerce market is expected to reach USD 800 billion worldwide.

Currently, consumer functionality and uptake of m-commerce solutions are also restricted due to lack of compatibility between m-commerce services. This calls for integrated solutions like Ericsson Converged Wallet platform. With our presence in more than 180 markets, Ericsson is well-positioned to address this challenge and create economies of scale. Our video “On the money” shows how ICT is changing the way we interact with money.

By connecting banks, Internet service providers, money transfer and payment service organizations, we want to facilitate creation of a modern financial ecosystem and invite them to cooperate via local initiatives facilitated by Ericsson. An important step towards this is developing insight into consumers’ attitudes towards m-commerce and driving standards that support its uptake (see below).

During 2014 Ericsson will implement a regulatory out-reach program to better understand regulatory challenges and explore how the ICT industry can work with NGOs to leverage national initiatives on financial and social inclusion.



## IN LATIN AMERICA, M-COMMERCE SHOWS PROMISE

A wide range of mobile financial services – mobile payments, remittances and banking, exist in Latin America but the market is largely fragmented and use is low, according to the 2013 Ericsson ConsumerLab report, “M-commerce in Latin America.” However, the region has a growing middle class, rapidly increasing smartphone penetration and consumer interest in m-commerce is at an all-time high. M-commerce can also help address financial inclusion in Latin America, where 61% of the population is unbanked and 48% of the labor force is informally employed\*.



Through use of m-commerce solutions, bill payments, shopping and money transfers can be made instantly, without the need to carry large sums of cash or queue at banks, benefiting both the banked and unbanked.

The main barriers hindering uptake of m-commerce services, according to the Ericsson ConsumerLab report, are low levels of trust, perceived low network performance and lack of public awareness. Regulation, education and continued investments in networks are therefore essential to earn consumer trust.

In Latin America, Ericsson ConsumerLab found that 66% of consumers are interested in m-banking, 42% would try a mobile wallet, and 44% would use mobile payments when shopping.

\*Sources: World Bank Global Financial Inclusion Database (2012) and International Labour Office Labour overview (2012).

## DELIVERING QUALITY EDUCATION FOR ALL THROUGH CONNECT TO LEARN

In schools across Africa, Latin America, and Asia, Connect To Learn is opening doors to learning through ICT.

Education is a cornerstone for reducing poverty, enabling development, and fostering better lives. Yet it is still the case in many less developed countries that girls are less likely to attend secondary education. According to UNESCO, around 39 million adolescent girls in the world today are out of school. When girls are educated and empowered, their life prospects – and those of their families, communities and national economies – are hugely enhanced.

Ericsson is lead technology partner in Connect To Learn, an initiative of Columbia University’s Earth Institute and Millennium Promise, with specific focus on benefitting girls and their education needs. Since 2010, Connect To Learn has supported UNESCO’s Education for All goals, by deploying mobile broadband and cloud solutions, combined with hands-on training in ICT, to schools in 14 countries. Thanks to the program, some 40,000 students from Ghana and Uganda to Cape Verde and Djibouti have been able to access quality education resources enabled by our cloud-based solution.

**Wired to learn**  
Connect To Learn’s school installations started in rural Millennium Villages in Ghana, Tanzania, Kenya, Uganda, Malawi, and Senegal, as well as Ethiopia and Rwanda. Additional installations around the world include Cape Verde, Chile and Djibouti as

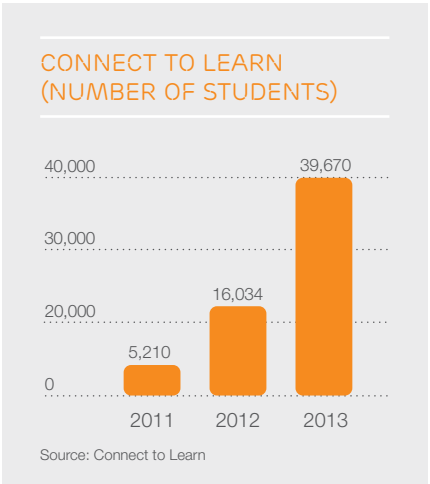
well as Brazil, China, and India, with Mexico and Bhutan joining the program in 2014. Altogether by the end of 2013, a total of almost 40,000 students across three continents have benefited from this program.

