ERICSSON

TECHNOLOGY FOR GOOD

CONTENTS

THE ERICSSON VISION

Ericsson's vision is to be the prime driver in an all-communicating world. The vision of an all-communicating world is rapidly becoming a reality with approximately six billion subscriptions today for mobile telecommunications, of which close to one billion are for mobile broadband. Ericsson envisions a continued evolution, from having connected five billion people to connecting 50 billion "things". In the Networked Society, we envision that anything that can benefit from being connected will be connected, mainly via mobile broadband. For us, it's about Technology for Good — using connectivity to make a positive socio-economic and environmental impact, and address challenging issues such as poverty alleviation, Human Rights and climate change.

Additional information on Ericsson's sustainability performance is available online, including:

Global Reporting Initiative (GRI)

Key Performance Indicators (KPI)

www.ericsson.com/sustainability

www.ericsson.com

ABOUT ERICSSON

Information and Communication Technology (ICT) is positively changing the way we work and live. As a leading provider of communications infrastructure, services and multimedia solutions, Ericsson strives to enable this change. We constantly innovate to empower people, business and society. Network infrastructure provides the fundamentals for people to communicate. Today, more than 40% of the world's mobile traffic passes through networks provided by Ericsson. The networks we support for operators serve more than two billion subscriptions. We serve approximately 400 customers, most of whom are network operators. Our ten largest customers, of which half are multinational, account for 44% of our net sales.

Our experience in building networks in more than 180 countries gives us unique customer and consumer insights, and our extensive portfolio of telecommunications solutions and intellectual property (patents) offers a true business advantage. We are committed to working with our customers and partners to expand the borders of telecommunications for the benefit of people everywhere. Our operations have been divided into business units that create competitive advantage and best meet the needs of our global customer base. These include Networks, Multimedia, and Global Services. Through the joint ventures Sony Ericsson and ST-Ericsson, we provide handsets and product offerings in semi-conductors and platforms for mobile devices.

On February 15, 2012, Ericsson completed the divestment of its 50% stake in Sony Ericsson Mobile Communications AB.

ABOUT THIS REPORT

This report, together with additional information available online, summarizes our 2011 sustainability and corporate responsibility (CR) performance. For us, sustainability is about the "triple bottom line" – long-term social equity, economic prosperity and environmental performance. Corporate responsibility is about maintaining the necessary controls to minimize risks, while creating positive business impacts for our stakeholders and our brand, by linking our products, services and solutions to an overall business goal of sustainable growth. A sustainable and responsible approach results in value creation for the company, our employees, our customers, our shareholders and society as a whole. Unless otherwise stated, all information and data pertains to activities undertaken from January 1, 2011 to December 31, 2011. This report covers the Ericsson Group, i.e. Telefonaktiebolaget LM Ericsson and its subsidiaries, and provides performance highlights from our joint ventures Sony Ericsson and ST-Ericsson. The Ericsson Annual Report 2011 provides information on Ericsson's structure, nature of ownership and legal form, subsidiaries, as well as changes regarding size, structure, financial performance and ownership during 2011.
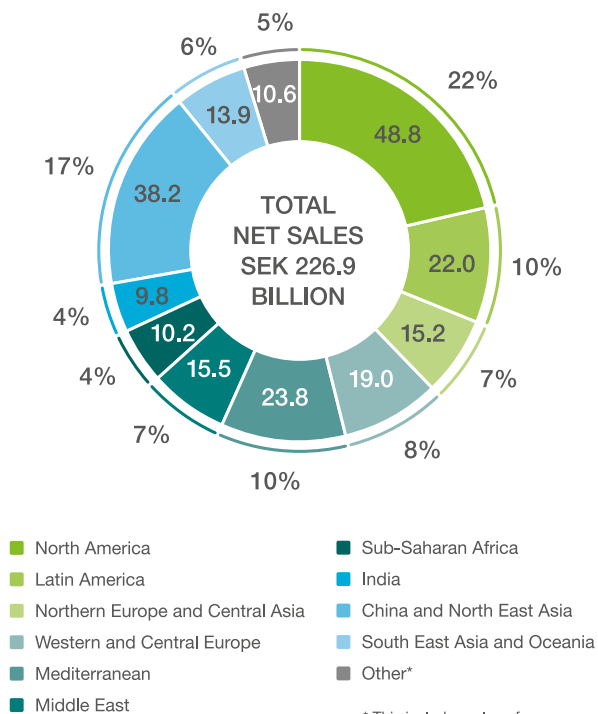
The Sustainability and CR Report is published as a PDF together with more comprehensive online information, which allows readers to explore topics more in depth.

Please visit **www.ericsson.com/sustainability**

The Ericsson 2011 Annual Report and other financial information can be found at www.ericsson.com/investors. To help us improve reporting and ensure transparency, we welcome your feedback and questions on our report and performance.

Please contact us at: **corporate.responsibility@ericsson.com**

Technology for Good Blog

ericsson.com/technology-for-good-blog

http://www.facebook.com/technologyforgood

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EXTERNAL ASSURANCE GLOBAL REPORTING INITIATIVE (GRI) APPLICATION LEVEL

This Report, with the exception of pages 42-43, pertaining to Sony Ericsson and ST-Ericsson, has been assured by PwC, see Auditor's Report on page 44. 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 2011 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, PwC.

SALES BY REGION 2011

TOTAL NET SALES SEK 226.9 BILLION

5% 10.6
6% 13.9
17% 38.2
4% 9.8
4% 10.2
7% 15.5
10% 23.8
8% 19.0
7% 15.2
10% 22.0
22% 48.8

- North America
- Latin America
- Northern Europe and Central Asia
- Western and Central Europe
- Mediterranean
- Middle East
- Sub-Saharan Africa
- India
- China and North East Asia
- South East Asia and Oceania
- Other*

* This includes sales of e.g. mobile broadband modules, cables, power modules as well as licensing and IPR.

DEAR STAKEHOLDERS,

Mobility and broadband will continue to play a decisive role in the transformation of society. In five years time we believe that 90% of the world's population will have access to mobile communications. Our innovations, combined with global presence and scale, have made us a leader in an industry that gets more exciting every day.

Information and Communication Technology (ICT) presents opportunities to sustainable development challenges, from sub-Saharan African villages to fast-growing cities in Asia and North America. Working with customers and in public-private partnership, we demonstrate the benefits of ICT and confirm our commitment to enabling communications for all.

Achieving our vision

Our vision is to be the prime driver in an all-communicating world. We anchor our approach to sustainability and corporate responsibility in the triple bottom line of responsible social, economic and environmental development. The sustainability and corporate responsibility (CR) strategy is one of Ericsson's core strategies, integrated into our operations, decision-making and culture. We continuously raise the bar on our own sustainability performance, and seek to deepen our understanding of stakeholders' top concerns.

I think this way of doing business is essential to success. It enhances customer satisfaction, spurs efficiency and innovation, makes us an attractive employer and strengthens our brand.

Long- and short-term targets, supported by our sustainability and CR strategy, move us toward our vision. We set ambitious targets, including our carbon footprint intensity reduction goals. Over the last decade we have increased 3G/4G radio base station energy efficiency by over 85% to give one example. Despite growing bandwidth demands, we are able to keep the energy consumption per subscriber at a low and constant level.

A smarter, low-carbon world

The world is entering a new communications era. Technology is enabling us to interact, innovate and share knowledge in entirely new ways – creating a dynamic shift in mindset. At Ericsson, we are just beginning to explore the possibilities of what we call the Networked Society. This has profound implications. One example is energy efficiency that delivered through innovative solutions and service offerings, will enable the Networked Society, while keeping network energy consumption constant.

Smart, sustainable cities are a glimpse into the future. Representing over 70% of CO_2 emissions, cities spell either environmental catastrophe or an opportunity for ecological rejuvenation. Half of the world's population live in cities today. Within just four years, we expect nearly 60% of all traffic in mobile networks will be generated by 30% of the global population who live on 1% of the planet. A digital infrastructure and services like smart grids, e-education, e-health, e-governance, and intelligent transportation systems offer a better way to manage urbanization and strained resources. We're working with customers, governments, utilities, transport, non-governmental organizations and other partners to create an ICT-enabled infrastructure, service offerings and business models that transform the way we live, work, travel and govern – with greater efficiency, less carbon, and improved quality of life.

The transformation of cities is just one example of ICT's role to address climate change. In addition to working to reduce our own carbon footprint, we see ICT's significant role to offset emissions from other sectors and help governments achieve carbon dioxide reduction targets. Although our carbon footprint intensity target reduction was lower this year compared to 2010, Ericsson is well on track to meet its five-year target (see p. 18).

Leading in partnership

Global challenges are best tackled through partnership. Ericsson engages in regional, national and global initiatives. For example, I chair the Working Group on Climate Change of the Broadband Commission for Digital Development, a public-private initiative highlighting broadband's role in achieving the Millennium Development Goals. In April 2012 we launched "The Broadband Bridge", outlining 10 high-level policy recommendations on how ICT can help tackle climate change. At Rio+20, we'll use these findings to promote ICT's role to address climate change.

Business and Human Rights

The rising significance and relevance of Human Rights in our business was highlighted in 2011 with the Arab Spring and the publication of the UN Guidelines on Business and Human Rights.

As one of the initial members of the United Nations Global Compact (UNGC), Ericsson is committed to its ten universal principles for business conduct. Each year, we produce an Annual Communication on Progress (see p. 40). An ethical approach to business has long been part of the Ericsson brand. We believe in high standards for business ethics and Human Rights and are committed to work actively with the UN Guiding Principles for Business and Human Rights, and have updated our Code of Business Ethics to reflect this commitment.

ICT is already playing a major role in catalyzing the shift to a Networked Society. In 2012 and beyond, we will continue to innovate and bring solutions that enable communication for all. Our policies remain strong and we are committed to high levels of governance standards wherever we do business in the world. As the leader in our industry, we will also prioritize our work with Human Rights throughout our business operations and join multi-stakeholder dialogues which advance these goals.

HANS VESTBERG
CEO AND PRESIDENT
ERICSSON

TECHNOLOGY FOR GOOD

DEAR STAKEHOLDERS,

In the Networked Society, Ericsson is the leading advocate of Technology for Good. Our sustainability and corporate responsibility priorities remain constant – communication for all, energy and climate change, and being the trusted partner to our stakeholders. By using broadband to address poverty, Human Rights, climate change and other challenges, we want to ensure our technology is a force for lasting, positive change. We do this through a wide range of projects, research, advocacy and initiatives, public-private partnerships, social media outreach, and other forms of engagement.

This report presents our key material issues, as well as opportunities and challenges, and overall progress in executing our Sustainability and CR strategy and targets during 2011.

Making a difference in 2011

The report also describes how our public-private partnerships are making a difference. The connectivity we provided in the Millennium Villages reaches some 500,000 people today. In September we celebrated one year of progress on Connect To Learn, delivering secondary education to girls, starting in the Millennium Villages.

Our partnership with Refugees United to develop and deploy a mobile platform to assist refugees in locating loved ones has also matured. On World Refugee Day 2011 Ericsson launched an Android application of the service, to complement WAP access. We did not manage to reach the target to register 120,000 refugees, but at the end of 2011, Refugees United reported that 65,000 refugees had registered, and some 60 families were reconnected. Those first family reconnecting underscore the power of partnership.

Engaging with stakeholders

During 2011 we strengthened our stakeholder engagement by reaching out to more and newer audiences.

Our customers are keen to drive network energy efficiency and to use broadband to shape the low-carbon economy of the future. We continue to be a leader in network energy efficiency. We also engaged in initiatives such as the Stockholm Royal Seaport. It is aimed at more energy-efficient infrastructure to help meet the goal of a climate-positive city district by 2030 (see p. 26). We engaged early in the project, working closely with utilities on smart-grid solutions and with the car industry on electric vehicle charging. We're excited about continued collaboration as the first inhabitants move in at the end of 2012.

In September we partnered with the UN Foundation, Mashable and 92Y at the Social Good Summit, which brings the issues being discussed at the UN General Assembly to a broader global audience through live conversation and webcast. The Summit convened thought-leaders, social entrepreneurs, innovators and bloggers to discuss how to communicate technology's role in addressing some of the world's most significant challenges.

This year we ran Technology for Good as an innovation theme for the Ericsson Application Awards, a global program to attract and assist software developers to tap Technology for Good for mobile platforms that address poverty, energy, climate change or other social issues.

A key stakeholder group is our own employees. Our commitment to sustainability and corporate responsibility helps make Ericsson a desired employer (with our flagship program Ericsson Response, see p. 16, as just one example), offering opportunities to directly engage in Sustainability and CR issues. We strive to continuously harness the skills and enthusiasm of our employees in making Technology for Good a reality.

Balancing responsibilities

Opportunities must be balanced with responsibilities. Since the Arab Spring protests, Human Rights activists have championed the power of technology, mainly the Internet and mobile phones, as tools for democracy and change. But just as telecom is a powerful enabler of freedom of expression, it can also be misused in ways that violate Human Rights. Technology can be used for non-intentional purposes, which brings new ethical challenges. We encourage the use of technology as a force for good rather than as a tool to be used against democratic principles.

We have taken the necessary first steps to avoid complicity in Human Rights abuses, but no one company, government or organization can solve this issue on its own. It requires a multi-stakeholder dialogue, and an increased understanding of the ICT value chain and where such abuses can occur. We are committed to engage on this issue, and are presently evaluating multiple options for industry wide, multi-stakeholder engagement.

We expect our suppliers to meet high social, environmental and ethical standards. We work closely with suppliers to reduce our risk while improving standards in the supply chain. In 2011 we continued to evolve our Supplier Code of Conduct program, with more in-depth environmental audits.

Engage with us

This report is a strategic overview that highlights our achievements and key initiatives in 2011. A comprehensive online report of the year's sustainability and corporate responsibility performance is available at **www.ericsson.com/sustainability**

We welcome your feedback and encourage you to support Technology for Good.

Please contact us at:
corporate.responsibility@ericsson.com
Read and comment on our blog
ericsson.com/technology-for-good-blog
Join conversations on Facebook
www.facebook.com/technologyforgood
or follow us on **twitter@ericssonsustain**

ELAINE WEIDMAN-GRUNEWALD
VICE PRESIDENT, SUSTAINABILITY AND
CORPORATE RESPONSIBILITY
ERICSSON

AN INTEGRATED APPROACH

The Sustainability Strategy is one of Ericsson's functional strategies and is fully integrated in the Ericsson strategy development and deployment process, including target setting, see illustration at right. The strategy is actively implemented by our four Business Units and 10 Regions. Continuous dialogue with external and internal stakeholders at all levels of the company informs the Strategy and helps prioritize the issues most material for Ericsson (see p. 8, Stakeholder Engagement).

Implementation of the Strategy is measured at Group, Regional and Business Unit levels according to target fulfillment.
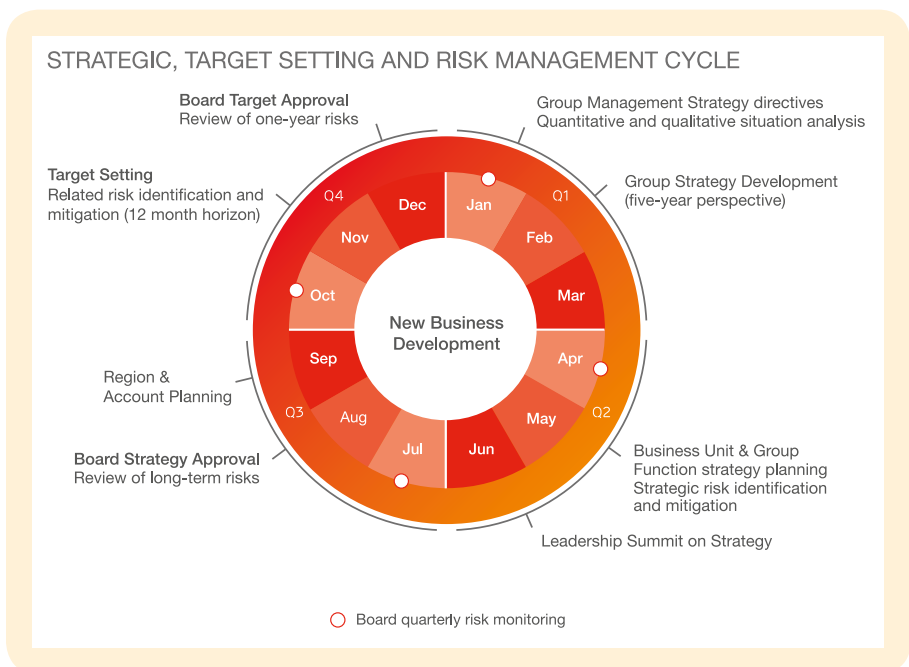
Setting targets

A commitment to sustainability and corporate responsibility must be backed by targets and objectives. Ericsson has a five-year Group target which aims to reduce the carbon emission intensity by 40% from a 2008 baseline (see p. 18). Our performance on objectives and achievements is reported on pages 38-39.

Assessing our impact

A wide variety of input inform our materiality process. These include:

- Our life-cycle assessment approach (LCA), which determines the environmental impact of our activities. Through this, we have identified that energy use and carbon dioxide emissions are the most material environmental impacts for Ericsson.
- Impacts of our industry and our initiatives

STRATEGIC, TARGET SETTING AND RISK MANAGEMENT CYCLE

Board Target Approval
Review of one-year risks

Target Setting
Related risk identification and mitigation (12 month horizon)

Group Management Strategy directives
Quantitative and qualitative situation analysis

Group Strategy Development
(five-year perspective)

Q4   Dec   Jan   Q1
      Nov   Feb
      Oct   Mar
New Business Development
      Sep   Apr
Q3   Aug   Jun   Q2
      Jul   May

Region & Account Planning

Board Strategy Approval
Review of long-term risks

Business Unit & Group Function strategy planning
Strategic risk identification and mitigation

Leadership Summit on Strategy

○ Board quarterly risk monitoring

on socio-economic development. For example, studies by Arthur D. Little and Ericsson demonstrating the link of broadband penetration to GDP, a Monitoring and Evaluation study of the socio-economic impact of the Millennium Villages project. During 2011, Ericsson initiated work on a socio-economic impact assessment framework, looking at how ICT can change lives at the individual and community level, as well as a study on leveraging ICT at the base of the pyramid.

- Annual cycle of reviewing our

sustainability strategy in consultation with internal and external stakeholders. This review process tracks trends and developments impacting our business as well as develops the strategy and translates it to relevant plans and targets.

- Annual response to selected surveys run by independent organizations or companies give us input to our material issues.
- Analysis of surveys run by Ericsson with our customers and employees, for example, the Customer Satisfaction survey and Ericsson employee engagement survey.

OUR SUSTAINABILITY STRATEGY

Improve our own sustainability performance: We do this by continuously reducing our environmental impact, deepening our understanding of the business potential within sustainability and by further integrating sustainability in our culture and ways of working.

Provide products, solutions and services so that customers improve their own environmental performance: Our ambition is to be the undisputed leader in energy efficiency and environmental performance to reduce our own and our customers' environmental impact throughout the value chain. We set ambitious targets, provide our customers with products, services, and solutions aimed at greater energy efficiency, and drive standardized metrics to capture improvements in energy efficiency and life-cycle impacts including product take back.

Enable a low-carbon economy: To promote ICT as a catalyst for change, we actively engage in global policy to address

climate change and we also strive to capitalize on business opportunities to drive the transition to a low-carbon economy, from smarter and connected cities and villages to the intelligent grid and sustainable transport.

Enable communications for all: We demonstrate how ICT can contribute to socio-economic development and contribute to the Millennium Development Goals. We build our strategy on sustainable business models and alliances with stakeholders who share our commitment.

Be a trusted partner: We are recognized for high standards of business ethics and manage corporate responsibility business risks to secure that Ericsson is a trusted partner among our stakeholders. We fulfill this aim by engaging to address global challenges, and ensuring a robust system of corporate governance which includes the Code of Business Ethics, Supplier Code of Conduct and Sustainability Policy.

MANAGING OUR KEY ISSUES

We prioritize sustainability and corporate responsibility issues in terms of their importance to our business, our stakeholders, society and the environment. These are determined through a continuous process of review, consultation, and assessment that takes its starting point in our sustainability strategy work. In determining materiality, Ericsson takes into account relevant reporting guidelines and industry commitments, such as the Global Reporting Initiative and international standards, and the United Nations Global Compact, the UN Guiding Principles for Business and Human Rights, and our commitment to the Millennium Development Goals. Through this process we have determined that our key material issues are:

ACCESSIBILITY AND AFFORDABILITY OF MOBILE COMMUNICATION

Our greatest contribution to sustainable development and the Millennium Development Goals is to make ICT more accessible and affordable for all. ICT supports economic growth and quality of life and enables developing nations and individuals to seize the opportunities of the Networked Society.

ENERGY AND MATERIAL EFFICIENCY

By designing and manufacturing products and solutions that prioritize energy and material efficiency, and conserving scarce resources in our own activities, we can reduce our own environmental footprint and that of our customers.

CLIMATE CHANGE AND URBANIZATION

The ICT sector has huge potential to lead the transformation to a low-carbon economy by offering solutions to reduce the 98% of carbon emissions that come from other industries and sectors. We offer solutions for smart grids, remote work, intelligent transport and other innovative uses of ICT.

BUSINESS ETHICS AND HUMAN RIGHTS

Good governance and business ethics are essential to responsible business and enhance investor and customer confidence. High environmental and social requirements apply to our global supply chain and we conduct our business with respect for universal Human Rights.

EMPLOYEE ENGAGEMENT

With an engaged and diverse workforce that emphasizes leadership, learning and values, we can better achieve our sustainability aims, attract and retain talented people, respond to our customers' needs and maintain a competitive advantage.

TECHNOLOGY FOR GOOD AROUND THE WORLD.

STAKEHOLDER ENGAGEMENT

Ericsson CEO Hans Vestberg took part in a roundtable discussion with bloggers at the Social Good Summit in New York City in September 2011, that explored how technology can be used to address some of the world's greatest challenges such as education and poverty, as well as challenging areas like conflict minerals.

Engagement with stakeholders, such as customers, employees, investors, suppliers, industry partners, government, consumer and business users of telecommunications services, non-governmental organizational, standardization bodies, research institutes, and media informs our strategy and actions. We work with diverse stakeholders to transform Technology for Good into reality, with concrete initiatives and innovative approaches and solutions that serve as a catalyst for change. We also engage stakeholders in conversation about the Networked Society and Technology for Good through our blogs, Twitter and other social media.
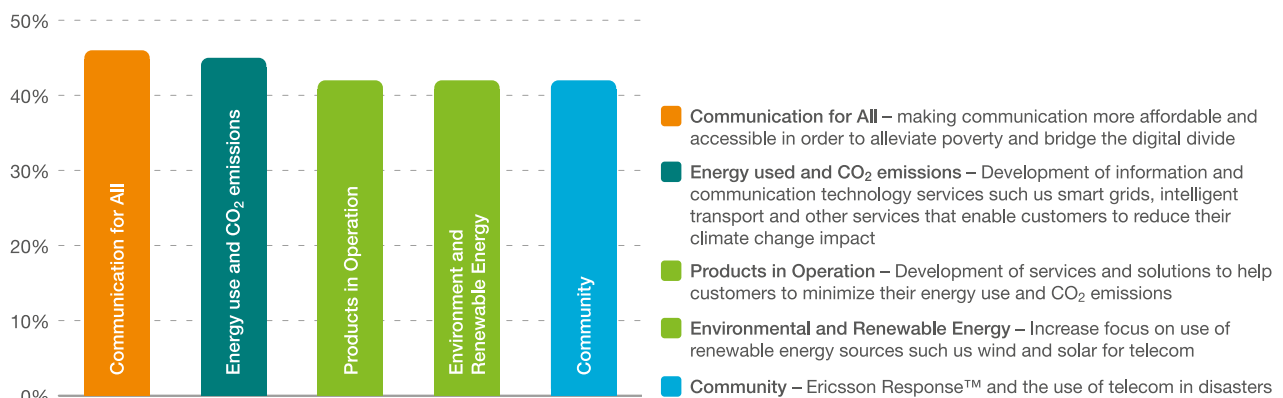
We are responsive to stakeholders' requests for a deeper understanding of how we work with sustainability and CR. We also reach out proactively to stakeholders when we feel there are issues that are relevant to them. We interact regularly with customers, investors and governments and policy makers, and regularly respond to surveys and inquiries from investors, media, and NGOs. See our main engagements during 2011 on page 9.

In addition, each year Ericsson conducts a customer satisfaction survey of approximately 10,000 representatives of our customers worldwide. In this customer satisfaction survey sustainability has kept constant and very high figures over the last three years.

Ericsson conducts an Ericsson employee engagement survey with 90% response rate and personal feedback. For the first time, sustainability is addressed in this survey to get employees' perception of Ericsson's sustainability performance. The result will be used as a one of the baselines for our targets.

We also run a more detailed employee survey each year, in which more than 1,300 employees respond to an annual online poll ranking the top five sustainability issues they think Ericsson should prioritize (see illustration below). Human Rights were rated as number six by employees.In 2011 we broadend our approach to better leverage social media.

EMPLOYEE POLL: TOP FIVE SUSTAINABILITY ISSUES

Communication for All – making communication more affordable and accessible in order to alleviate poverty and bridge the digital divide

Energy used and CO_2 emissions – Development of information and communication technology services such us smart grids, intelligent transport and other services that enable customers to reduce their climate change impact

Products in Operation – Development of services and solutions to help customers to minimize their energy use and CO_2 emissions

Environmental and Renewable Energy – Increase focus on use of renewable energy sources such us wind and solar for telecom

Community – Ericsson Response™ and the use of telecom in disasters

STAKEHOLDER ENGAGEMENT

STAKEHOLDER	2011 ENGAGEMENT ACTIVITIES	KEY ISSUES IDENTIFIED	HOW ARE WE ADDRESSING THE ISSUES
INVESTORS AND ANALYSTS	• Multiple one-on-one meetings • Surveys and questionnaires	• Integration of CR into business strategies and operations globally • Business in sensitive countries • Supply chain management	• Held meetings with investors and other stakeholders about ICT and Human Rights • Continued strong focus on supply chain • Work actively with UN Guiding Principles on Business and Human Rights and updated company policy to reflect commitment
CUSTOMERS	• Meetings and workshops • Purchasing requirements • Customer Satisfaction survey • Customer engagement initiatives	• Energy consumption, carbon footprint and measurement methods • Ethical risks in supply chain • Occupational health and safety (OHS) • Sustainable cities and urbanization • Phase-out of hazardous substances, enabling effective end-of-life treatment of telecom equipment • Design for Environment	• Carbon footprint reduction targets • New solutions and services for energy optimization and rural low-income segments, smart cities • Measurement methodology for energy efficiency and CO_2 emissions • Continued strong focus on supply chain and CoC implementation • OHSAS 18001 certification • Selected public-private partnerships including Ericsson Response, Millennium Villages, Connect To Learn, refugee reconnection • Networked Society Forum, NEST
EMPLOYEES	• Annual employee engagement survey • Sustainability and CR collaboration site • All-employee meetings • Sustainability employee poll • Social media outreach • Technology for Good volunteer pilot program	• Communication for all • Increased focus on renewable energy sources • Development of customer serivces and solutions to help minimizing their energy use and CO_2 emissions • Help customer to reduce their climate change impact by developing ICT technologies and services • Caring for the community • Focus on decreasing energy consumption and environmental performance in our own operations • ICT and Human Rights	• Launch of Technology for Good program including social media engagement platform • Increased focus on the direct impacts of our operations • All-employee Sustainability and CR e-learning • Creating opportunities for employee engagement on CR projects • Ericsson Response
SUPPLIERS	• Supplier audits, assessments • Seminars • Online Code of Conduct training	• Supplier Code of Conduct compliance • Network Rollout and related OHS issues • Reduce carbon footprint • Environmental management, including conflict minerals	• Increased focus on local sourcing • Online Code of Conduct training for all suppliers • Audits, assessments • Key Supplier Forum
INDUSTRY PARTNERS AND STANDARDIZATION	• Participate in industry fora, initiatives and standardization bodies	• Standards for assessment of climate change and measurement of energy efficiency • Materials data handling and chemicals management • Supply chain management and conflict minerals • Effective handling of e-waste globally • Broadband for digital development	• Active submissions to ITU and other standardization bodies • Participation in industry organizations such as GSMA, GeSI and Digital Europe • Supporting a "bag and tag" in-region sourcing program run by the ITRI Tin Supply Chain Initiative (iTSCi) and a Conflict-Free Smelter Program developed through a multi-stakeholder process • UN STEP initiative to handle e-waste globally and Ghana e-waste project
GOVERNMENTS	• Public policy outreach at COP17 on climate issues • Meetings with governmental bodies on e- and m-health • Broadband Commission for Digital Development • Multi-stakeholder dialogue on ICT and Human Rights	• Importance of broadband for social and economic development and climate change • Ensure that energy and carbon footprint of sector does not increase • Broadband for digital development • Broadband for GDP and job growth • ICT and Human Rights	• Participate in organizations such as the Broadband Commission on Digital Development • Led the Climate Change Working Group of the Broadband Commission • Annual Government and Regulator seminar • Led industry initiative in GeSI to launch the Transformative Step of the Day • Strengthen due diligence process for ICT and Human Rights
CONSUMER AND BUSINESS USERS AND APP DEVELOPERS	• Consumer and business research • Social media outreach • Social Good Summit • Technology for Good App competition for developers	• Impact of connectivity on improving lives and fostering economic development (GDP; job creation) • Electromagnetic fields (EMF) • Human Rights and ICT	• Radio waves and health information and research • Committed to UN Guiding Principles on business and Human Rights • Arthur D. Little, Ericsson study analyzing impact of more than a 100 studies on social and economic impacts • Ericsson Application Awards, focus on Technology for Good
NGOS AND INTERNATIONAL ORGANIZATIONS	• Public-private partnerships and engagement on selected topics • Surveys and benchmarks • Social Good Summit • Meetings and dialogue	• Technological assistance, support and partnership • Telecom for low-carbon economies • MDGs, education, disaster management, refugee cause, weather info, m-health • Conflict minerals • Human Rights and ICT	• Selected public-private partnerships including Ericsson Response, Millennium Villages, Connect To Learn, refugee reconnection • Conflict minerals and supply chain engagement in GeSI workgroup • China NGO coalition on environmental issues • Multi-stakeholder dialogue on ICT and Human Rights
ACADEMIC INSTITUTIONS	• Participate in international research with multiple universities • Studies	• Technological assistance, support and partnership • Telecom for low-carbon economies • Energy-efficiency of future telecom networks • Smart grids, intelligent transport, health	• Stockholm Royal Seaport Project • EARTH Project • Columbia University Monitoring & Evaluation Report • KTH Center for Sustainable Communications • MIT SENSEable City Lab

ENABLING COMMUNICATIONS FOR ALL

Connectivity is a basic enabler for economic growth and improved quality of life. For developing regions keen to seize the opportunities of the Networked Society, ICT facilitates education, health, safety and security, and livelihoods, in support of the Millennium Development Goals.

The last billion

With more than six billion mobile subscriptions, innovative approaches are still needed to address the needs of the "last" billion users at the base of the pyramid to ensure Technology for Good benefits everyone. Ericsson takes a holistic approach. By combining technology, global presence and experience in public-private partnerships with competency in developing new business models and novel approaches, we can replicate and scale successful initiatives for the greatest possible impact. Our partners include mobile operators, UN agencies and local NGOs. A key part of this approach is building the market by developing new products and services that help prove the business case for broadband as a means for positive change.

GDP growth

Broadband access and speed are strong economic drivers. Research by Ericsson and Arthur D. Little shows that for every 10% point increase in broadband penetration, GDP increases by 1%. A 2011 study of 33 OECD countries by Ericsson, Arthur D. Little and Chalmers University of Technology showed that doubling the broadband speed increases GDP by 0.3%. For the OECD region, this equates to USD 126 billion.

To analyze how ICT impacts individuals and communities in 2011, Ericsson developed a socio-economic impact assessment framework. Key indicators can be applied to specific projects. The framework is based on research by several UN organizations and will be further developed as a method to monitor and evaluate programs and activities within Ericsson's work in enhancing communication for all.

As an inquiry into the types of initiatives that offer both an economically viable model and positive socio-economic impacts, Ericsson co-sponsored a 2011 report, "Leveraging Information and Communication Technology for the Base of the Pyramid". Looking at 280 ICT-related initiatives in education, health, agriculture and finance across Asia, Latin America and Africa, the report found that among the key success factors are entrepreneurship, collaboration to scale services, and a solid business model to sustain services over the long term.

UN MILLENNIUM DEVELOPMENT GOALS

1. ERADICATE EXTREME POVERTY AND HUNGER
2. ACHIEVE UNIVERSAL PRIMARY EDUCATION
3. PROMOTE GENDER EQUALITY AND EMPOWER WOMEN
4. REDUCE CHILD MORTALITY
5. IMPROVE MATERNAL HEALTH
6. COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES
7. ENSURE ENVIRONMENTAL SUSTAINABILITY
8. GLOBAL PARTNERSHIP FOR DEVELOPMENT

THE MILLENNIUM VILLAGES

Ericsson is lead partner in the Millennium Villages Project (MVP), together with the Earth Institute at Columbia University, to show that by fighting poverty at the village level through development, rural Africa can achieve the MDGs. Alongside proven interventions, the MVP introduces new solutions to persistent development challenges. Ericsson has since 2007 provided connectivity to the MVP.

Mobile phone technology is the basis for many of the ground-breaking tools and systems developed by the MVP. With billions of mobile phone users worldwide and as many as 330 million in sub-Saharan Africa, ICT is a driving force for economic development, according to the 2011 MVP Report summarizing the project's impact from 2006-2010.

More than 500,000 people throughout 11 countries in sub-Saharan Africa benefit from mobile connectivity as a result of engagement in the MVP. At the end of 2011, over 90% of the village clusters were connected. Pastoralists in nomadic communities use their mobile phones to check prices and decide whether or not to bring their livestock to market. Schools that once sent students home when the sun went down due to lack of electricity now have solar panels to run lights as well as energy-efficient computers with wireless 3G Internet access. Community health workers deliver better

quality and more efficient healthcare, thanks to mobile phone-based health services like ChildCount+, a platform to register 140,000 patients, 90% under age five, for monitoring nutrition, immunizations and more.

RURAL CONNECTIVITY BY CORPORATE RESPONSIBILITY INITIATIVES

Number of people covered

- ■ Amazon Connection
- ■ Lake Victoria
- ■ Millennium Villages Project
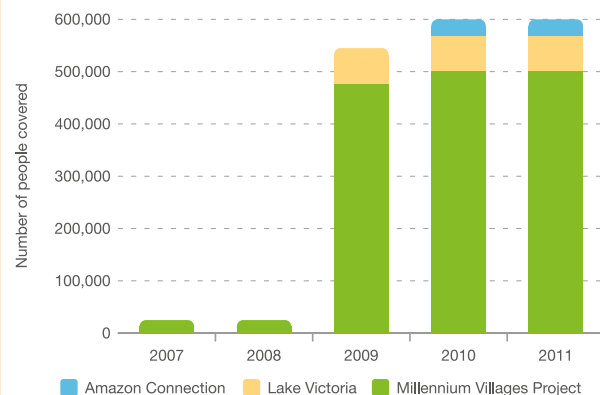
INNOVATIVE WAYS TO LEARN

Connect To Learn uses a cloud-based ICT solution for schools developed by Ericsson, and other ICT partners, as well as the on-the-ground experience of NGO partners. It is designed for users who have little or no technical competence. It removes the complexities of virus protection, software updates, application installation and maintenance to the cloud, thereby reducing costs and improving accessibility.

LearnQuick is a mobile communication tool connecting teachers and learners in sectors such as education, health, business and agriculture. In addition to providing lessons, social networking features create virtual communities. Content providers offer educational content via a mobile marketplace.

The Education Partnership Program is a collaboration among diverse partners such as education and training companies and NGOs to address the needs of schools in Johannesburg, South Africa. Ericsson's contribution to the program is the Ericsson Education Suite, introduced into several schools in Johannesburg in 2010 and 2011. This is an end-to-end broadband solution offering a set of communication technologies, content, applications and services targeted to education

CONNECT TO LEARN

Education is essential to ending poverty and ensuring a productive life for people all over the world. With today's technology, all young people can have the opportunity to learn. Mobile broadband makes it possible to connect even the most remote village classrooms so that they can benefit from 21st century educational resources.