**Identifying the barriers**  
Under our thought leadership initiative The Networked Society Forum, Ericsson and the Earth Institute recently shared the results of a collaborative, year-long research study of four Connect To Learn schools in Uganda and Kenya to understand the challenges faced by rural, marginalized communities, and develop potential models for measuring the impact of ICT on education.

The ICT in Education report highlighted a number of benefits: teachers receiving ICT training support were significantly more comfortable using equipment, enhancing

classroom learning and boosting student confidence. While just 21% of teachers considered themselves advanced ICT users at the outset, one year on it rose to to 45%. An 18% increase in classroom use of ICT was reported over the course of the project.

The study identified challenges in providing ICT-based education, including access to reliable electricity, security issues and entrenched teaching styles. Underlining possible solutions, the study offers a universal framework for measuring interventions in schools based on six key intervention areas: physical infrastructure; ICT infrastructure; teacher ICT and pedagogical skills and knowledge; open-source teaching and learning resources; student ICT participation and knowledge; and public-private partnerships.



Connect To Learn scholars in Ghana.





Students in the Amazon connect via video link to a classroom in Portugal.

## LENDING A VIRTUAL HAND

In 2011, the remote community of Sururacá in Brazil's Amazon gained **3G connectivity** for the first time, through a partnership between Ericsson and mobile operator Telefonica/Vivo. A year later, Connect To Learn was launched for students ages 14 to 16 years of age at João Franco Sarmento School.

During 2013, the students were able to tap into the possibilities of the new technology, thanks to Ericsson virtual volunteers who are teaching basic ICT and social media skills to complement classroom learning. Twenty-six Ericsson employees in Brazil and 30 employees in other Latin American locations hold weekly sessions over Skype. Some days they take a virtual trip around the world with Google maps; another day they learn how to use a search tool like Google, or social media sites like Facebook or Twitter.

### Replicating the learning

A challenging aspect of the project has been limited availability of electricity in the village, which means there is only a few hours a day for recharging laptops. Therefore, at present, eight students have been provided computers and virtual lessons, but these students in turn share the knowledge with a total of 150 students, as well as friends and family, so that the learning is replicated.

The world beyond the village is expanding, thanks to this virtual lens. In school-to-school connections with the Pedro Teixeira School in Cantanhede, Portugal, the volunteers helped the children prepare materials to share about their local culture and in their common language.



Ericsson virtual volunteers supporting Connect To Learn students in Brazil.

### Volunteers and students meet

In fall 2013, some of the Ericsson employees traveled to the Amazon village to meet the students in person. The plan is to have students and volunteers meet annually.

Ericsson employees have found the program to be a hands-on way to make a difference in young people's lives, and make Technology for Good a reality.

# MOBILE PLATFORM HELPS REFUGEES RECONNECT

Refugees United family reconnection platform enables refugees and other displaced persons to find lost loved ones.

Reuniting loved ones can be a challenge for refugees: many face a futile paper trail when they try to locate their family and friends. Since 2008, non-profit organization **Refugees United** has been making it easier via an innovative online database to help displaced persons locate loved ones.

Ericsson has been the lead technology partner to Refugees United since 2010, and has developed a solution that extends the ability to help refugees. It is a mobile phone platform that combines a simple, low-tech user interface like SMS 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. Outreach includes a hotline, manned by Refugees United, and SMS campaigns run by mobile operators to help people in camps and refugee-prone areas register for the service.

### Success through SMS

By end of 2013, the database had approximately 250,000 registered users – an increase from approximately 185,000 in 2012, largely thanks to digital registrations. Between 2010 and 2012, radio and SMS awareness campaigns were tested, and during 2013 the digital model was scaled in the Democratic Republic of the Congo (DRC) and Kenya. The project partners are working with Safaricom in Kenya and Vodacom in the DRC on SMS campaigns. To date SMS campaigns have been by far the most effective way to reach the refugee population.