Connect To Learn is a collaborative effort between Ericsson, the Earth Institute at Columbia University and Millennium Promise that leverages the power of ICT to bring a high-quality education to students everywhere. It promotes universal access to education to help meet the MDGs by providing scholarships to girls. According to a World Bank study about 70% of girls in some African countries do not receive a secondary education. Girls empowered to stay in school not only improve their own prospects but those of their families, communities and national economies.

Mobile broadband and cloud computing (see box at left) offer low-cost and user-friendly ICT so that students and teachers can access world-class information and educational resources. Through School2School, classrooms from the Millennium Villages and Millennium Cities Initiative in Africa are connected to classrooms in the United States, fostering cross-cultural learning and communication. Eight African schools now connect with American schools to explore a syllabus based on the MDGs.
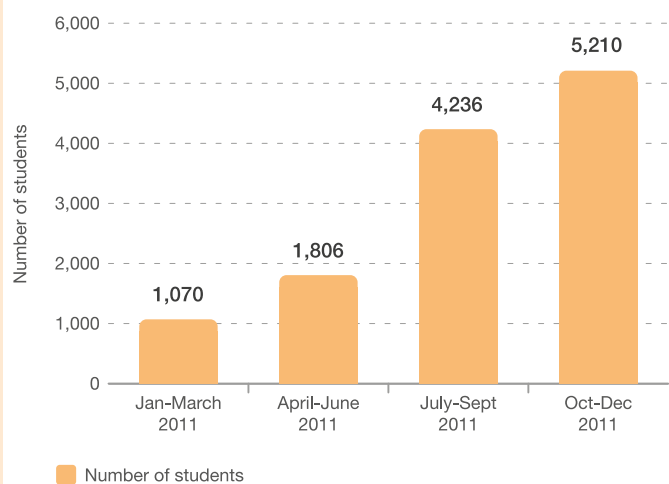
In 2011, its first year, Connect To Learn was implemented at secondary schools in the Millennium Villages in Ghana, Tanzania, Kenya, and Uganda. Nigeria, Rwanda, Malawi and Senegal will follow in 2012. Eighteen schools in the Millennium Cities Initiative were connected in Kumasi, Ghana in 2011. In Chile, it is being introduced to four schools in the Ninhue community in the Biobío region, as part of a national broadband project Todo Chile Communicado. In 2011, Connect To Learn reached some 5,000 students, and more than USD one million has been raised for scholarships.

THE NETWORKED SOCIETY FORUM

At NEST – The Networked Society Forum, thought leaders like the former President of the United States, Bill Clinton, examined how ICT can shape new business models to empower people, business and society, especially education.

CONNECT TO LEARN

Number of students	
Jan–March 2011	1,070
April–June 2011	1,806
July–Sept 2011	4,236
Oct–Dec 2011	5,210

Number of students

REFUGEE RECONNECTION

Ericsson has a long-term commitment to the refugee cause. According to the UN Refugee Agency, UNHCR, more than 43 million people have been forcibly displaced worldwide and struggle to learn the whereabouts of separated family members. With about 40% of Africa's population with access to mobile phones, yet just 2% have Internet access, mobile phones can help meet this need.

In 2010, Ericsson joined NGO Refugees United, the UNHCR and African mobile operator MTN to develop and deploy a mobile phone application to help refugees find loved ones. The service began with an SMS message and WAP version to suit low bandwidth. On World Refugee Day 2011 Ericsson launched an Android application enabling a richer experience for high-bandwidth users, with features such as a donation button, video, and relevant links.
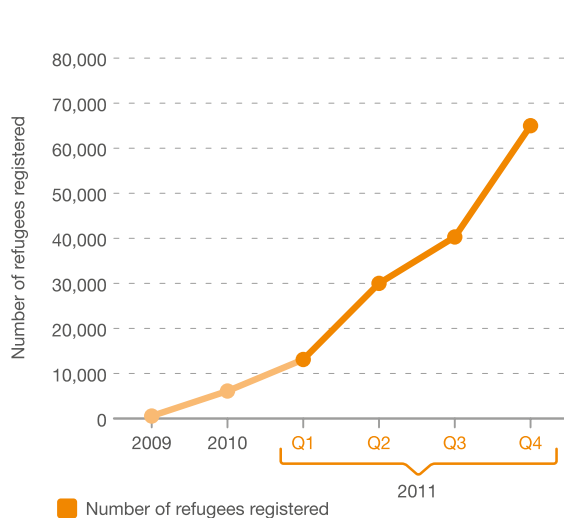
Refugees United creates, maintains and updates the database. Ericsson provides the mobile applications, technology and access to enable the application in mobile networks. Operators offer the service and raise awareness. UNHCR helps to implement the project in refugee settlements. Installed network capacity and applications adapted to different data capability make the service scalable and replicable globally.

By end of 2011, 65,000 refugees had registered for the service and some 60 families were reunited, states Refugees United. According to the UNHCR, three million people in East Africa alone could benefit from the service.

REGISTRATION ON THE RISE

REFUGEES UNITED

Number of refugees registered

80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0

2009   2010   Q1   Q2   Q3   Q4

2011

■ Number of refugees registered

BROTHERS REUNITED

In 2006, 36-year-old *Patrice and his brother *Olivier were separated when they fled the war in the Democratic Republic of Congo. With his wife and children, Patrice found himself in the Kakuma refugee camp in northwest Kenya. One thousand two hundred kilometers away in eastern Kenya, Olivier found safety in the world's largest refugee camp, Dadaab. Neither knew where the other one was or if he was alive.

For more than five years, the men lost all contact with each other until Patrice found his brother through the Refugees United family tracing service. The two brothers now regularly talk over the phone and, after five years of uncertainty, a new chapter in their lives has begun.

* Names have been changed to protect identities.

CONNECTING THE AMAZON

Remote communities in the Amazon have connectivity for the first time, thanks to the project Amazon Connection in which Ericsson has joined with partners to provide mobile broadband to people in the region. The first phase of the project, Connect Belterra, began in 2009, connecting the Belterra village. In 2011, the second phase was launched, bringing WCDMA/3G broadband to the village of Suruacá, along the Tapajós River. Alternative energy solutions such as solar panels were installed.

Broadband is also making a difference in Belterra, the first 3G/WCDMA radio base station deployed in the Amazon. The village previously lacked telecommunication and Internet. Today mobile technologies are used for community development programs within health, organization, forest economy, education, culture and communication, enabling m-health and m-learning for 30,000 people. The network has quickly reached full capacity, clearly indicating the need for services. The project will continue to connect other remote villages in Brazil and leverage the use of broadband for e-learning.

Partners in the project are Brazilian operator Vivo and NGO Project Saúde & Alegria, who provide community development programs. Ericsson developed and implemented the infrastructure, services and applications while Vivo operates and maintains the network. Saúde & Alegria trains local people to use the new technology, and advise other partners on how to best assist local communities.

Communication and access to basic services, such as health and education, have improved the prospects of the people in the communities, enabling a more economically active population that can support local livelihoods. In 2011, Vivo and the University of Para, conducted interviews to better understand the impact of broadband on Belterra. A total of 94% said they had used a mobile phone in the last three months; an overwhelming majority felt that the mobile phone facilitated their daily routine, and 60% were satisfied with improvements in their lives based on the new services.

The Amazon project has resulted in digital inclusion in a total of 15 communities via mobile device and investments in both urban and rural areas.

MOBILE INNOVATION VILLAGE

The Mobile Innovation Village (MIV) initiative is aimed at empowering rural communities in Malaysia by making ICT services available, accessible and affordable to all. Inspired by the Millennium Villages Project, MIV is a joint initiative between the Malaysian Communication and Multimedia Commission (MCMC), operator Maxis, the University of Malaysia Sarawak and Ericsson. The MIV is a response to the country's Economic Transformation Program with initiatives aimed at extending reach and improving rural basic infrastructure and living standards of low-income households.

The MIV is initially planned for Kampung Serasut and neighboring villages in Bau District in Sarawak. In a 2011 study, Ericsson and partners determined that the rural population would benefit from e-health, especially in remote areas where healthcare services were scarce, e-learning at tele-centers and homes, and affordable communication solutions and cloud solutions such as PC as a Service. The study provided valuable insights into community needs and the feasibility of deploying relevant solutions.

INNOVATION IN ACTION

MANAGED RURAL COVERAGE

Addressing the needs of communication for the millions of people worldwide without it, is the aim of Ericsson Managed Rural Coverage, MRC. This is a customized business model for mobile operators directed at the investment and operational expenses of traditional sites that would otherwise not be financially viable to address.

In a pilot with pan-African telecommunications operator MTN, Ericsson has implemented four pilot sites using this low-density network coverage solution. The solution uses a solar-powered micro cell with satellite backhaul equipment and batteries.

Once coverage is in place, a range of services can be provided within health, education, and small business enterprise, and other areas, to improve the socio-economic development of rural areas.

The pilot demonstrates that there is a commercially viable business case for this rural and solar powered connectivity solution, due to set-up and running costs being reduced.

By using solar power only, the environmental disadvantages of using diesel to power remote sites is minimized. A life-cycle assessment of this solution indicated that a typical MRC installation results in carbon dioxide emissions of about 0.3 kg per subscriber and year.

ERICSSON MOBILE AUCTION

Rural farmers often live far from market places and lack timely and accurate information about the price of crops. As a result, they are often forced to accept a very low price, or risk having their crop deteriorate, in particular in emerging markets.

Through Ericsson Mobile Auction, farmers can initiate an auction via SMS, to the registered buyers, who then make bids. The buyer with the highest bid contacts the farmer to arrange for delivery. The solution also has an SMS broadcast function so that agricultural suppliers, farmer cooperatives, and non-profit organizations can distribute messages or weather alerts relevant for the farmers. Still in the innovation phase, a trial of Mobile Auction in India in 2011 with a small group of farmers and buyers showed a positive response. In 2012, a larger-scale trial is taken place in Former Yugoslavian Republic of Macedonia to evaluate the economic benefits of the solution for agriculture. The pilot is executed in close cooperation with the government.

MOBILE WEATHER ALERT

Lack of weather information is a serious challenge in Africa, where tens of millions of people depend on accurate forecasts for their livelihoods, safety and security. Now this problem is being addressed through a partnership project where individuals can subscribe to customized forecasts sent to mobile phones. Ericsson has developed the mobile application Mobile Weather Alert and designed the operational model for scale and replication. The World Meteorological Organisation and the Uganda Department of Meteorology have developed the tailor made forecasts and the National Lake Rescue Institute supports the end-users and usability studies. Operator MTN Uganda and Grameen Foundation deliver the service. In 2011, 1,000 fishermen in Uganda's Kalangala Islands subscribed to the service for a pilot and proof of concept. The pilot found that fishermen use the information to ensure that they fuel their motors to be able to handle high waves and to avoid being stranded during a storm. The forecast allows them to optimize their fuel use based on weather conditions, and even postpone trips if necessary. Some 200,000 fishermen depend on Lake Victoria for their livelihood. With over 5,000 fishing-related deaths per year, and catch rates on the decline due to a lack of resource management, such solutions are needed.

ERICSSON RESPONSE TIMELINE.

- **2000** – Extreme floods in Algeria and severe drought in Tajikistan.
- **2001** – Flooding in Hungary and earthquakes in Pakistan, Peru, El Salvador.
- **2002** – Rail disaster in Tanzania and food crisis in Lesotho. Humanitarian Aid to Afghanistan.
- **2003** – Earthquakes strike Algeria and Iran. Hurricane in Caribbean. Aid to Liberia.
- **2004** – Tsunami devastates Indonesia and Sri Lanka.
- **2005** – Hurricane Katrina hits the US. Earthquakes in Pakistan.
- **2006** – ICT support for aid workers in South Sudan. Earthquake victims in Pakistan.
- **2007** – Establish connectivity for aid worker in Central African Republic and in Peruan Earthquake.
- **2008** – Establish connectivity for Save the Children in South Sudan.
- **2009** – Assessment of ICT needs in Philippines. ICT support in de-mining mission in DRC.
- **2010** – Earthquake strikes Haiti.
- **2011** – "One UN" initiative in Tanzania.

ERICSSON RESPONSE

For over ten years Ericsson employees have provided essential mobile communications to support disaster relief and humanitarian aid through Ericsson Response. This non-profit activity engages Ericsson employees in volunteer work with no commercial objective and is a key component of Ericsson's corporate responsibility activities. Not only is it inspiring those who participate but is a source of motivation, empowerment and value creation for all Ericsson employees.

Ericsson Response works in partnership with many of the United Nation's (UN) different humanitarian organizations to meet their communication needs in times of disaster, as well as in close co-operation with the International Federation of Red Cross and Red Crescent Societies (IFRC). Currently, more than 130 volunteers from about 30 countries are involved in the program. That level of diversity gives insight into local cultures as well as providing language skills. Not only is the program valued by Ericsson Response's partners but it is also part of our employer brand, attracting people who want to use their skills and knowledge and the company's technology, as a force for good.

In 2011, Ericsson Response supported the "One UN" initiative, sending ICT specialists to Tanzania to work with the UN World Food Programme. The One UN initiative aims to enhance the impact of the UN system within individual countries through increasing national ownership of activities and reducing transaction costs. The role of ICT is to create a "virtual office", providing coordinated and streamlined services to participating agencies.

The volunteers provided on-site support for the integration of computer systems for one month. During that time, they analyzed the information needs UN agencies present in Tanzania in terms of what information is critical in humanitarian work, set up applications for knowledge sharing and information gathering, and trained the organization's staff. The One UN initiative, will assist UN agencies to be more coherent, effective and efficient.

Also in 2011, Ericsson and Singapore Telecommunications Ltd (SingTel) announced a partnership to provide emergency communications services to support disaster relief efforts in South and Southeast Asia through Ericsson Response. Under this agreement, SingTel and Sing Tel affiliates will provide satellite services and associated connectivity as well as frequency allocations for our GSM containers during relief efforts for their area of coverage. This will allow for faster deployment of emergency communications services in the event of disaster.

TECHNOLOGY FOR GOOD AROUND THE WORLD

Ericsson is working to transform Technology for Good from vision to action in every region where we operate around the world. We address global sustainability and corporate responsibility needs at the local level, working together with local stakeholders to create solutions that empower people, business and society. Below is a selection from Ericsson's many Technology for Good projects. More information on many of these projects can be found in our online Sustainability & CR reporting.

AUSTRALIA
Smart grid project with Ausgrid.

BANGLADESH
Ericsson devised a solution of power-purchase agreements (PPA) with local suppliers to enable the use of renewable energy, primarily solar, at some radio base stations in Bangladesh, together with Grameenphone.

BRAZIL
- Conexao Belterra (Connect Belterra).
- Partnership with Vivo, DataProm and Ericsson for intelligent buses in Curitiba.

CANADA
Smart metering project for utility Hydro-Quebec.

CHILE
With government and operator Entel, delivering broadband to three million people in rural communities, and introducing Connect To Learn in the Biobio region.

CHINA
- Pilot of LearnQuick in rural areas, addressing education, health, enterprise and agriculture.
- Cooperation with provincial government of Guangdong and Agriculture Ministry in Jiangsu province to use mobile broadband to benefit fish farming.
- ICT solutions in environmental monitoring, transport and logistics for Dongfeng Motor and Wuhan Iron and Steel Group.

ETHIOPIA
Millennium Villages Project in Koraro.

GHANA
- Millennium Villages Project in Bonsaaso including Connect To Learn deployment.
- Millennium Cities Initiative, with Connect To Learn in 18 schools in Kumasi.
- E-waste handling project.

HUNGARY
Network modernization project with Magyar Telekom to meet their cost efficiency and 50% energy saving goals.

INDIA
- Ericsson Mobile Auction deployed.
- Global Leadership Technology Exchange India Infrastructure Partnership.
- Automatic Meter Reading (AMR) and Street Light Management (SLM) Solution in the state of Simla, Himachal Pradesh.

ITALY
- Advanced metering project with utility ACEA.
- CO_2 reduction on 50% of WIND off-grid sites with hybrid diesel battery.

JAPAN
Supported customers with communication solutions during the earthquake.

KENYA
- Millennium Villages Project in Sauri and Dertu, including Connect To Learn.
- Refugees United deployment with Safaricom.

MALAYSIA
Mobile Innovation Village initiative.

MALAWI
Millennium Villages Project in Mwandama.

MALI
Millennium Villages Project in Tiby and Toya.

NIGERIA
- Millennium Villages Project in Pampaida and Ikaram.
- Deployment of 250 "green" sites, using wind and solar.

RWANDA
Millennium Villages Project in Mayange.

SENEGAL
Millennium Villages Project in Potou.

SERBIA
EcoBus Project, jointly developed by Telekom Srbija and Ericsson.

SOUTH AFRICA
- Education Partnership Program at schools in Johannesburg.
- Johannesburg next-generation, fibre optic network and systems integration to help the city reach its 2040 Growth and Development Strategy.

SOUTH KOREA
With operator KT, deployment of 5,000 radio base stations units in Cloud Communication Center for substantial energy savings.

SWEDEN
- Sustainable cities with Stockholm Royal Seaport project and SymbioCity.
- Partner of the Centre for Sustainable Communications (CESC) at the Royal Institute of Technology in Stockholm.
- Refugees United – World Refugee Day in Stockholm.

TANZANIA
- Millennium Villages Project and Connect To Learn in Mbola.
- Field study together with the World Lung Foundation and referral hospitals in the Kilombero and Rufiiji districts.
- Ericsson Response, "One UN" initiative.

UGANDA
- Millennium Villages Project and Connect To Learn in Ruhiira.
- Mobile Weather Alert with operator MTN for use by fishermen and traders in the Kalangala Islands, Lake Victoria.
- Refugees United deployment with MTN.

UNITED STATES
- Ericsson sponsor of Social Good Summit in New York.
- Connected Commuting in San Jose.