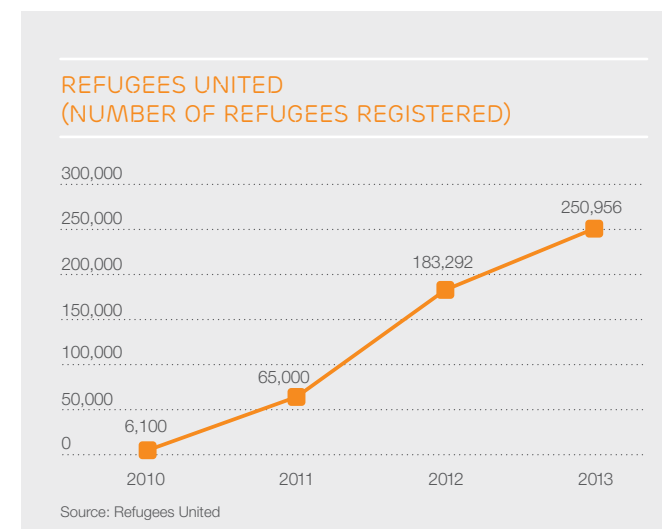
The Ericsson and Refugees United partnership is also a Clinton Global Initiative Commitment, with a goal to register 1 million refugees by 2015.

### New partnership to reconnect Syrian families

In 2014, Ericsson and operators in the Middle East **launched the Refugees United service for the nearly 1.4 million Syrian refugees** currently residing in Jordan, Turkey and Iraq. According to the UNHCR, an estimated 2.4 million refugees from Syria have been forced to move to surrounding countries; due to the crisis in Syria—a displacement rate of one every 15 seconds. The Refugees United platform will be made available to Syrian families via a mobile application with toll-free lines and SMS awareness campaigns in bordering countries. Ericsson will provide development, support and integration of the platform into mobile networks in Jordan, Turkey and Iraq. This service is made possible thanks to the leadership and support of mobile operators Zain Group, Avea in Turkey and Asiacell in Iraq (part of the Ooredoo Group).



Somali family living in Dadaab, Kenya, the world's largest refugee camp.



## VIEWPOINT

“We want to reconnect as many families as we can. Digital campaigns like mass SMS are playing a big role in extending our reach. Mobile technology is the only way to achieve the scale we need. We find that in addition to bringing long-lost family members together, the indirect impact of registering on the Refugees United platform is empowerment. Our solution flips the model of dependency. Those looking for their loved ones only need a mobile phone or another device to get access to the information. They don't have to wait in line for someone to do it for them.”



**Christopher Mikkelsen,**  
Co-founder of  
Refugees United



# BUILDING SAFER COMMUNITIES AFTER CONFLICT

In conflict zones, ICT is helping turn young lives around for a brighter future.

Among the biggest threats to achieving global development goals and thriving communities is conflict. With over 60% of the population in conflict-affected countries under the age of 25, the impact of war, drug trafficking and violence can be especially severe on youth.

The Whitaker Peace and Development Initiative (WPDI) aims to address this problem and break the cycle of violence through education. By equipping youth with the necessary skills and tools, they can be empowered to peacefully address conflict in their communities.

Founded in 2012 by UNESCO Goodwill Ambassador Forest Whitaker, WPDI is dedicated to peace-building and community empowerment of violence-affected youth. Through on-the-ground programs in Latin America, Africa and the United States, WPDI helps communities affected by conflicts transform into safe and productive ones. Ericsson is the technology partner to WPDI, using ICT technology and education solutions and expertise of staff to help catalyze positive social change.

WPDI initiatives include the Youth Peacemaker Network (YPN) and Harmonizer Programs. The aim of YPN is to inspire a new generation of leaders in areas marked by conflicts such as in South Sudan, or post-conflict situations as in northern Uganda, to become agents of positive change committed to reconciliation and conflict prevention. Harmonizer Programs aim to spur transformation in urban areas affected by violence.



Elaine Weidman-Grunewald on-site in Mexico with Forest Whitaker, UNESCO Goodwill Ambassador and Founder and CEO, The Whitaker Peace and Development Initiative.



Ericsson volunteer Bruna Barbosa helping to launch the Harmonizer program in Tijuana.

Due to the dramatic surge of armed violence that South Sudan has been experiencing since mid-December 2013, the program in that country has been modified, but it has still proven its value: the youth equipped and trained jointly by WPDI and Ericsson effectively used the network to keep each other informed on their respective situations and to escape the conflict. Goodwill Ambassador Forest Whitaker's message on peace for South Sudan has never been more relevant: [“Reject violence. Choose peace, you have the country's hope in your hands.”](#)

As for northern Uganda, progress has been positive, notably helping former child soldiers on the way back to normal lives.

In 2014, Ericsson collaborated with WPDI to [launch the Harmonizer program in Tijuana](#), Mexico. With the support of on-the-ground partners, the initial rollout started training 34 youths from violence-torn neighborhoods in conflict resolution, community building, life coaching and ICT, among other skills, to help them develop leadership skills to transform their communities from within. Over the next three years, the Harmonizer program will expand in Mexico, with plans to develop an innovative capacity-building, mentoring and business skills model for Mexican youth.

Ericsson helps youth in the program in the different countries collaborate with each other via ICT tools and solutions. By empowering and connecting conflict-affected youths through ICT, we are doing what we can to lay the foundations for peaceful and prosperous global human development.

# RAPID RESPONSE

Ericsson Response plays a critical role in establishing life-saving communications when disaster strikes.



An Ericsson Response volunteer on-site in the Philippines.

When typhoon Haiyan devastated islands across the Philippines in November 2013, [Ericsson Response](#) was quickly on the scene. This global initiative of around 140 active employee volunteers provides communications expertise, equipment and resources to assist humanitarian relief organizations in responding faster and more effectively when disaster strikes. Since 2000, Ericsson Response has deployed employee volunteers and ICT support to over 40 relief efforts in 30 countries.

## Helping the helpers

Within four days after [Haiyan](#), Ericsson Response had deployed volunteers and communications equipment to the Philippines through its unique stand-by partnership with the United Nations' [Emergency Telecommunications Cluster](#) (ETC). Local communications infrastructure had been destroyed, so Ericsson Response volunteers set up WIDER 4, a solution developed by Ericsson Response, that provides wireless connectivity through scores of access points. Over 6,000 humanitarian workers from agencies as diverse as Save the Children, the World Food Programme, and UNICEF were able to log on to [WIDER](#) (Wireless LAN in Disaster and Emergency Response) networks to keep communication flowing.

To date, five teams of three Ericsson Response volunteers have been rotated, providing ongoing technical support to the Philippines. Ericsson Response volunteers are also active in collaboration with the World Food Programme in war-torn South Sudan, where WIDER networks and volunteers' core technical competence are helping long-term humanitarian efforts.

## A moving goalpost

A key goal of Ericsson Response is to use feedback and testing to continually improve the technologies and tools deployed in humanitarian aid to make sure they give organizations the quickest possible access to communications during the critical first phase of a disaster. In 2013 this included Ericsson Response volunteers working with UNICEF to upgrade and rebuild technical emergency kits, a move that proved valuable following Haiyan.

During 2013, Ericsson Response also hosted the UN's ETC Working Group. While nobody welcomes a disaster, harnessing ICT to respond as quickly and effectively as possible can help communities recover faster.