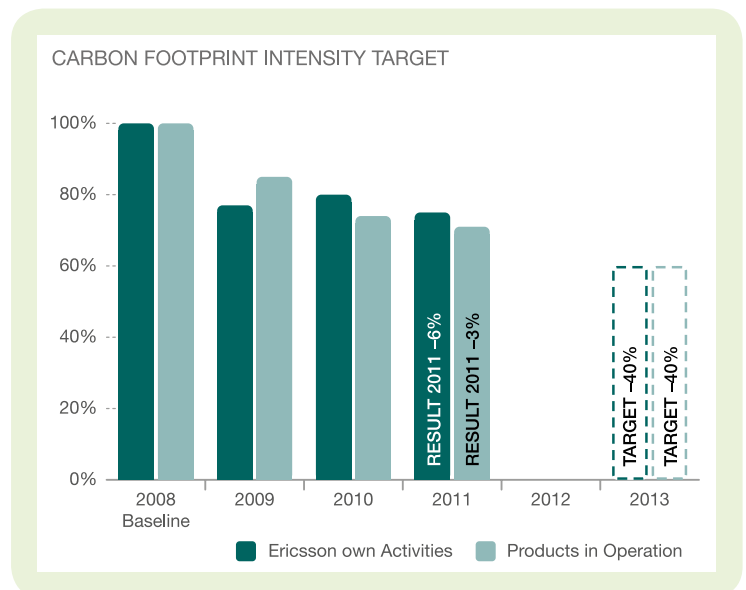# REDUCING OUR ENVIRONMENTAL
IMPACT

Our focus is on reducing our environmental impact throughout the value chain. This includes the direct impact of our own activities, the impact of our products in operation, and solutions that help customers improve environmental performance.

Ericsson uses Life-Cycle Assessment (LCA) and Design for Environment (DfE) to identify and minimize our environmental impact from all life cycle activities including raw material extraction, manufacturing, transport, use and end-of-life treatment.

Our most significant environmental impact is the energy consumed when our products are in use. We use LCA to manage our in-house carbon footprint and the impact of our network products and services. In 2008, Ericsson set a five-year target to reduce carbon emission intensity by 40% across our own activities and the life-cycle impacts of our products in operation.

In 2011, the carbon dioxide emissions associated with the lifetime operation of delivered products totaled approximately 24 Mtonnes. This equated to a 3% reduction in carbon footprint intensity from products in operation compared with 2010. While the reduction was lower than 2010, Ericsson is well on track to meet its five-year target. The direct emissions from in-house activities totaled approximately 0.84 Mtonnes during 2011, which corresponds to a 6% reduction in direct emissions intensity from our own activities.

Materials efficiency is central to our DfE approach. Our list of Banned and Restricted Substances applies in the design phase and in all purchasing agreements worldwide. Our materials declaration tool gives a systematic approach to selecting materials and minimizing resource use in accordance with all relevant legislation.

CARBON FOOTPRINT INTENSITY TARGET

Bar chart showing carbon footprint intensity from 2008 (Baseline) to 2013. Y-axis: 0% to 100%. Bars for Ericsson own Activities and Products in Operation. 2011 labeled RESULT 2011 –6% and RESULT 2011 –3%. 2013 labeled TARGET –40% and TARGET –40%.

Legend: Ericsson own Activities — Products in Operation

ERICSSON LIFE-CYCLE ASSESSMENT – CARBON FOOTPRINT 2011

Mtonnes CO_2e

Supply Chain	~3
Ericsson own Activities	0.84
Operator Activities	~4
Products in Operation	~24
End-of-Life Treatment	~−0.3

Activities in 2011: Supply Chain, Ericsson own Activities

Future (lifetime) operation of products delivered in 2011: Operator Activities, Products in Operation, End-of-Life Treatment

■ Direct emissions (Ericsson own Activities)
■ Indirect emissions (all other life-cycle emissions)

~ = approximately

TOWARDS HARMONIZED STANDARDS

Ericsson monitors sustainability developments in the market and regulatory areas and we support and contribute actively to the development of well-defined, harmonized standards that drive efficiency in use of materials and energy. This not only builds a competitive advantage but also helps us, our customers and our suppliers to meet environmental targets. Lack of harmonized standards is one of the greatest challenges in creating a level playing field.

UNDERSTANDING ENERGY TRENDS

Our industry-leading research tracks future trends on carbon emissions for the ICT industry, seeking innovative ways to minimize that footprint as much as possible, even in light of growing demand. We engage in a number of research projects to drive greater energy efficiency in both fixed and wireless networks.

As data traffic on mobile broadband networks grows, the ICT industry needs to increase network energy-efficiency to limit its contribution to global carbon dioxide emissions. Ericsson is deeply engaged in studying the relationship between network energy consumption and data growth to better understand key mechanisms for energy consumption in mobile networks, and how to further reduce total energy consumption of networks in light of continued growth.

The EU research project EARTH, representing partners from industry, academia and research institutions from ten European countries, is focused on understanding trends in network energy consumption over the next ten years, with the objective of reducing energy consumption of mobile systems by 50%. Ericsson has played a major role since the project began in 2010.

EARTH has developed common models and an evaluation methodology, a so-called energy efficiency evaluation framework (E3F), which received broad attention in the scientific community. It was adopted by many researchers and influenced industrial standardisation fora. Furthermore, EARTH has developed a number of feature concepts allowing for significant energy savings, and the partners have jointly identified and agreed on the most promising of these.

EARTH is providing best-practice engineering guidelines for the deployment of future energy-efficient networks, and is on track to meet its 50% goal. Currently the project is investigating proof-of-concepts through validation tests in realistic settings and comprehensive network simulations.

CARBON FOOTPRINT INTENSITY: ICT OUTLOOK 2020

The carbon footprint per mobile user is estimated to increase slightly as there will be more users of smartphones, tablets and laptops. The CO_2 emissions related to fixed network users will decrease, mainly as a result of more energy efficient PCs. The carbon footprint per average ICT user rapidly decreased until 2010 and will continue to decrease as a larger share of all ICT users are using mobile devices.

kg $CO2_e$ / user

■ Fixed networks   ■ ICT sector   ■ Mobile networks
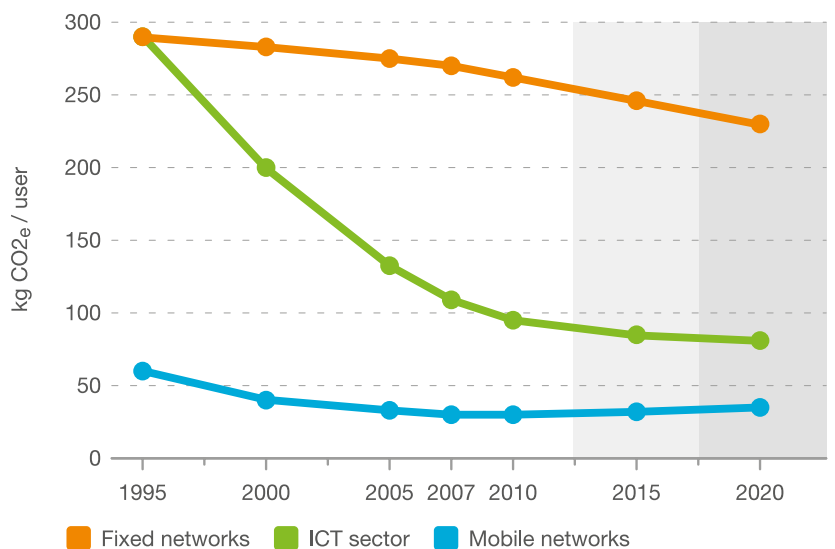
Source: Ericsson

ADVANCED PRODUCTS

AMONG THE ERICSSON PRODUCTS CONTRIBUTING TO GREATER NETWORK EFFICIENCY:

- The multi-standard radio base station RBS 6000 supports GSM/EDGE, WCDMA/HSPA, LTE and CDMA in a single unit. It offers cost-effective deployment and a future-proof evolution in capacity and functionality. The RBS 6000 family now accounts for close to 100% of our radio base station deliveries and offers 80% lower energy consumption per subscriber and requires 75% less space compared to previous generations.

- During 2011 we launched the Antenna-Integrated Radio (AIR), as part of the RBS 6000 family. This product reduces installation time by 30%, and cuts energy consumption by 40%.

- In order to increase network capacity in densely populated urban areas, we will build heterogeneous networks. Powerful macro-radio base stations are complemented by smaller radio base stations (pico and micro) which provide extra capacity for areas where demand is particularly high. By serving users with a nearby low power node, it is possible to off-load the high power nodes, thus saving energy.

- Ericsson Ψ-Coverage solution provides Mobile Broadband (3G) coverage with 45% energy savings compared to traditional solutions. Ψ-Coverage uses new Ericsson technology to boost coverage while enabling significant energy and cost savings by using just one standard radio.

- The new IP service delivery platform - the SSR 8000 family of products - has been found to have leading power efficiency results. As an example, the GGSN node built on SSR 8020 is 4.5 times more efficient than previous generation.

- Ericsson has unveiled its second digital-power Advanced Bus Converter platform for use with power modules in telecom and datacom applications, operates with a 98% efficiency.

ENERGY-EFFICIENT PRODUCTS AND SOLUTIONS

In an energy-optimized network, solutions on node, site and network level can reduce power consumption while maximizing traffic, thereby decoupling traffic growth from energy consumption. Our product development focuses on more compact and efficient designs that provide equivalent or better performance, consume less power and generate less heat, which requires less cooling.

Ericsson fixed and mobile networks are designed for energy efficiency, increased lifespan and less need for maintenance and site visits. In a typical radio access network up to 90% of the energy is consumed in the radio base stations. Ericsson has increased 3G energy efficiency by 85% in radio base stations over the last decade. This allows networks to meet bandwidth demands without increasing energy consumption per subscriber, see below graph.

Growing interest in energy optimized sites

Customers are concerned about the supply, reliability and cost of energy, the impact of climate change, growing regulation, and the need for operational efficiency in a constrained economic environment.
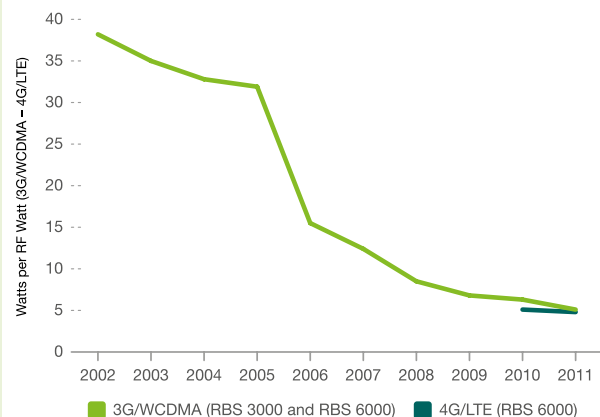
Ericsson's Efficient Energy Solution is a holistic turnkey approach that combines network, site and node level improvements to achieve the optimal energy consumption for our customers.

By drawing upon Ericsson's global consulting and technical capabilities, we can assist operators in every stage of the project, from initial baseline analysis through to implementation and final reporting and measurement of solutions deployed.

Alternative energy sources such as solar and wind are increasingly attractive, economically and technically feasible, as radio sites become more energy efficient, the cost of solar panels decreases, and energy prices rise.

Currently no single solution will solve the challenge of increasing energy expenditure in a cost-effective manner, which is why Ericsson focuses on overall network energy optimization to meet customer needs.

POWER CONSUMPTION PER UNIT OUTPUT POWER

Watts per RF Watt (3G/WCDMA – 4G/LTE) vs years 2002–2011

- 3G/WCDMA (RBS 3000 and RBS 6000)
- 4G/LTE (RBS 6000)

EXTENDED PRODUCER RESPONSIBILITY

Producer responsibility is embedded in our long-established Ecology Management Program, which seeks to ensure that our products have the lowest possible impact on the environment, even at end-of-life. By facilitating recovery and recycling of products for our customers, we not only comply with legislation but help operators to reduce costs while minimizing negative impacts to the environment.

The Ecology Management Program is built around the requirements of the EU Waste from Electrical and Electronic Equipment (WEEE) Directive, but is applied globally. The program will accommodate the requirements of the WEEE recast directive which will be published during 2012 and reflects a revision of WEEE intended to increase the amount of e-waste that is appropriately treated. Of all material collected and processed during 2011, less than 2% was sent to landfill and more than 98% was recovered, an improvement from 2010. We have increased the amount of reuse from 2% to 5% of the total volume taken back. Reuse is the preferred method from an environmental impact perspective. The program has reached its own recovery target on year, which exceeds the WEEE target.

Increasing volumes

In 2011, we increased volumes retrieved by more than 60% compared to 2010. This was due largely to a number of take-back requests for large volumes of material from regions in Central and Western Europe and Asia. We also improved our capabilities to handle WEEE in Asia, Africa and the Middle East and we continue working to increase awareness among customers about the service.

The key material streams we deal with are ferrous metals, precious metals and plastics. The majority of these metals eventually re-enter the commodities market where they are sold to industry as raw materials. This reduces the need to use the diminishing reserves of global natural resources.

Customer value

Customers from around the world including India, Malaysia, Singapore, and many countries in Africa are taking advantage of the program. In China, the process has been implemented in our production plant at Nanjing and we are in discussion with customers in China interested in the program. In India, due to the new directive on electronic waste, similar to WEEE, which is due to come into effect during 2012, Ericsson is well positioned to help our customers meet these new requirements.

Our overall aim is to reduce the end-of-life impact of our products, while making the process cost-neutral. We participate in, and contribute to, a number of global organizations focused on improving WEEE handling, such as the UN StEP (Solving the E-waste Problem), and GeSI (the Gobal e-Sustainability Initiative).

IMPROVING E-WASTE HANDLING IN GHANA

In developing countries where suitable infrastructure does not exist, the handling of electronic waste can cause human health and environmental damage, while large volumes of valuable and strategic materials go unrecovered. To address this problem, Ericsson is one of several partners in an e-waste project in Ghana, along with the Raw Materials Group of Sweden, the Nordic Development Fund's Climate Facility and the Environmental Protection Agency in Ghana.

The project is assisting and advising the Ghanaian government in preparing e-waste legislation and to establish recycling infrastructure to help solve Ghana's e-waste problems while reducing its climate footprint as more energy-efficient processes to extract metals are used. Establishing efficient handling and dismantling methods will also improve e-waste workers' health and safety, alleviate poverty through improved livelihood conditions, discourage children from working in this business instead of attending school, and generally ensure a better handling of electronic waste.

In 2011, the project achieved increasing awareness and providing assistance to the Ghanaian Ministry of Environment and EPA in their preparation of the e-waste bill. This is expected to be published during 2012. The project is due to be completed 2013 and will then have a processing and pre-treatment facility to handle e-waste. This will create formal working conditions and hopefully substantially increase the local health status among the workers.

CASES:
FOCUS ON ENERGY SAVINGS

RENEWABLE POWER IN NIGERIA

To help mobile operator Bharti Airtel bring a more energy-efficient solution for its operations in Nigeria, Ericsson in 2011 was contracted to upgrade an initial batch of 250 diesel-powered radio base stations with "green" sites. The solution will allow Airtel to harness solar and wind energy at the sites to minimize diesel consumption and carbon dioxide emissions. Ericsson expects that the solution in Nigeria will provide over 80% reduction of diesel.

In addition to optimized solar and wind generation systems and a bank of batteries to store energy, the solution also includes sophisticated control system that ensures maximum power is captured from the renewable energy sources and that the use of the battery bank is highly efficient. Ericsson will be responsible for implementation and maintenance services for all the sites.

NETWORK MODERNIZATION IN SOUTH KOREA

In South Korea, Ericsson is working with operator KT to replace an existing WCDMA network with 5,000 radio base stations units with digital units which operate in a Cloud Communication Center (CCC), a mobile telecommunication system that incorporates cloud-computing technology. A CCC provides higher data capacity while reducing an operator's cost in deployment, operation and maintenance. It also consumes significantly less power and allows operators to assign radio resources based on the volume of data traffic at any particular moment. KT reduced electricity consumption by 67% through CCC, expecting to reduce over 10,000 tonnes of carbon dioxide emissions per year.

POWER SAVING FEATURES IN CHINA

Ericsson is active in deploying software features that place various mobile network components into stand-by mode during low traffic conditions with the result of reducing overall network energy consumption. This helps customers to save energy for existing mobile networks equipment. For example, in China a major operator worked with Ericsson to equip the Ericsson Power Save feature in more than 1.2 million transceivers from 2008 to 2011, resulting in estimated energy savings consumption of over 263,000 MWh, which corresponds to a saving of 237,000 tonnes CO_2e.

MAGYAR TELEKOM, HUNGARY

Ericsson was selected by Magyar Telekom to modernize their network. As part of the network modernization, Ericsson will replace the current 2G and 3G wireless radio base stations with the, multi-standard RBS 6000 equipment developed for GSM/EDGE, WCDMA/HSPA Evolution and LTE technologies. With this solution it will be possible for Magyar Telekom to meet their cost efficiency and 50% energy saving goals. The decommissioned equipment will be handled by Ericsson's Ecology Management program,

POWER SAVINGS FEATURES
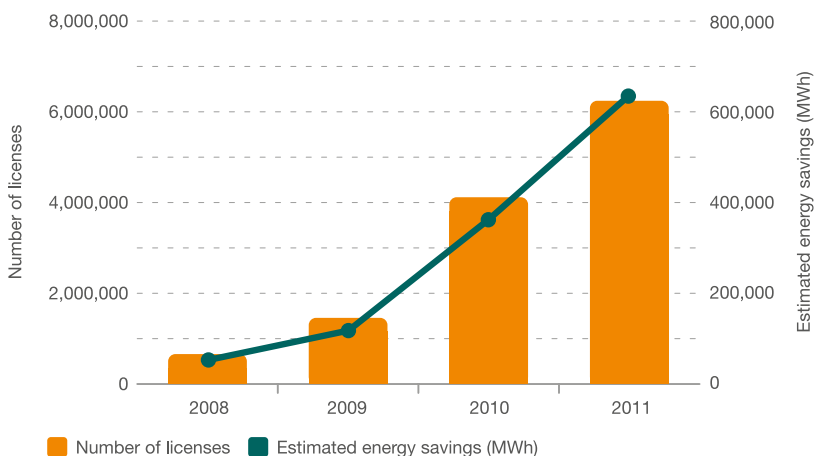
This graph shows the number of GSM TRX where BTS Power Save and Timeslot Power Save features have been deployed and the estimated energy savings from these features across our customer networks.