# OBJECTIVES AND ACHIEVEMENTS

## CONDUCTING BUSINESS RESPONSIBLY

STATUS	OBJECTIVES 2013	ACHIEVEMENTS 2013	OBJECTIVES 2014
●	Launch Business Learning Program on human rights with Shift.	Completed the first year of the two-year program with a focus on the human rights impact assessment in Myanmar.	Complete the second year of the Business Learning Program on business and Human Rights with Shift.
●	Ensure country risk-screening process fully operational and complete at least one Human Rights Impact Assessment (HRIA).	The Sales Compliance Process including country screening is fully operational and the HRIA for Myanmar was to a large extent completed, (stakeholder engagement completed early 2014).	Complete Human Rights Impact Assessment on one additional high risk country.
●	Implement expanded Environmental Audit program in at least two regions which indicate higher risk.	Training and audits in Latin America completed. Training in SE Asia completed and audits to be completed during 2014.	Complete South East Asia Audit program and integrate environmental aspects into Responsible Sourcing Program.
●	Achieve 95% completion rate of Code of Conduct Training for Suppliers by Strategic Sourcing personnel.	95% completion rate achieved.	Achieve 95% completion rate of training "Anti-corruption for Suppliers" by Strategic Sourcing personnel.
●	All regions and relevant units to have Supplier Code of Conduct auditors who conduct and follow up risk based audits to ensure continual improvements.	The Supplier Code of Conduct Program implemented in all regions and relevant units.	Broaden Supplier Code of Conduct to a Responsible Sourcing Program with enhanced risk assessment, tracking and improvement activities.
●	Reduce the number of critical findings by >50% among selected suppliers audited two consecutive years.	The number of critical findings among selected high risk suppliers audited in both 2012 and 2013 decreased by 68%.	Reduce the number of critical findings among selected high risk suppliers audited in 2013 and 2014 by 70%.
●	Complete Supplier Code of Conduct Auditor refresher training for 100% of all Supplier Code of Conduct auditors.	All Supplier Code of Conduct auditors (100%) have completed the on-line refresher training.	
●	Arrange at least four local Supplier Workshops with Code of Conduct focus.	Supplier seminars were conducted in Myanmar, Bangladesh (2) and Kenya.	Establish and launch Zero Incident Program with the target to reduce severe incidents internally and in the supply chain.
●	Increase our commitment to technical leadership by expanding technical certifications supported by training from 22 to 33.	35 technical certifications available.	Increase by 30% the number of technical certifications passed.
●	Continue to assess employee engagement pilot expansion in 2013.	Internal assessment regarding the establishment of a global volunteer program was completed and a decision was taken to establish a program with a dedicated driver in 2014.	Launch Ericsson Technology for Good employee volunteer program.
●	Establish diversity council and long term goals on diversity.	Global Diversity and Inclusion Council was established and a long term goal was set that by 2020 one-third of all Ericsson employees will be female.	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.
●	Launch global learning solutions which address key competence gaps critical for employee and company success.	Learning solutions included: Sales Excellence, Project Manager Academy for Services staff; Lean & Agile initiative for R&D; a Cloud Strategic Learning Program, and an OSS BSS Education Program.	Launch Ericsson Play and Virtual Campus to facilitate new ways employees can learn and share.
●	Launch a Global Employee Referral Program to further integrate our employee engagement into our ways of working and bringing exceptional talent to Ericsson.	The program was launched and resulted in a 50% increase in number of referrals from employees.	Increase number of Global Employee Referrals by 20%.
●	Conduct Occupational Health and Safety (OHS) campaign on health aspects in each region.	Successfully carried out OHS campaigns in all 10 regions. Each region chose relevant themes.	Launch a new campaign to continue to focus on raising awareness internally of the importance of OHS in each region.
●	Establish root cause analysis in Occupational Health and Safety incident investigations.	Launched and implemented a comprehensive methodology for incident investigation and measured the implementation rate. The implementation rate was 86% which was above commitment for 2013.	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.

● Target achieved   ● Partly achieved   ● Not achieved

## ENERGY, ENVIRONMENT AND CLIMATE

STATUS	OBJECTIVES 2013	ACHIEVEMENTS 2013	OBJECTIVES 2014
●	Reduce CO <sub>2</sub> e emissions per employee by 5% on Ericsson own activities (business travel, product transportation and facilities energy use).	The Company achieved a 10% reduction of CO <sub>2</sub> e emissions per employee in 2013.	As part of our Long Term Objective, reduce CO <sub>2</sub> e emissions per employee by 7% on Ericsson own activities.
●	Reduce the Ericsson carbon footprint intensity by 40% over five-years. The target was set in 2009 (with a 2008 baseline).	Target was achieved in 2012, in four years instead of five. The final result in the fifth year was: A 56% reduction in direct emission intensity from own activities, and a 47% reduction in indirect emission intensity from life cycle impacts of products in operation.	
●	Establish a new energy performance baseline and target for Products in Operation in 2013.	See Long Term Objective (next page).	
●	Achieve 10% of e-waste take-back vs. put on market, while continuing to ensure less than 5% of e-waste treated by Ecology Management Program is disposed of in landfill.	Achieved approximately 6% of e-waste take-back vs. put on market, while less than 5% was disposed in landfill.	Achieve 17% of e-waste take-back vs. put on market, while continuing to ensure less than 5% of e-waste treated by Ecology Management Program is disposed of in landfill.
●	Develop selected cases demonstrating the ICT-enablement potential for the low-carbon economy.	Zero Site lighting with Philips and Connected Car case with Volvo developed but full assessment results not finalized.	Develop 3-5 cases that show the ICT-enablement potential for the low-carbon economy.
●	Define broadband blueprint and assessment methodology for sustainable cities.	Ericsson presented assessment methodology at the ICT4S conference (Evaluating Sustainability of Using ICT Solutions in Smart Cities – Methodology Requirements) and also contributed to the ITU-T work related to cities and sustainability.	
●	Develop a platform for dialogue and knowledge sharing on ICT impact on energy in the low-carbon economy.	UN Habitat three year partnership launched.	Publish first results from partnership with UN Habitat on sustainable urbanization.

## COMMUNICATION FOR ALL

STATUS	OBJECTIVES 2013	ACHIEVEMENTS 2013	OBJECTIVES 2014
●	Deploy ICT in education projects to 10,000 students by 2013.	Deployed ICT in education projects to over 23,600 students. Total over 39,500.	Deployed ICT in education projects to an additional 10,000 students.
●	Complete Collaborative Action Research project on ICT and education with Earth Institute at Columbia University.	ICT in Education Collaborative Action Research Study by Earth Institute at Columbia University and Ericsson published in November 2013.	
●	Increase number of refugee registrations in Refugees United database to 300,000.	Number of refugees registered increased to over 250,000. Over 67,600 refugees registered in 2013.	Achieve 650,000 registrations in the Refugees United database.
●	Support Youth Peacemaker Network and PeaceEarth Foundation with ICT tools and training in three countries.	Youth Peacemaker Network and the Whitaker Peace and Development Initiative (WPDI) were supported in Mexico, South Sudan and Uganda.	Continue the establishment of a Monitoring and Evaluation framework for evaluating the connection between technology, development and peace with ICT tools and training.
●	Have Ericsson mobile wallet platform ready for service in 10 countries by the end of 2013 to increase financial inclusion among unbanked.	Strategic partnership with pan African customer to introduce Ericsson Converged Wallet across 14 countries in Africa.	

● Target achieved   ● Partly achieved   ● Not achieved



LONG TERM OBJECTIVES (2013-2016)\*



CONDUCTING BUSINESS RESPONSIBLY

STATUS	LONG TERM OBJECTIVE	PROGRESS 2013
	Continue to regularly engage Ericsson Board in Sustainability and CR as appropriate.	<i>Note: Engagement with Ericsson Board of Directors on Sustainability and CR is today part of our regular operational procedures so this has been removed as an annual objective.</i>
	Complete two-year Business Learning Program on Business and Human Rights, and implement improvements.	Completed the first year of the two-year program with a focus on the human rights impact assessment in Myanmar.
	Integrate adequate human rights and CR risk measures in Ericsson Group Management System.	Human rights and CR risk measures are integrated in Ericsson Group Management System, including the fully operational Sales Compliance Board.
	No observed or reported failure by Ericsson Sourcing to fully consider Code of Conduct and Environmental compliance when evaluating and selecting suppliers by 2017.	Enhanced focus on OHS and anti-corruption. Strengthened focus on incident reporting and highlighting categories of risk.
	Ericsson's supplier-related ethical and environmental risks are continually reduced.	The number of critical findings among selected high risk suppliers audited in both 2012 and 2013 decreased by 68%.
	The supplier year-on-year improvement, measured as the reduction of critical findings, shall exceed 60% in 2017.	The sample results from 2012-2013 including use of Corrective Action Plans show strong progress.
	Maintain 100% up to date training level for Supplier Code of Conduct auditors.	All Supplier Code of Conduct auditors have completed the on-line refresher training.
	Reduce amount and severity level of Occupational Health and Safety incidents and accidents by consistently identifying and controlling our health and safety risks, working toward our long term goal for zero fatalities.	OHS Standards were updated with new requirements on vehicle and climbing safety. Enhanced site induction in Regions, including safety instructions related to climbing and driving. A Zero incident program will be initiated in 2014.
	Increase employee knowledge and awareness significantly on Occupational Health and Safety.	Health awareness campaigns successfully carried out internally.
	Reach one third female employees by 2020.	Global Diversity and Inclusion Council launched.