IMPACT OF ERICSSON ACTIVITIES

We continuously reduce environmental impact of our own activities, with particular focus on lowering our carbon dioxide emissions. The environmental impact of Ericsson's own activities is relatively small compared to the impact of products in operation, but it is nevertheless an important area of focus. Our approach is two-fold: Reducing carbon footprint while simultaneously improving productivity and achieving a cost-benefit balance. Three areas take priority with Ericsson's own activities: logistics, facilities management, and travel.

Logistics

To reduce emissions from our product transport, Ericsson has made a strategic shift from air to surface freight to reduce emissions. Logistics is a key priority area in terms of direct emissions. Significant differences exist in carbon dioxide emissions between different modes of transport when expressed in terms of emissions per tonne-kilometer transported.

In 2011, we achieved our surface transportation target to increase surface transport to 70% by weight, despite delivering higher volumes. This is a significant increase from 2008 when surface transport represented 40% of volume.

Facilities management

Facilities are a critical area for lowering Ericsson's own carbon footprint. We focus on three main areas: reduce energy consumption and improve energy efficiency in offices and buildings; reduce energy consumption from data centers and test labs, and to increase the purchase of green energy when practical. This depends, for example, on the market availability of green certified energy and where we identify a positive cost-benefit case. During 2011, the certified green energy share of the total energy for Ericsson facilities was slightly above 30% globally. That figure was higher in Europe in 2011 (75%), where there is a strong market for green energy.

CARBON INTENSITY / ERICSSON OWN ACTIVITIES

- Transports: Tonnes CO_2e/Tonnes products
- Facilities: Tonnes CO_2e/employee
- Travel: Tonnes CO_2e/employee

In 2011 our electricity usage in absolute terms increased from 650 GWh in 2010 to 830 GWh in 2011, mainly due to an increase in total square meters of building space. One way in which Ericsson addresses energy consumption in offices and buildings is through energy audits. As of end 2011, we had completed audits for over 900,000 square meters out of 2.2 million square meters, or 40% of the significantly larger offices, data centers, test labs, and production sites.

Other measures include to secure energy efficiency requirements in new lease agreements and within our own projects, to increase the use of green building rating systems, and to install sub-meters to better understand energy usage and savings areas.

We have reduced energy consumption from data centers by more than 30% over the past three years.

Travel reduction

In managing our global business while improving productivity and reducing carbon dioxide emissions, Ericsson prioritizes developing alternatives to travel. This includes deploying our own technology and communication and collaboration tools and creating more modern and flexible work environments.

One example is Ericsson Visual Communication, our video conferencing solution, a solution which addresses the operators' opportunity to provide their customers with high-quality video conferencing services.

Ericsson together with a group of ICT industry leaders announced an open solution for standardized video conference services at the industry event Mobile World Congress in February 2012, enabling people, businesses and societies to interact in new ways by making visual communication as easy as a phone call.

ENABLING A LOW-CARBON ECONOMY

Working with a range of partners, Ericsson is developing intelligent ICT-enabled infrastructure for utilities, transportation, government services and more. The aim is to optimize services or activities for greater energy efficiency, and to seek out opportunities for transformative solutions that fundamentally change the way we live and work.

The ICT sector contributes about 2% of global carbon dioxide emissions. It is committed to further decreasing this share while also making significant contributions to reducing the 98% of carbon emissions from other sectors such as energy supply production and distribution, transport and dematerialization in general.

Broadband and sustainable development

There is a strong business case for investing in broadband to provide a common communications infrastructure that unites diverse sectors in contributing to low-carbon goals and improved quality of life. Broadband can optimize delivery of essential services and redefine urban landscapes, from more intelligent electricity grids to more efficient transportation.

Ericsson is developing products, solutions and services as well as engaging in thought leadership to create the right framework for action. We participate in local, regional and international fora, such as the global climate negotiations, the work of the Broadband Commission for Digital Development, and policy work on behalf of the Global e-Sustainability Initiative (GeSI).

Cross-sector collaboration

Partnership is vital to deliver the low-carbon economy. Industries that have traditionally operated independently, from energy to utilities to transportation, are moving toward cross-sectoral collaboration. The evolution of the low-carbon economy is changing the business environment and challenging the status quo, creating opportunities for new business models.

Ericsson is partnering with operators, a range of industry sectors, governments and international organizations to accelerate ICT's role in reducing global carbon emissions and putting the world on a more sustainable path.

SUSTAINABLE CITIES

The urban centers of the world are responsible for nearly 70% of carbon dioxide emissions but only cover 1% of land. This impact is expected to increase dramatically in the next three decades. Urbanization, growing city populations and urban sprawl all contribute to a bigger environmental footprint. Networked cities are using ICT's transformational power to shift society in a different, more sustainable direction.

Fifty years ago, less than one third of the world's population lived in urban areas but that proportion is expected to increase to almost two-thirds within the next 20 years. Half of the world's population lives in cities today and that number will reach 70% by 2050.

From Ericsson's perspective, the technological transformation now taking place is addressing some of the biggest challenges facing rapidly expanding growing cities, from energy, transportation, education, and population movements to carbon dioxide emissions, and healthcare. Ericsson sees urbanization as the driver of development in many industries, and that ICT will play a key role in that new paradigm. The introduction and expansion of ICT is rippling across industries, fundamentally altering business and operational processes.

Ericsson is working with cities globally to increase awareness and help realize a multitude of benefits from ICT that address specific environmental and socio-economic targets. These include job creation and GDP growth, more efficient government services including improved access to healthcare and education, optimized energy consumption, reduced carbon dioxide emissions and greater awareness of every individual's environmental impact.

Among the steps Ericsson took in 2011 towards more sustainable cities:

- Launched a Smart City service, in which we support cities in their development towards a smart city. Ericsson is working on development of smart cities in countries such as China, South Africa, US, Sweden Italy and Qatar.

- Created the Networked Society Cities Index, with Arthur D. Little, ranking cities in terms of their ability to use ICT to deliver triple bottom line benefits to their citizens.

- Became a founding member of the New Cities Foundation, a non-profit Swiss institution dedicated to improving the quality of life and work in the 21st-century global city.

- As a member of SymbioCity, a network of Swedish companies and organizations, helped integrate ICT into the solutions being offered to promote urban sustainability initiatives.

- Published paper "Shaping Sustainable cities in the Networked Society".

STOCKHOLM ROYAL SEAPORT

The Stockholm Royal Seaport project is initiated and driven by the City of Stockholm and aims at developing a former industrial and port area into an attractive and sustainable environment for living and working. Its aim is to be a world-class sustainable city with a climate-positive city district already by 2030, utilizing a climate-smart and efficient infrastructure connecting 10,000 homes, and 30,000 workspaces.

The tough climate-positive target influences both core infrastructure performance as well as sustainable lifestyle ambitions. It will require a great deal of technological innovation, and collaboration across classic disciplines for urban development.

ICT solutions

Ericsson engaged with the City at the earliest planning stages and supported development of an approach for taking advantage of ICT across several dimensions of the project. This has now evolved into a formal partnership in the Stockholm Royal Seaport Innovation Center, with our active participation in cross-sector innovation in several areas of the new city district area development.

So far, progress has mainly focused on optimizing the core infrastructure of the city area, with a focus on energy. With our early engagement, we have established close, hands-on collaboration with the power industry to implement a full smart-grid solution in the area, and with the car industry to develop solutions for electric vehicle charging (see p. 28). We are now exploring additional concepts for smart power usage in the public domain, for use in street lightning, etc.

Ericsson is also driving research and development for mobility solutions and lifestyle applications in order to improve daily life in areas such as travel and transportation, remote working, and efficiency of city-based businesses.

STRATEGIC GROWTH IN JOHANNESBURG

In Johannesburg, South Africa, Ericsson is providing the network and systems integration for a next-generation, fiber optic network as well as strategic advisory services to help them reach its 2040 Growth and Development Strategy, launched in 2011. The strategy is driven by the need to address education, economic growth, and sustainability. Through tailored applications, consumers and businesses can seize the advantages of connectivity.

Bwired, an Ericsson initiative formed specifically for this purpose, is implementing the project and is comprised of a collaboration among a few Internet Service Providers with a history of delivering affordable Internet and broadband services to Johannesburg. Upon completion in 2013, the network will cover all eight regions in Johannesburg, providing broadband technologies to city offices and enabling a variety of solutions within education and health and other areas to further socio-economic development. The project will help to bridge the digital divide between the city's wealthier and lower-income areas. The diverse range of services supported by high-speed broadband will enable Johannesburg to become the first true Digital City in sub-Saharan Africa.

SMART GRIDS

Energy utilities are today under considerable pressure to help reduce carbon dioxide emissions, and help meet sustainability goals. Accounting for about 26% of the world's total carbon foot-print, supplying energy to society has a significant environmental impact. To address this challenge, strategic programs introduced by utilities often include the introduction of more renewable energy generation (solar, wind, hydro and bio-mass) distributed across the grid.

These trends require the grid to evolve from passive one-way energy flow to active two-way energy flows, balancing energy demand with energy supply to minimize excessive wasteful energy demand peaks or supply troughs (with resultant blackouts).

These changes to the grid are fundamentally enabled by the introduction of ICT. In particular, the creation of a smart grid communications network provides for connections between devices (switches, sensors, meters) throughout the grid, and sophisticated computer systems that automate the operation of the smart grid. A smart grid can help improve efficiency of the grid from generation to distribution to end-usage, thus reducing the carbon foot-print of utilities and energy users.

Grid projects worldwide

Ericsson is actively involved in smart grid transformation worldwide as a prime integrator of the ICT platforms enabling smart grids. Detailed information about electricity consumption patterns, electricity distribution information, pricing signals, and remote control of smart devices enables utilities to deliver, and their customers to use, energy more efficiently. For example, smart meters are simultaneously a sensor that reports on the quality of energy supply to the utilities system, and provides energy users with a real-time awareness of their energy use and its cost.

The telecom industry's extensive experience with time- and volume-dependent pricing can be adapted to the utility industry. As an area of increasing interest, Ericsson is working on smart grid solutions for customers across many markets including India, China, Australia, North America and Europe. Ericsson is part of the Urban Smart Grid project led by the utility company Fortum and ABB to study implementation of a complete smart grid in the Stockholm Royal Seaport.

Meeting tough EU goals

Ericsson is involved in a number of research activities to contribute to the European Union goal of a carbon-neutral power supply in Europe by 2050. As part of InnoEnergy, established by the European Institute of Innovation and Technology, Ericsson is looking at the role of smart grids in meeting European carbon targets, and in particular how public LTE/4G networks could be utilized to better manage the electricity grid. Ericsson is also chair of the telecom-related work for the European ADDRESS project, an EU-funded project looking at the future of smart grids in Europe.

INTELLIGENT TRANSPORTATION

Travel and transport contribute about 13% of global carbon dioxide emissions – and this is set to rise. A combination of ICT-enabled machine-to-machine communication connecting vehicles and transport infrastructure (including signs, cameras and sensors), and person-to-machine communication is changing the way we travel.

Intelligent transport systems result in reduced fuel consumption and lower carbon emissions and helps make companies, other organizations, and individual drivers more aware of the environmental impact of their travel.

With Intelligent Transport Systems and Services (ITS) traffic can be optimized and reduced with integrated communication. To understand the drivers and industry-specific requirements from different stakeholders, Ericsson works with other industries to increase the joint business value. Electrical vehicles, ITS and smart grid are closely related and are all enabled by mobile communication.

Connected Commuting

Ericsson is leading a task force on Connected Commuting as part of the New Cities Foundation. With the City of San Jose, Orange Labs, GE, the University of California, Berkeley, and start-ups Roadify and Waze, the project explores the use of social media and mobile technologies to improve the lives of city commuters.

Ericsson was also a member and project manager of the Cooperative Cars (CoCarX) project, together with German automotive companies, mobile network operator Vodafone Germany, the German Road Authority's research institute and German universities. The project, which concluded in 2011, explored how mobile broadband can complement car communications systems. The project found that 4G/LTE mobile networks can help pave the way for next-generation telematics systems for cars.

Smart buses

The 3.2 million citizens of Curitiba, Brazil and public transport operators are benefitting from an electronic ticketing and fleet management system enabled by mobile broadband in a joint project with Vivo, DataProm, and Ericsson. Better fleet management cuts fuel costs and travel time and reduces emissions per passenger. At COP17 the project was named one of ten inspiring examples in the UNFCCC Momentum for Change initiative.

SMART CHARGING FOR ELECTRIC VEHICLES

The introduction of electric vehicles is prompting a major rethink of the electricity grid. Before electric vehicles can be introduced on the market on a large scale, there has to be sufficient support for the physical charging of the vehicles, as well as effective and secure financial transactions related to charging. The physical infrastructure supporting cars today is unable to support mass introduction of electric vehicles. To address these barriers, Ericsson is taking part in several smart grid pilots incorporating the charging of electric vehicles, and the associated authentication and billing of the driver.

Electrical vehicles on the smart grid

One such project is with Volvo Car Corporation, Göteborg Energi, the leading utility in western Sweden, and Victoria Institute, a non-profit IT research institute. The purpose is to increase usability for drivers and build an ecosystem that makes it easier to deploy electric cars around the world.

The new architecture allows drivers to control charging of cars while they are plugged into any ordinary power outlet. Additionally, the system directs energy costs to the car owners' bill. The driver sets the time and amount to charge on a console in the car or remotely via a smartphone or tablet.

Using the mobile network, the car then communicates with the grid so that charging is scheduled based on energy prices on the grid, reducing user costs. For the energy utilities, coordinating the charging of cars across the grid is more efficient and sustainable.

Electric Vehicles Charging Server

The partners are testing a new process to control the charging of electric vehicles. The process allows the car user to tell an Electric Vehicle Charging Server (EVCS) when the car is required to be fully charged; the EVCS then negotiates with the Electricity Utility on a charging sequence that balances electricity demand across the grid, reducing excess load to the utility and reducing costs for the end user; and the EVCS then tells the car (with machine-to-machine communications) the desired charging sequence. The car user can also override the charging sequence by using a smart phone or tablet and human-to-machine communications.

Such an approach interweaves the needs of the automotive, utility, and mobile operator segments, with the needs of residential and business electric vehicle users. This research imagines a wide variety of ways in which new business models become possible; for example, dedicated electric vehicle energy suppliers.

CLIMATE ADVOCACY

For Ericsson, climate advocacy is about achieving the right framework for the necessary innovation and investment in ICT to support the aims of a low-carbon economy. Some key initiatives where we are engaged include:

Sustainable Energy for All

With 2012 as the "International Year of Sustainable Energy for All", Ericsson, as member of the UN Global Compact Task Force for the Sustainable Energy for All (SE4All) initiative, supports the UN goals: ensure universal access to modern energy services, double the rate of improvement in energy efficiency, and double the share of renewable energy in the global energy mix.

Broadband Commission - ICT and climate change

Ericsson is also a member of the Broadband Commission for Digital Development, formed by the ITU and UNESCO to highlight broadband's role to achieve the Millennium Development Goals. In 2011, the Working Group on Climate Change, which Ericsson chairs, issued a report, "The Broadband Bridge: Linking ICT with Climate Action for a Low-Carbon Economy".

The report discusses how broadband can help cut carbon emissions as well as aid climate change mitigation and adaption, supported by best practice cases from around the world and a set of policy recommendations to accelerate the role of ICT in the low-carbon economy. **www.bbcom.org**

UNFCCC Momentum for Change

At COP17 Ericsson and mobile operators Vivo and DataProm were acknowledged by UNFCCC for the project to introduce electronic ticketing and fleet management in Curitiba, Brazil.

Brazil, named as one of ten inspiring examples in the UNFCCC Momentum for Change initiative. Professor Lord Nicholas Stern of Brentford, chair of Grantham Research Institute on Climate Change and the Environment, said: "It is by learning from the existing excellent, indeed inspirational, examples that we can help gather the momentum required to drive towards a new energy and industrial revolution. We are going to have to change the way we do things on scale and across the whole economy, but the learning we get from these projects will be vital in the story of innovation and growth that we must turn into reality.
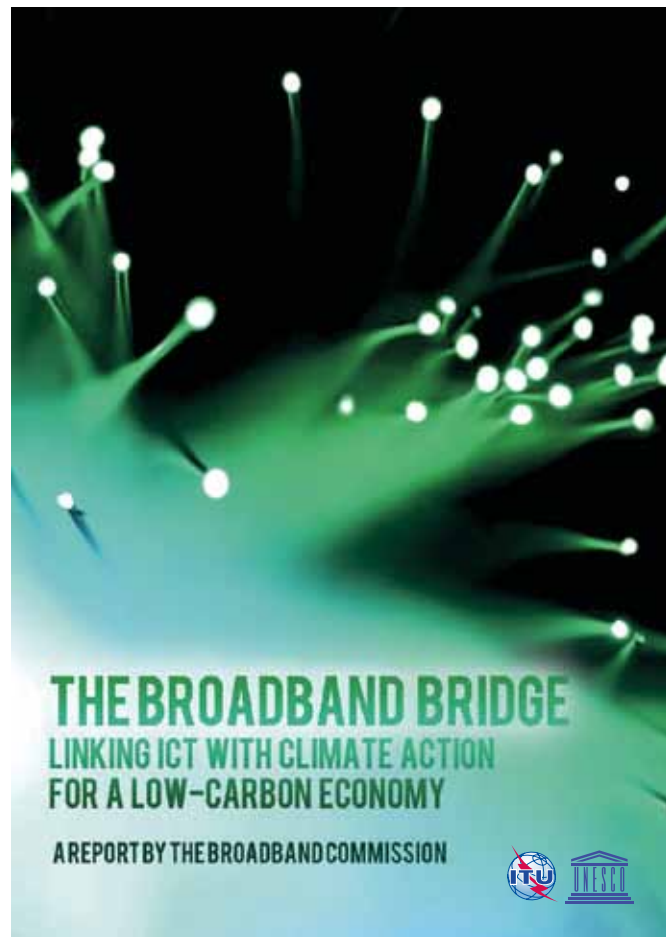
THE BROADBAND BRIDGE
LINKING ICT WITH CLIMATE ACTION
FOR A LOW-CARBON ECONOMY

A REPORT BY THE BROADBAND COMMISSION

ITU   UNESCO

TRANSFORMATIVE STEP OF THE DAY

At the global UN Framework Convention on Climate Change (UNFCCC) negotiations, COP17 in Durban, South Africa in 2011. Ericsson and operator Deutsche Telecom supported the Global e-Sustainability Initiative (GeSI) in the Transformative Step of the Day, initiative. The goal was to present a concrete initiative focusing on solutions providers that advanced the Guadalajara ICT Declaration which was signed by more than 140 ICT companies at COP16 and advocated low-carbon ICT solutions to meet climate goals. The UNFCCC and the International Telecommunications Union joined GeSI to recognize leading government low-carbon transformative solutions.

Among the winners are:
• The Green Commuting Fund, for the carbon-neutral transport solution already in use in places like Shanghai.
• The 3GF "Public-Private Partnership for Green Growth", a partnership between Denmark, South Korea and Mexico with a focus on transformative solutions that can deliver a zero-carbon economy.
• The Chinese National Development and Reform Commission, for recognizing the need to shift focus from growth to quality of life, in areas such as buildings, transport, grids and industry.

CONDUCTING BUSINESS RESPONSIBLY

Ericsson is committed to doing business in a way that benefits the company, our stakeholders, the environment, and society. Through good governance, we work to ensure accountability in business ethics, supply chain, Human Rights, environment, and occupational health and safety. We aim to uphold the same high standards wherever we operate.

A global Group approach

Good corporate governance is an important factor in our corporate culture. In addition to efficient and reliable controls and procedures, it requires a commitment to strong values and ethical business practice among all the people in our organization.

Our governance framework is based on the standards of business conduct embodied in the Ericsson Group Management System (EGMS), which applies globally. Ericsson's Code of Business Ethics sets out our expectations for high ethical standards and summarizes the Group's fundamental policies and directives.

The EGMS is dynamic, allowing us to adapt to stakeholder expectations and evolving legislation. At the same time, it is our belief that our consistent approach and global reach builds trust in the way we work. The EGMS requires compliance with the Code of Business Ethics, including the Code of Conduct and the Sustainability Policy.

Universal commitments

Effective management of the environmental and social impacts of our supply chain is a top priority. Our suppliers worldwide are required to meet the Ericsson Supplier Code of Conduct requirements, based on the principles of the United Nations Global Compact.

We believe access to communications is a basic human need. ICT can enable the right to health, education, livelihood, quality of life and freedom of expression. Ericsson respects all internationally recognized Human Rights as reflected in our Code of Conduct and Code of Business Ethics. We engage with other stakeholders on issues that impact the responsible conduct of business.

We recognize and are committed to actively integrate the The UN Guiding Principles for Business and Human Rights, published in 2011, into our ways of working and governance framework.

We are committed to ensure a safe working environment and healthy workplaces around the world. In 2011 we implemented the Occupational Health and Safety Assessment Series (OHSAS) 18001 throughout our operations worldwide.

BUSINESS ETHICS

Our stakeholders expect Ericsson to uphold high standards within business ethics. A primary focus in 2011 was anti-corruption, with the business environment and legal and regulatory requirements in this area becoming increasingly complex. Since January 2011, a Chief Compliance Officer (CCO) heads an Anti-Corruption Compliance Program. A structure has been established to effectively handle compliance issues, supported by a senior-level management forum which oversees the program.

Anti-corruption compliance program

The anti-corruption is built on six pillars: policies and directives (the Code of Business Ethics and Supplier Code of Conduct); top-level commitment; risk assessment through Group Internal Audit; due diligence of process and partners; implementation, training and communication; monitoring and review, including reporting mechanisms. This includes a whistle-blower procedure for suspected accounting irregularities and any other issues of non-compliance.

Group Corporate Audit and the Board of Director's Audit Committee review the Anti-Corruption Program annually. Group Corporate Audit assesses corruption risks in Business Units and Regions. In addition, all employees must take an anti-corruption e-learning course to inform, identify problematic situations, and help evaluate appropriate courses of action. Security, Audit, Sourcing, Legal and other relevant personnel receive additional, specialized training.

Code of Business Ethics

The Ericsson Code of Business Ethics is the primary way to ensure that high standards are met. The Code, which summarizes our company's basic policies and directives, is translated into 26 languages, ensuring that it is accessible to all employees. It covers the importance of following laws and statutes that concern our operations and financial reporting. It also gives details on how to protect information about our operations, customers and suppliers.

The Code is periodically reviewed and acknowledged by all employees (it was last acknowledged in 2010 and will be done again in 2012). It is a reminder of each employee's responsibilities and provides guidance in how to act in situations where an issue might arise. Acknowledging the Code is a way to raise awareness and emphasize the importance of doing business with integrity.

Compliance measures

Compliance to corporate governance is implemented through the Global Assessment Program, which is monitored by Intertek our external assurance provider.

This audits application of Group policies and directives, management of operational risks, and achievement of corporate responsibility objectives.

All Regions are visited annually to verify local performance against targets, to mitigate risks and improve Group performance.

OCCUPATIONAL HEALTH AND SAFETY

We are committed to ensure a safe working environment and healthy workplaces around the world. This dedication is shown in a variety of different ways, including workplace programs and the implementation of international standards. These measures promote a safe and healthy working environment for the company, its employees, customers and suppliers. Ericsson Group has achieved a global OHSAS 18001 certification.

This framework enables consistent identification and control of health and safety risks, reduces the potential for incidents, aids legislative compliance and improves overall performance. It provides additional assurance to our customers that we have robust systems in place to protect Ericsson employees and others engaged in company business.

Our Group-wide approach to occupational health and safety aligns best practices and responsibilities globally with our Occupational Health & Safety Policy and Directive. It is vital for our customers and other stakeholders that we protect life and to safeguard their brand when they outsource tasks such as field operations to us. OHSAS 18001 certification helps create confidence in our ability to respond to customer needs.

ICT AND FREEDOM OF INTERNET

Telecommunication can enable the right to health, to education and to freedom of expression. The tide of mass protests that swept through the Middle East in early 2011, and became known as the Arab Spring, emphasized the role of modern ICT and digital social media to spur democracy. It was a phenomenon felt globally in both developed and emerging nations. ICT can also be a powerful tool in emergency situations and contribute to alleviating humanitarian situations, e.g. refugees and disasters.

Lawful intercept capabilities are an integral part of the networks standards and a requirement by most operators throughout the world, normally due to legal requirements put upon the operators. Lawful intercept is commonly used for law enforcement purposes, for saving lives, and fighting crime.

Ericsson also recognizes that technology can be misused, which brings new ethical challenges. We seek to encourage the use of technology as a force for good rather than a tool that can be used against democratic principles.

Ericsson and Human Rights

Ericsson engaged early in the ICT and Human Rights issues, as a member of the Business Leaders Initiative on Human Rights (BLIHR), from 2006 – 2009, aimed at driving integration of Human Rights into business practice. We are signatories to the United Nations Global Compact and its ten principles in the areas of Human Rights, labor, environment and anti-corruption, and have been since the year 2000. We recognize and are committed to actively integrate the UN Guiding Principles for Business and Human Rights, published in 2011, into our ways of working and governance framework.

Strengthened internal processes

Ericsson's governance framework includes a strong commitment to respect Human Rights throughout our business operations. This is actively followed up by Sales Compliance, Sourcing, and Trade Compliance processes. Our compliance process, wich applies to all 180 countries Ericsson operates in, provides a mechanism to reduce the risk that the use of our technology violates applicable laws or inadvertently contributes to the misuse of technology.

Among the actions that Ericsson undertook in 2011 to ensure that we respect Human Rights within our sphere of influence are the following:

- The Ericsson Code of Business Ethics (CoBE) describes our commitment to respect Human Rights, and is being updated to reflect the new UN Guidelines.
- The due diligence process throughout our business operations has been strengthened. Our Code of Conduct governs our Human Rights work in our supply chain, our CoBE our own behaviors, and our sales compliance policies the upstream sales processes.
- A Sales Compliance Board was established with broad company representation.
- A support organization is now in place.

We also have a group wide trade compliance policy and compliance process for managing compliance with relevant export control, customs and other trade laws and regulations, such as in-ternational sanctions. There are approximately 150 people working with trade compliance within the company. We have an automated sanctioned parties list screening (utilizing black lists from the UN and the EU etc.) implemented in Ericsson's business system to further ensure compliance with sanctions and other export control regulations.

Need for guidelines

Ericsson is committed to engaging with stakeholders and to promote the positive use of ICT to uphold Human Rights and to protect against the technology being misused. To date, there are no clear guidelines for telecom companies, and this is clearly an area requiring industry, government and civil society coordination.

We consider it essential to take a multi-stakeholder approach and are actively monitoring this area, participating in relevant industry, government and civil society discussions, and evaluating different initiatives. We will closely follow the European Commission's decision to include the ICT sector as one of three sectors to evaluate the Human Rights and due diligence procedures.

SANCTIONS AGAINST SYRIA AND IRAN

In 2011, Ericsson was named in media reports that suggested that Syria and Iran are using "surveillance products" supplied by technology companies such as Ericsson in the monitoring and sometimes forceful repression of its citizens. Such reports also came from Human Rights organizations.

The EU sanctions towards Syria and Iran prohibits the supply of equipment primarily for use in the monitoring or interception by these countries' regimes. The important role of modern ICT and digital social media in the democracy movements is however commonly recognized and standard telecom equipment is still safeguarded in the international sanctions. To illustrate this certain standard telecom equipment is still explicitly exempted in the EU sanctions towards Iran even though these sanctions include a broad embargo on other equipment.

In both the case of Syria and Iran, Ericsson delivered standard telecommunication equipment and services and has not provided surveillance equipment for mobile communications. In response to allegations about Ericsson and the role of surveillance equipment by the governments of Syria and Iran, Ericsson made clear its commitment to support Human Rights through ICT.

We continuously monitor changes in sanctions in order to ensure compliance.

RESPONSIBLE SOURCING

Responsible management of our supply chain on Code of Conduct issues is a top priority. Our suppliers worldwide must meet the Ericsson Supplier Code of Conduct (S-CoC) requirements, based on the UN Global Compact principles. All our Regions and Business Units have trained auditors and procedures in place to assess high-risk suppliers and to conduct S-CoC audits and on-site assessments. A critical part of the sourcing process is following up of the results to ensure continuous improvement.

We continuously work towards increased awareness of CoC issues in the supply chain, particularly in developing markets. By actively helping our suppliers improve their performance with the use of audits, on-site assessments, web training and seminars, we reduce our risk while contributing to higher standards in the supply chain.

We identify high-risk suppliers using a systematic and documented risk matrix approach. Among the prioritized categories are: die-casting and network roll-out; tower manufacturing and galvanization; enclosures; mechanical parts; power supply; printed circuit board manufacturing; warehousing and logistics.

Monitoring and training

An analysis of audit scorecard results of some 60 suppliers audited in 2010 and 2011 showed significant improvement. The number of critical findings dropped by 50%. Improvements were made in areas including overtime; fire prevention; training and information, and environmental management. These areas remain in focus, along with use of personal protective equipment and communicating CoC requirements further in the supply chain. Findings are actively followed up, with corrective action plans and follow-up audits.

Online training for suppliers, and any other interested party, is available on our corporate website in 13 languages. The goal: to help suppliers improve their own performance as well as help them inform their own suppliers of expectations. The training covers employee conditions (including forced and child labor); health and safety; supply chain compliance; environmental management; elimination of discrimination, and anti-corruption.

Performance highlights 2011

- The number of auditors increased from 150 to 170.
- 392 S-CoC audits and 270 on-site assessments were performed (see graph). The total number is down from 2010, due to an improved level of compliance and control in the supply chain after three years of intense S-CoC audit activities. This trend also reflects a shift in focus to other activities, such as promotion of on-line training, as part of a preventive approach.
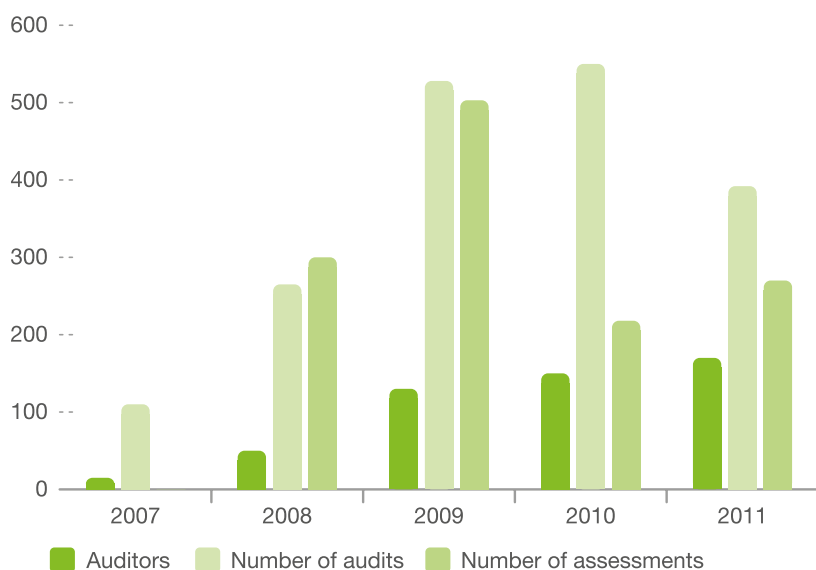- Nearly 90% of Regional Strategic Sourcing personnel completed the Code of Conduct training for suppliers during 2011.

Maintaining and developing the S CoC program is included in each Regional and Unit Sourcing Management scorecard.

Conflict minerals

Responsible sourcing includes restricting or banning certain types of materials that do not meet our requirements. In this regard, Ericsson is taking steps to avoid the sourcing of conflict minerals. Conflict minerals refers to minerals mined in conditions of armed conflict and Human Rights abuses, notably in the Democratic Republic of Congo (DRC) and neighboring countries where the mining is believed to support the ongoing conflict. We recognize that the Human Rights implications of sourcing of conflict minerals and are actively working to address stakeholder demands and legislation in this area. Ericsson is on the Executive Board of GeSI and several of its working groups including supply chain and Extractives (which includes focus on conflict minerals).

BEST PRACTICE: TANZANIA

As an example of Ericsson working closely with suppliers to improve performance, Linksoft Communication Systems, a supplier in Tanzania, has shown significant improvement. A first audit in 2010 indicated many areas of non-compliance. A second audit in 2011 found that Linksoft had addressed most of the identified areas for improvement, including appropriate policies, better safety procedures, and improved training and record keeping. The supplier had also been awarded by the Tanzanian Ministry of Health a certificate of compliance to the National Health and Safety Regulations. Linksoft was committed to handling the few remaining gaps, supported by their top management.

SUPPLIER CODE OF CONDUCT: AUDITS AND ASSESSMENTS

Legend: Auditors | Number of audits | Number of assessments

LEADING WITH VALUES

Leading with values and diversity is a prerequisite for success in a complex, changing world. To succeed in a competitive, increasingly global marketplace, a values-driven culture centered on learning is essential for developing our people and building the leaders of the future. A diverse workplace sparks innovation and helps us better respond to the global markets in which we operate.

Leading with values

Our core values of Respect, Professionalism and Perseverance are reflected not only in our workplace but also in the business we do with our customers and in how we interact in society. We believe in treating every individual with respect and with fairness.

Our values are deeply held beliefs and principles that guide our everyday actions and define how employees treat each other, our customers and business partners. Together, they form the foundations of our company culture. They contribute to making Ericsson a trusted partner among our stakeholders.

These long-held values inform Ericsson's mission, "Innovating to empower people, business and society". They are ingrained in the way employees perform their jobs and are the foundation for the Ericsson brand and corporate culture.

The values are embedded in many ways, including through the Ericsson Group Management System (EGMS), in learning programs, new employee onboarding, individual performance management, and talent reviews and through top management support.

Fostering leadership

Maintaining a high pace in a world in which change is a constant, and where future developments are difficult to forecast, requires a strong emphasis on leadership. In preparing leaders to lead Ericsson's future, the ability to respond to sustainability and corporate responsibility issues is a key ingredient for navigating the challenges and opportunities that lie ahead.

Leadership today is foremost about understanding one's own values, motivations and purpose and to lead from within – aligned with the mission and values of the company. That a company's values align with one's personal values is increasingly important, not least for the next generation of leaders, looking for companies that inspire and make a positive contribution to society.

In order to develop the best leaders in the industry, Ericsson has a process of identifying talent and then nurturing it through several development programs. There is an annual process to identify, assess, develop and recruit talented individuals to assume strategic roles in the company. Any employee identified for a leadership position must be assessed on several parameters. The CEO is engaged in the talent review process for all senior leadership teams.

OUR CORE VALUES

**– RESPECT
– PROFESSIONALISM
– PERSEVERANCE**

These three core values are the foundation of the Ericsson culture, guiding us in our daily work – how we relate to people and how we do business.

IN CELEBRATION OF DIVERSITY

Ericsson has a focused strategy aimed at ensuring that our employee base and our leadership teams are as diverse as the world in which we operate. We respect our differences and foster a workplace where individuals can freely express their opinions. Our definition of diversity extends beyond gender, race, religion, ethnicity, age and other established parameters to differences in experience, personalities, thoughts, family situation etc.

We believe a diverse and inclusive workforce is a strong, capable and innovative workforce, better able to respond to needs of a global customer base and to help achieve Ericsson's aims to contribute to sustainable development. Ericsson has a global, multi-generational workforce with a wide range of nationalities, ethnic/socio-economic backgrounds, age, education, gender etc.

Diversity is part of how we identify talent globally. Each candidate is reviewed in terms of what they bring to the team in terms of diversity parameters. The talent management process focuses on creating high performing, diverse teams where creativity and innovation is fostered.

Increasing diversity

While increasing diversity throughout the organization is important at Ericsson, we have devoted specific focus to increase female representation in leadership roles. We have made improvements in this area but still have work to do. The Ericsson Executive Leadership Team has increased its gender diversity from 8% women in 2009 to 29% women in 2011. Gender diversity among top 250 executives has increased from 14% in 2010 to 16% in 2011. We also work with university graduate programs to target younger people and stimulate their interest in technology to enhance our recruitment base.