ENERGY, ENVIRONMENT AND CLIMATE

STATUS	LONG TERM OBJECTIVE	PROGRESS 2013
	Maintain absolute CO <sub>2</sub> e emissions from Ericsson own activities for business travel, product transportation and facilities energy use in 2017 at the same level as 2011. Reduce CO <sub>2</sub> e emissions per employee by 30% over five years.	The Company achieved a 10% reduction of CO <sub>2</sub> e emissions per employee in 2013.
	Achieve 50% of e-waste take-back vs. Equipment Put on Market in 2017 while continuing to ensure less than 5% of e-waste treated by Ecology Management Program is disposed of in landfill.	In 2013 we have achieved approximately 6% of e-waste take-back vs. put on market, of less than 5% is disposed in landfill.
	Deliver opportunities to address sustainable development challenges using our core business in three cities to address sustainable urbanization, and develop selected cases.	3-year partnership with UN Habitat established to work on sustainable urbanization.
	Establish a globally agreed industry position around the potential of ICT for low carbon economy with key stakeholders.	Joined advisory panel of UNFCCC Momentum for Change ICT pillar.
	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.	

COMMUNICATION FOR ALL

	LONG TERM OBJECTIVE	PROGRESS 2013
	Advocacy and support for Broadband Commission for Digital Development's 2015 targets and post-2015 development agenda.	Ericsson led the publication of the Broadband Commission report – Transformative Solutions for 2015 and Beyond, published in September 2013.
	Document connection between technology, development and peace with ICT tools and training by 2015.	"Monitoring and Evaluation" framework initiated with WPDI and UNESCO.
	Be one of the key drivers to increase financial inclusion in an open financial eco-system, and make it significantly simpler and more affordable to make a financial transaction over a mobile device, wherever or whenever you are.	Strategic partnership established with pan-African customer to introduce Ericsson Converged Wallet across 14 countries in Africa.
	Impact positively 2.5 million people through Technology for Good initiatives by 2016, including the deployment of ICT in education projects to 50,000 students by 2015 and achievement of 1 million registrations in the Refugees United database by 2015.	We estimate that nearly 300,000 people were positively impacted through our Technology for Good Programs, bringing our total reach for Technology For Good to nearly 900,000 people.

Auditor’s Combined Assurance Report on the Sustainability & Corporate Responsibility Report

To the readers of the Telefonaktiebolaget LM Ericsson (publ) Sustainability & Corporate Responsibility Report

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 2013.

Responsibility of the Board and Management

The Board of Directors and Executive Leadership Team are responsible for the company’s activities regarding environment, occupational health & safety, social responsibility, and sustainable development, and for the preparation and presentation of the Sustainability & CR Report in accordance with applicable criteria.

Responsibility of the Auditor

Our responsibility is to express a conclusion on the Sustainability & CR Report based on our examination. We have performed the assurance 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 consists of a review of the Sustainability & CR Report as a whole and an audit of carbon dioxide emissions data regarding Ericsson’s own activities on page 29 and 35.

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

The criteria on which our examination is based are the parts of the *Sustainability Reporting Guidelines G3*, 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 and disclosed. 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 and CR reports, and with experience from the Information and Communication Technology sector.

We consider the evidence collected during our examination to be sufficient and appropriate in order to support our conclusions listed below.

Conclusions

Based on our review, nothing has come to our attention that causes us to believe that the information in the Ericsson Sustainability & CR Report has not, in all material respects, been prepared in accordance with the above stated criteria and that Ericsson has not adhered to the AA1000APS (2008) principles inclusivity, materiality and responsiveness.

Based on our audit, the information in the Ericsson Sustainability & CR Report which has been subject to our audit procedures has, in all material respects, been prepared in accordance with the above stated criteria.

New On track Off track

\*unless otherwise stated





#### *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 continue to see a strong commitment to stakeholder accountability and evidence of numerous engagement activities at corporate level. We recommend Ericsson to also ensure that stakeholder participation processes are documented in a relevant manner, and also increase awareness of the AA1000APS principles throughout the organization.

#### *Regarding materiality*

We see that the process for determining material sustainability issues has been further developed and refined during the year, including group instructions on identifying and prioritising material issues. We have no specific recommendations regarding materiality.

#### *Regarding responsiveness*

We observe that Ericsson has processes in place to respond to significant stakeholder concerns, including extensive communication using various channels. We encourage Ericsson to consider disclosing further examples of how the company has responded to specific stakeholder concerns in the Sustainability & CR Report.

Stockholm, April 11<sup>th</sup> 2014

PricewaterhouseCoopers AB

*Peter Nyllinge*  
Authorised Public Accountant

*Fredrik Ljungdahl*  
Expert Member of FAR