EVOLVING COMPETENCE IN A LEARNING CULTURE

Talent and competence management has emerged as a strategic issue for today's businesses. At Ericsson, we believe a strong learning culture enables business growth, boosts employee productivity and engagement, and increases customer satisfaction. By evolving our competence in myriad ways, we leverage collaboration and creativity, and gain a competitive advantage.

We are continually evolving how we approach learning. In order to prepare our people to meet the challenges today and in the future, Ericsson has transformed our learning culture and tools to enable on-demand, interactive and collaborative learning. Competence development and management taps into many processes in the company, such as product management, service delivery and human resources.
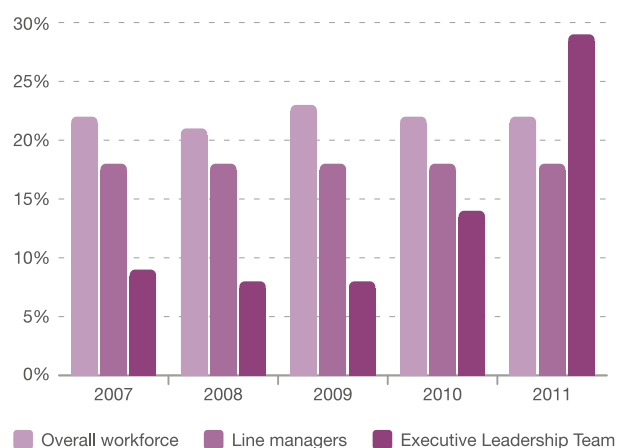
We develop our people through a culture of continuous learning and industry-leading learning solutions.

Our key focus areas are: Learning Excellence, Competence Readiness, Onboarding, and Extended Enterprise Learning.

EMPLOYEES BY AGE AND GENDER 2011
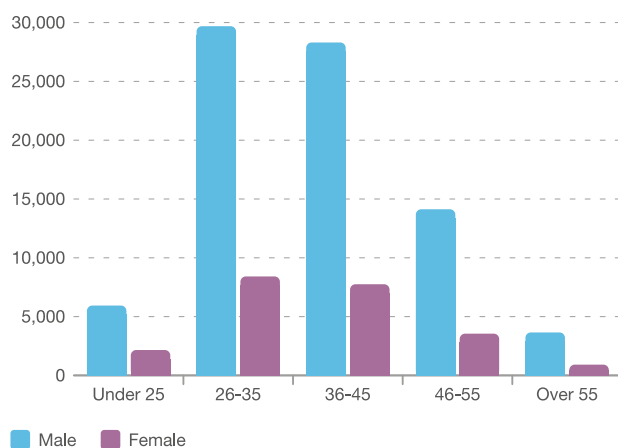
FEMALE REPRESENTATION

AWARDS AND RECOGNITION

THE MENTOR AWARD (DIVERSITY)
President and CEO Hans Vestberg and Ericsson received the 2011 Mentor Award from the New York-based Swedish-American Chamber of Commerce (SACC) for efforts to enhance diversity throughout the company.

GSMA GLOBAL MOBILE AWARD
In the category Best use of Mobile for Social and Economic Development, Ericsson and Swedish telecom site solution supplier Flexenclosure were recognized for the Community Power solution.

AFRICACOM 2011
Ericsson honored with Rural Telecoms Award which recognizes an outstanding vendor solution, or service provider initiative that has extended and improved telecommunications services in rural and under-served Africa since November 2010.

GREEN SUPPLY CHAIN AWARD
Ericsson India was awarded the India International Logistics Forum (IILF) Innovation in Supply Chain (ISC) Award 2011 under the category of "Green Supply Chain".

EXCELLENT INITIATIVE TOWARDS GREEN TECHNOLOGY
The Federation of Indian Export Organizations (FIEO) has awarded Ericsson with the "Excellent Initiative towards Green Technology" award at the "Telecom Technology Awards".

VODAFONE SUPPLIER OF THE YEAR
For the second year in a row Ericsson received the Vodafone's supplier of the year award in the area of Sustainability and Corporate Responsibility, in recognition of its commitment to reduce carbon dioxide emissions and follow Vodafone's code of ethical purchasing.

SOFTBANK MOBILE
Softbank Mobile Radio (SBM) recognized Ericsson Japan for supporting them in the recovery of their network after the earthquake in Tohoku.

EUROPEAN SMART METERING AWARD
Ericsson was announced as the winner of the "Network and Communications Award 2012" at the recent "Smart Metering UK & Europe Summit", for our solution for Smart Meter Communications which enables better use of the mobile networks by utilities.

FOLKSAM'S TOP 10 IN ENVIRONMENTAL IMPACT ANALYSIS
A report by Folksam shows that Ericsson was one of the top ten Swedish companies in an analysis of environmental impact and Human Rights awareness.

LUNDQUIST CSR ONLINE AWARDS NORDIC 2011
Ericsson was among the top ten companies recognized in the CSR Online Awards Nordic 2011. The award assesses how the region's biggest companies are communicating corporate responsibility online and their ability to engage with stakeholders through the corporate website.

COP17 DURBAN/MOMENTUM FOR CHANGE
Ericsson and operators Vivo and DataProm joined in a public bus project in Curitiba, Brazil, which was selected by UNFCCC Secretariat as one of the ten "lighthouse projects" at COP17 in Durban, South Africa.

FTSE4GOOD
FTSE Group confirms that Ericsson has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. Created by the global index company FTSE Group, FTSE4Good is an equity index series that is designed to facilitate investment in companies that meet globally recognised corporate responsibility standards. Companies in the FTSE4Good Index Series have met stringent social and environmental criteria, and are positioned to capitalize on the benefits of responsible business practice.

MEMBERSHIPS AND AFFILIATIONS

BROADBAND COMMISSION FOR DIGITAL DEVELOPMENT

With support of the United Nations Secretary-General Ban Ki-moon, the Broadband Commission for Digital Development was launched on May 10, 2010, by the International Telecommunications Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). It is chaired jointly by President Paul Kagame of Rwanda and Mr. Carlos Slim Helú, Honorary Lifetime Chairman of Grupo Carso, with ITU Secretary-General Hamadoun Touré and UNESCO Director-General Irina Bokova as vice chairs. Ericsson is a founding member of the Broadband Commission and our CEO is a Commissioner. During 2011, Ericsson led the Commission's Climate Change working group.

www.broadbandcommission.org

BUSINESS CALL TO ACTION – UNDP

Ericsson is a member of Business Call to Action (BCtA) and supported the launch of the BCtA in 2008, which aims to accelerate progress toward the Millennium Development Goals (MDGs) by challenging companies to develop inclusive business models that offer the potential for both commercial success and development impact.

www.businesscalltoaction.org

CLINTON GLOBAL INITIATIVE

Established in 2005 by former US President Bill Clinton, the Clinton Global Initiative (CGI) convenes global leaders to devise and implement innovative solutions to some of the world's most pressing challenges. At it´s Annual Meeting and at events throughout the year, CGI gathers government officials, business leaders, and non-profit directors from all over the world, creating opportunities for them to collaborate, share ideas, and forge partnerships that enhance their work. To fulfill the action-oriented mission of CGI, members devise practical solutions to global issues through the development of specific and measurable Commitments to Action.

www.clintonglobalinitiative.org

GLOBAL E-SUSTAINABILITY INITIATIVE (GESI)

Ericsson is a founding member of the Global e-Sustainability Initiative (GeSI) and is represented on the Board of Directors and co-chairs the Public Policy Work Group. GeSI aims to create an open and global forum for the improvement and promotion of products, services and access to ICT to benefit society and the environment. Sustainable sourcing and climate change are key issues on the agenda.

www.gesi.org

NEW CITIES FOUNDATION

The New Cities Foundation is a non-profit Swiss institution founded in 2010 and dedicated to improving the quality of life and work in the 21st-century global city, with a particular focus on new cities in Asia, the Middle East, Latin America and Africa. NCF sees cities as humanity's most important source of innovation, creativity and wealth-creation. NCF believes that achieving the vision of building more sustainable and dynamic urban communities can only be done through innovative partnership. NCF serves a unique role in developing new models of collaboration between the public, private and academic sectors. Ericsson is a founding member of the New Cities Foundation.

www.newcitiesfoundation.org

STEP

With members from industry, government, the NGO sector and academia, the Solving the e-waste Problem (StEP) initiative develops sustainable solutions to e-waste through analysis, planning and pilot projects.

www.step-initiative.org

SYMBIOCITY

SymbioCity is a network of Swedish companies and organizations. It was founded on the initiative of the Swedish Government and Swedish Industry. SymbioCity is administrated by The Swedish Trade Council, with offices in more than 60 countries around the world. The headquarters is situated in Stockholm.

www.symbiocity.org

UNITED NATIONS GLOBAL COMPACT

Gobal Compact is an organization for businesses committed to aligning their operations and strategies with ten universally accepted principles in the areas of Human Rights, labor, environment and anti-corruption. Ericsson was one of the first signatories of the UN Global Compact.

www.unglobalcompact.org

ERICSSON ALSO SUPPORTS THESE UN GLOBAL COMPACT INITIATIVES

– Caring for the Climate

This is a voluntary and complementary action platform for UN Global Compact participants who seek to demonstrate leadership on the issue of climate change. It provides a framework for business leaders to advance practical solutions and help shape public policy as well as public attitudes. Chief Executive Officers who support the statement are prepared to set goals, develop and expand strategies and practices, and to publicly disclose emissions as part of their existing disclosure commitment within the UN Global Compact framework, the Communication on Progress.

– Sustainable Energy for All

With 2012 as the "International Year of Sustainable Energy for All", Ericsson joined as a member of the UN Global Compact Task Force for the Sustainable Energy for All (SE4All) initiative, to supports the UN goals: ensure universal access to modern energy services, double the rate of improvement in energy efficiency, and double the share of renewable energy in the global energy mix.

OBJECTIVES AND ACHIEVEMENTS

ENABLING COMMUNICATIONS FOR ALL

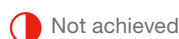| STATUS	OBJECTIVES 2011	ACHIEVEMENTS 2011	OBJECTIVES 2012
Achieved	Deploy Connect To Learn in at least four Millennium Village schools. Continue to develop affordable ICT solutions for education such as PC as a Service.	The first Connect To Learn implementations were deployed at secondary schools in the Millennium Villages in Ghana, Tanzania, Kenya and Uganda. PC as a Service is used in MV schools and in Chile.	Deploy Connect To Learn in eight new schools in Millennium Villages, and extend the Connect To Learn to two additional countries.
Achieved	Initiate study to analyze social and economic impacts of projects aimed at supporting the poorest of the poor.	Developed a framework, aimed at describing how ICT could impact lives at individual and community level. Launched study: ICT for the Base of Pyramid study with partners.	Define baseline for independent monitoring and evaluation study for ICT and education.
Achieved	LearnQuick for use in secondary schools targeted by Connect To Learn.	LearnQuick has been further developed with additional functionality and used in schools.	
Ongoing	Launch smart phone application for Refugees United and support in enabling 120,000 refugees to register in the Refugees United data base to search for missing family and loved ones.	Launched Android application at World Refugee Day 2011. 65,000 refugees were registered in the Refugees United database by end 2011.	150,000 refugees registered in the Refugees United database.
Not achieved	Complete Liberia site installation powered by renewable energy. Community power commercially launched.	The installation was not completed due to poor site conditions.	
Achieved	Complete deployment of weather services and alerts in East Africa for selected user groups.	The Mobile Weather Alert service was deployed and proofed for scale by 1,000 fishermen at the Kalangala Island in Uganda.	

REDUCING OUR ENVIRONMENTAL IMPACT

STATUS	OBJECTIVES 2011	ACHIEVEMENTS 2011	OBJECTIVES 2012
Ongoing	10% Ericsson carbon footprint intensity reduction measure as CO_2 emissions per subscriber, including Ericsson own activities and products in operation.	A 3% reduction in carbon footprint intensity from products in operation and a 6% reduction in carbon footprint intensity from our own activities compared with 2010. While the reduction was lower than 2010, Ericsson is on track to meet its five-year target.	10% Ericsson carbon footprint intensity reduction measure as CO_2 emissions per subscriber, including Ericsson own activities and products in operation.
Achieved	To reduce business travel, deploy our own smart work solution, Business Communication Suite including web-conferencing and other virtual collaboration tools, which can also be shared with other external parties.	We have deployed our own video conferencing solution as well as other virtual collaboration tools.	Reduce the number of air flight trips by 10% (baseline 2011).
Achieved	Increase outbound surface shipping to 70% using the global share of surface transport indicator.	Surface transport shipping is over 70% by weight, despite delivering higher volumes.	Increase outbound surface shipping to 75% using the global share of surface transport indicator by weight.
Achieved	Reduce energy use in offices by 3% per employee.	We reduced energy usage by 7% per head.	Reduce energy usage by 3% per head.
Achieved	Reduce energy consumption from data center and Hub over 30% from baseline.	Our multi-year program to reduce energy consumption in data centers and hubs reached 30% respectively.	Define an implementation plan for our next infrastructure consolidation project, including data rooms, data centers, and test labs and evaluate the measures found in the energy audits.
Ongoing	Define a baseline for our test environment areas.	We have a baseline estimate for all key test labs, and use virtual servers which require less energy, including for cooling.	Define an implementation plan for our next infrastructure consolidation project, including data rooms, data centers, and test labs and evaluate the measures found in the energy audits.
Ongoing	Establish new measurement for Equipment Put on Market and achieve 20% volume of Waste Electrical and Electronic Equipment (WEEE) take-back vs. Equipment Put on Market.	We have established a new measurement based on WEEE Take-Back and Electrical and Electronic Equipment (EEE) Put on Market in all regions and defined 2011 as baseline, but we did not meet the 20% volume goal.	Achieve 4.5% of WEEE take-back vs. Equipment Put on Market (baseline 2011), while continuing to ensure less than 5% of WEEE treated by Ecology Management Program is disposed of in landfill.

● Achieved   ● Ongoing   ◖ Not achieved

STATUS	OBJECTIVES 2011	ACHIEVEMENTS 2011	OBJECTIVES 2012

ENABLING LOW-CARBON ECONOMY

STATUS	OBJECTIVES 2011	ACHIEVEMENTS 2011	OBJECTIVES 2012
●	Show how ICT contributes to a low-carbon economy by engaging with selected stakeholders on at least three projects or initiatives.	Projects and initiatives which illustrate how ICT contributes to a low-carbon economy: • Stockholm Royal Seaport project with City of Stockholm • Quebec Hydro Power • Electrical Vehicle charging concept created with Volvo	Show how ICT contributes to a low-carbon economy by investigating the impact of at least five different solutions.
●	Continue to engage and drive climate negotiations related activities together with external organizations such as the Broadband Commission and GeSI.	Ericsson's CEO leads the Climate Change Work Group of the Broadband Commission for Digital Development. Together with GeSI Ericsson participated in and supported the launch of the Transformative Step of the Day at COP17.	Launch Broadband Commission Report on Climate Change, and support Broadband Commission Statement for Rio+20.
			Implement the new International Telecommunication Union (ITU) recommendation for greenhouse gas inventory of organizations.

CONDUCTING BUSINESS RESPONSIBLY

STATUS	OBJECTIVES 2011	ACHIEVEMENTS 2011	OBJECTIVES 2012
●	Conduct corporate responsibility training for the Ericsson Board of Directors.	The annual Sustainability and Corporate Responsibility annual review by the Ericsson Board of Director was conducted in October, 2011.	Conduct annual Sustainability and Corporate Responsibility review for the Ericsson Board of Directors.
●	Improve Ericsson sustainability leadership based on thought leadership, perception and performance.	The Ericsson sustainability leadership based on leadership, perception (External and internal ranks and surveys) and performance improved on the three areas.	
			Update Code of Business Ethics to reflect UN Principles for Business and Human Rights Guidelines and initiate a new acknowledgement request for all employees.
●	Perform Occupation Health and Safety (OHS) according to the standards set in the Ericsson Group Management System and in compliance with Occupation Health and Safety Assessment Series 18001 (OHSAS).	The OHSAS 18001 Standard was implemented throughout the company.	Increase employee knowledge and awareness of OHS issues: 25% of employees will take a basic OHSAS training in 2012.
◔	Increase environmental focus within the S-CoC audit program by developing, piloting and implementing supplier environmental audit scheme in selected regions.	Framework for supplier environmental audits was developed.	Implement Environmental Audit in at least two Regions.
◔	Over 90% of all Strategic Sourcing personnel will complete the Code of Conduct training for Suppliers during 2011.	87% completion rate achieved by Regional Strategic Sourcing personnel.	Achieve 90% of all Strategic Sourcing personnel complete the Code of Conduct training for Suppliers.
●	Maintenance and development of the S-CoC Program is included in each Regional Sourcing scorecard.	S-CoC Program is included in each Regional Sourcing scorecard.	Maintain and develop the Supplier Code of Conduct Program; all Regions and Units to have auditors and risk-based audit plans updated, and perform and follow up audits according to plans to ensure continual improvement among critical suppliers.
			Achieve significant S-CoC performance improvements among selected suppliers audited in both 2011 and 2012. Target: Reduce the number of Critical findings by >50% from 2011 to 2012.
			Arrange key supplier forum on initiatives relevant on sustainability and corporate responsibility issues.
●	Initiate processes and procedures, including supplier requirements, to ensure elimination of conflict minerals from our supply chain that might contribute to financing armed conflicts.	Processes and procedures initiated to update supplier requirements and other internal processes to avoid conflict minerals in our supply chain.	Complete update to processes and procedures around conflict minerals, including individual supplier assessments.

LEADING WITH VALUES

STATUS	OBJECTIVES 2011	ACHIEVEMENTS 2011	OBJECTIVES 2012
●	Introduce a Technical Certification Program to our employees, initially covering the skills within the IP and converged IP domain.	We reached the targets of delivering more than 3,000 certification tests through eight different certification exams. We also enabled certification tests to be taken at different test centers at 700 different locations around the world.	Expand Ericsson Technical Certification Program (ETCP) to cover more technology areas.
●	Continue to expand the free of charge e-learning offering to external audiences.	Online e-learning is covering four of the Ericsson Market Categories with free of charge online courses.	
●	Complete Employee Engagement pilot project within selected units.	The Employee Engagement pilot project within selected units was concluded. Volunteers worked on three of CR projects.	Expand the Employee Engagement Program as part of the wider Brand Engagement Program open to all Ericsson employees.
◔	Launch a mobile application for certain workforce groups to access tailored tutorials and performance support.	Successful completion of mobile learning pilot.	

● Achieved   ◔ Ongoing   ◑ Not achieved

UN GLOBAL COMPACT ANNUAL COMMUNICATION ON PROGRESS

WE SUPPORT

The ten principles of the UN Global Compact provide a universal framework for business conduct, which Ericsson strongly endorses. Ericsson's commitment to the ten principles of the UN Global Compact guides us in the development of Group practices throughout our sphere of influence. Through initiatives like Refugees United and Connect To Learn; Ericsson Response, and the Millennium Villages, we mobilize our core business to support the UN in its efforts to alleviate poverty, improve the environment and bridge the digital divide.

Ericsson policies and directives

Respect for Human Rights and intolerance of corruption are embodied in our values of respect, professionalism and perseverance and in our Code of Business Ethics. The Code of Conduct (CoC) is also designed to respect Human Rights, promote fair employment and safe working conditions, and maintain high environmental standards. The Sustainability Policy details our commitment to continuously reduce the environmental impact of our own operations and to engage in activities that have positive socio-economic impacts and promote the vision of communication for all. CR is firmly embedded in our Global Assessment Program. Ericsson expects the same standards of labor and environmental performance among all suppliers. During 2011, we completed the annual sustainability and CR review with the Ericsson Board of Directors, and the ongoing Sustainability and CR e-learning program is mandatory for all new employees as part of the New Employee Learning Milestones.

Human Rights

We actively support the fulfillment of Human Rights within our sphere of influence. Our first obligation is to avoid complicity in Human Rights abuse, but Ericsson's core technologies can also help improve lives and promote democratic societies, and contribute to socio-economic development.

- We are committed to actively work with the UN Guiding Principles for Business and Human Rights, published in 2011.

- Our Code of Business Ethics now reflects these Guiding Principles, which will be acknowledged by all employees in 2012.

- We established a Sales Compliance Board as part of our governance framework.

- A study conducted jointly by Ericsson, Arthur D. Little and Chalmers University of Technology in Sweden in 33 OECD countries quantifies the isolated impact of broadband speed. Doubling the broadband speed for an economy increases GDP by 0.3%.

- Ericsson initiated work on a socio-economic impact assessment framework, looking at how ICT can positively impact lives at the individual and community level.

- We were co-sponsors of the report, "Leveraging Information and Communication Technology for the Base of the Pyramid," examining 280 initiatives in Asia, Latin America and Africa that used ICT for delivering education, health, agriculture and financial services at the Bottom of the Pyramid.

- The Supplier Code of Conduct (S-CoC) program has been implemented in all regions and business units. About 392 S-CoC audits and 270 on-site assessments were performed.

- We are addressing the issue of conflict minerals through our own supply chain initiatives and by working towards common sector-wide solutions.

Fair labor practices

Human resources procedures ban discrimination and ensure equality and diversity in our operations. We encourage union membership and, in countries where workers cannot freely choose membership, work conditions are discussed with local management in a structured format.

- Ericsson Group achieved a global (Occupational Health and Safety Assessment Series) OHSAS 18001 certification.

- Our Code of Conduct stipulates that as far as any relevant laws allow, all employees are free to form and to join trade unions or similar external representative organizations and to bargain collectively. Subjects covered include: health and safety, remuneration, training, work time flexibility, equal opportunity and restructuring. We estimate that approximately one third of all employees are covered by collective bargaining agreements. In some markets we have established other mechanisms for informing and consulting with employees.

- We fund independent research on health and safety issues relating to radio waves and electromagnetic fields (EMF).

Environment

- We actively promote technologies that help create low carbon economies.

- Our CEO serves as a Commissioner on the Broadband Commission for Digital Development and chair of the Working Group on Climate Change which in 2011 issued a report, "The Broadband Bridge: Linking ICT with Climate Action for a Low-Carbon Economy". The report discusses how broadband can help cut carbon emissions as well as aid climate change mitigation and adaption, supported by best practice cases from around the world and a set of policy recommendations to accelerate the role of ICT in the low-carbon economy.

- At COP17, we launched the Transformative Step of the Day together with the Global e-Sustainability Initiative, GeSI.

- While the Carbon footprint intensity reduction was lower this year compared to last, Ericsson is well on track to meet its five year target which aims to reduce the carbon emission intensities by 40%.

- One significant environmental aspect is the energy consumption of our products during operations. Ericsson has increased 3G/4G energy efficiency by 85% in radio base stations over the last decade.

- We take environmental aspects such as hazardous substances, producer responsibility and efficient use of resources into account in product design, procurement, production and operation.

- As part of our Extended Producer Responsibility, of all material collected and processed during 2011, less than 2% was sent to landfill and more than 98% was recovered. We have increased the amount of reuse to 5% of the total volume treated.

- Our Environmental Management System is globally certified to ISO 14001. This ensures our operations are consistently managed with minimal impact on the environment.

Anti-corruption

- The Ericsson Group Management System, implemented globally, ensures integrity and high standards of conduct. A whistle-blower procedure is in place for employees to report violations relating to accounting, internal controls and procedures or fraudulent practices.

- Ericsson strengthened its process for addressing bribery and corruption with the appointment of a Chief Compliance Officer and implementation of an anti-corruption program backed by a formal structure, policies, directives, training and communication, monitoring and review.

ST-ERICSSON

ST-Ericsson is a world leader in developing wireless platforms and semiconductors, bringing smarter communication, enhanced on-the-go entertainment and mobile broadband connectivity to people around the globe. Established as a 50/50 joint venture of Ericsson and STMicroelectronics in February 2009, it has one of most advanced product portfolios in the industry.

Sustainable

As a global business and thought leader, ST-Ericsson is strongly committed to the three main areas of sustainable development: environment, society and the economy. ST-Ericsson has implemented an Environmental Management System (EMS) which enables us to improve legal compliance, reduce waste, energy consumption and operating costs, as well as enhance our company reputation and gain recognition.

2011 carbon footprint

Following the formal roadmap for moving to a low-carbon economy issued by the European Commission in March 2011 and after an extensive benchmarking, ST-Ericsson has decided to concentrate on the areas of CO_2 footprint, energy, paper consumption and waste by fixing targets for 2020 (baseline 2010).

In 2011, we reduced our energy consumption by 7%, our paper usage by 8.4% in comparison of 2010. Our overall carbon footprint was reduced by 0.5%.

Our goals

• Reduce our carbon footprint by 30 to 50%. Minimize our environmental impact by reducing direct and indirect emissions. Improve facilities energy performance, optimize operations, and reduce business travel by substituting video conference facilities and IT sharing tools.

• Reduce our energy consumption by 30 to 50%. Move to low-power generation PCs and servers and increase the number of "green" buildings.

• Reduce drastically our paper consumption. Move towards long-term goal of being a paperless company and reduce hazardous substances involved in printing.

• Reduce electronic waste (WEEE) in Kg/employee by 15 to 25%. Promote waste recycling or reuse and ensure that remaining waste is disposed of safely.

Product responsibility

ST-Ericsson seeks to reduce the energy consumption of its products and to offer our customers the most energy-efficient products on the market. In 2011 we introduced three new feature phones by Sony Ericsson: the txt, txt-Pro and the Mix Walkman™. These models use the low-power E4910 platform. Compared to competition, for the same level of performances, the E4910 platform offers 73% better stand-by time, contributing to reduced energy use.

The ST-Ericsson PowerHUB™ product family for power management solution as well as NovaThor™ best-in-class application processors with the latest broadband modems, introduced during 2011 also save energy.

E4910 : Idle & MP3 Standby-Time vs competition
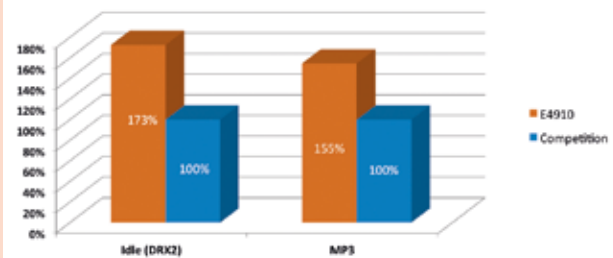
Moreover, ST-Ericsson contributes to the reduction of hazardous substances by promoting environmentally sound products. At the end of 2011, ST-Ericsson reached a shipment rate higher than 99% of Ecopack ® 2 products (lead free + free of brominated and chlorinated flame retardants).

Business and social responsibility

ST-Ericsson applies the Code of Conduct promoted by the Electronic Industry Citizen Coalition (EICC). In addition to compliance with all relevant laws, regulations and standards in all of the countries in which we operate, all ST-Ericsson divisions and organizations and their employees must comply with the ST-Ericsson Code of Conduct and company policies & directives. ST-Ericsson, in general, requires suppliers and their subcontractors to comply with our Code of Conduct and the Electronics Industry Citizenship Coalition (EICC) and to verify compliance by providing information and allowing access to their premises. ST-Ericsson also supports the United Nations Global Compact initiative.

As part of the Company Operational Excellence (COEX) program, many initiatives have been launched in 2011 like the implementation of local site committees which aim to strengthen relations with the local community. Concrete actions like collecting and recycling old GSM mobile phones for disabled people, collecting toys for hospitalized children's or contributing to education programs have been put in place at many sites.

Promoting economic development

Several international studies, such as the Indian Council for Research on International Economic Relations in 2009, establish a link between mobile phone adoption and GDP growth. For example, Indian states with 10% higher mobile phone penetration enjoy an annual average growth rate 1.2% higher than those with a lower teledensity. ST-Ericsson is one of the global leaders in high-value entry wireless platforms providing communications and Internet access to people through affordable platforms with additional value-added features, widening the scope of handset use cases and thus increasing business opportunities in developing countries.

SONY ERICSSON

Sony Ericsson is a joint venture between Sony Corporation and Ericsson. Combining the strengths of its parent companies Sony Ericsson has over the years brought together the best communications technologies with superior entertainment user experiences to create its Xperia™ line of the "most entertaining smartphones" in the mobile handset industry.

Building on the momentum of the previous year, Sony Ericsson continued to drive forward its smartphone strategy in 2011, shifting the business from feature phones to smartphones. The Android™ based smartphone Xperia™ portfolio remained at the heart of this strategy and will continue to serve as a cornerstone of the smartphone line up.

Sustainability is a central part of Sony Ericsson's business activities and key factors include substance control, limiting greenhouse gas emissions and increasing recycling but it is also about people and having a positive social impact on the world. Sony Ericsson works hard to address these elements and to contribute to society through community engagement activities. Ericsson and Sony Ericsson actively partner on many projects to benefit socio-economic development and humanitarian causes, such as Refugees United and Ericsson Response. Sony Ericsson's three environmental targets (using 2008 figures as a baseline) are:

- By 2015, reduce greenhouse gas emissions from their internal activities by 20%
- By 2015, reduce greenhouse gas emissions from the full life-cycle of their products by 15%
- Collect one million phones annually through their Global Take-Back program by 2011

GreenHeart™

From the start, with the launch of the Sony Ericsson C901™ Green-Heart™ in 2009, the intention has always been to broaden Green-Heart™ across the portfolio. For Sony Ericsson, GreenHeart™ is not a competition to produce the "greenest" products, it is an initiative to improve the entire portfolio and make a positive impact on the environment. In 2011 Sony Ericsson implemented Green-Heart™ to in their core portfolio. With Xperia™ neo, Xperia™ neo V, Xperia™ pro, Xperia™ mini and Xperia™ mini pro Sony Ericsson offer more eco-friendly smartphones on the Android™ platform. The back covers of the 2011 Xperia™ Greenheart™ smartphones contain 50% – 70% recycled plastics, which helps to conserve scarce natural resources and reduce the use of oil based virgin plastics. Sony Ericsson has worked hard to use waterborne paints in as many GreenHeart™ products as possible, which significantly lower emissions of Volatile Organic Compounds (VOC) compared to solvent-based paints. From the beginning of 2011, all of their new headsets and new standard chargers were GeenHeart™ compliant. Their headsets use recycled plastics and their chargers have a no-load power consumption of ≤ 30 mW. Sony Ericsson´s commitment in this area was recognized by receiving the EISA Green Smart Phone 2011 – 2012 award.

http://www.eisa.eu/award/56/european-green-smart-phone-2011-2012.html

Supply Chain

Sony Ericsson´s Supplier Social Responsibility Code (Supplier Code) is in place to ensure that their values and principles are driven through the entire supply chain. From their work with suppliers they have learned that both a thorough understanding by suppliers and long term engagement by Sony Ericsson are required in order to build up continuous positive changes in the supply chain. In 2011, Sony Ericsson continued with their strategy of social responsibility engagement by carrying out a number of detailed assessments across their suppliers' sites by internal CSR specialists. In total, 77 visits were made to 41 sites around the world including component suppliers and production sites. Of the suppliers visited in 2011, about 76% received a second visit or more, indicating their efforts and focus in providing sufficient education on their social responsibility requirements and on building a relationship of trust with their suppliers.

In 2011 for the first time, the category of "Corporate Social Responsibility" became a part of the Supplier Awards given to suppliers for their performance during the year. The supplier who was awarded in the Corporate Social Responsibility category was chosen due to its clear support of and dedication to supplier responsibility during 2011.

Concerns about raw materials

Sony Ericsson shares concerns surrounding raw material and mineral extraction activities in the Democratic Republic of the Congo (DRC) and its neighboring countries. In 2011, Sony Ericsson participated in a number of discussions held by the GeSI/EICC Supply Chain/Extractives working group and by the Organization for Economic Co-operation and Development (OECD) on the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High-Risk Areas to help tackle this issue.

In October 2011 it was announced by Sony and Ericsson that Sony will acquire Ericsson's stake in the company and that Sony Ericsson will become a wholly-owned subsidiary of Sony. Sony Ericsson's new name is Sony Mobile Communications. To learn more about their sustainability work, please visit the Sony Mobile Sustainability site at **www.sonymobile.com/sustainability**

pwc

Auditor's Report on review of the Ericsson Sustainability & Corporate Responsibility Report

To the readers of the Ericsson Sustainability & Corporate Responsibility Report 2011

We have been engaged by the Executive Leadership Team of Telefonaktiebolaget LM Ericsson (publ) ("Ericsson") to review pages 1-39 of the Sustainability & Corporate Responsibility (CR) Report for the year 2011. The Board of Directors and Executive Leadership Team are responsible for the company's activities regarding environment, health & safety, social responsibility, and sustainable development, and for the preparation and presentation of the Sustainability & CR Report in accordance with applicable criteria. Our responsibility is to express a conclusion on the Sustainability & CR Report based on our review.

The scope of the review

We have performed our review in accordance with RevR 6 *Assurance of Sustainability Reports* issued by Far. A review consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability & CR Report, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with IAASB's Standards on Auditing and Quality Control and other generally accepted auditing standards in Sweden. The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

The criteria on which our review 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.

Our review has, based on an assessment of materiality and risk, included e.g. the following procedures:

a. update of our knowledge and understanding of Ericsson's organization and activities,

b. assessment of suitability and application of the criteria regarding the stakeholders' need for information,

c. assessment of the outcome of the company's stakeholder dialogue,

d. interviews with management at group level in order to assess if the qualitative and quantitative information stated in the Sustainability & CR Report is complete, accurate and sufficient,

e. examination of internal and external documents in order to assess if the information stated in the Sustainability & CR Report is complete, accurate and sufficient,

f. evaluation of the design of selected systems and processes used to obtain, manage and validate sustainability information,

g. an evaluation of the model used to calculate carbon dioxide emissions,

h. analytical procedures of the information stated in the Sustainability & CR Report,

i. assessment of the company's declared application level according to the GRI guidelines,

j. assessment of the overall impression of the Sustainability & CR Report, and its format, taking into consideration the consistency of the stated information with applicable criteria,

Conclusion

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.

Stockholm, April 24th 2012

PricewaterhouseCoopers AB

Peter Nyllinge
Authorised Public Accountant

Fredrik Ljungdahl
Expert Member of Far

SUSTAINABILITY TIMELINE

1983   First renewable energy solution powered by wind
        First Environmental Policy

1993   First Environmental Report

1994   First Life-Cycle Assessment

1998   First release of The Ericsson lists of banned and restricted substances
        Release of Global Requirement Specification of Design for Environment for mobile system

2000   First "sun-site" – a Radio Base Station powered by solar panels in Morocco
        Signatory to the UN Global Compact ten principles
        Launched Ericsson Response – an initiative supporting relief organizations with
        communications technology in case of disaster

2001   Ericsson Group-wide requirement specification for Design for Environment released

2001–   Phase out of many substances, eg. beryllium oxide. Introduced printed boards with halogen free
2003   flame retardants and lead free soldered products

2002   Supplier Code of Conduct implemented
        First Global ISO 14001 certification (on environmental management)
        Early and proactive approach to product take-back initiated

2004   Code of Business Ethics implemented

2005   First long term energy targets published for Radio Base Stations

2006   Start of series production of lead-free soldered products
        All new Ericsson products are RoHS (Restriction of Hazardous Substances) compliant
        REACH (Registration, Evaluation, Authorization and Restriction of Chemicals)
        implementation started
        Launch of the BTS Power Save feature
        Member of Business Leaders Initiative on Human Rights

2007   First Group-level Carbon Footprint reduction target and work initiated for cross-sector carbon
        reduction potentials
        Commitment to support the Millennium Development Goals and the Millennium Villages project
        Launch of the Ericsson Tower Tube

2009   Expanded our Environmental Policy to a Sustainability Policy
        Launched web-based Code of Conduct training for suppliers, now available in 13 languages
        Published methodology framework for measuring the climate positive effects of ICT

2010   Co-founded the Connect To Learn, a global education initiative
        Joined the Broadband Commission for Digital Development
        Partnership established with Refugees United and UNHCR
        GSMA Global Mobile award for the Community Power Solution
        Supported the Guadalajara ICT Declaration launch at COP16 in Cancún, Mexico
        Launched the Ericsson AIR – an antenna integrated radio – solution

2011   Founding member of New Cities Foundation
        Launched Technology for Good program
        Global OSHAS18801 certification
        Group Chief Compliance Officer appointed
        Chair of Broadband Commission for Digital Development Climate Change Work Group