



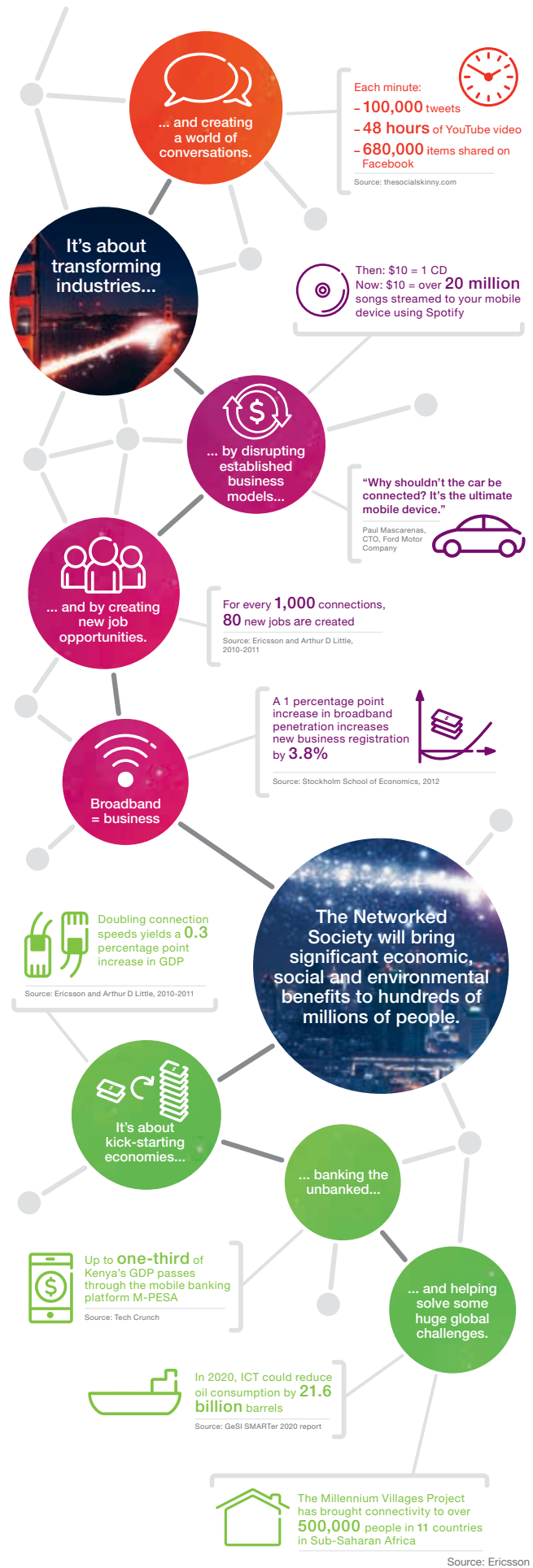
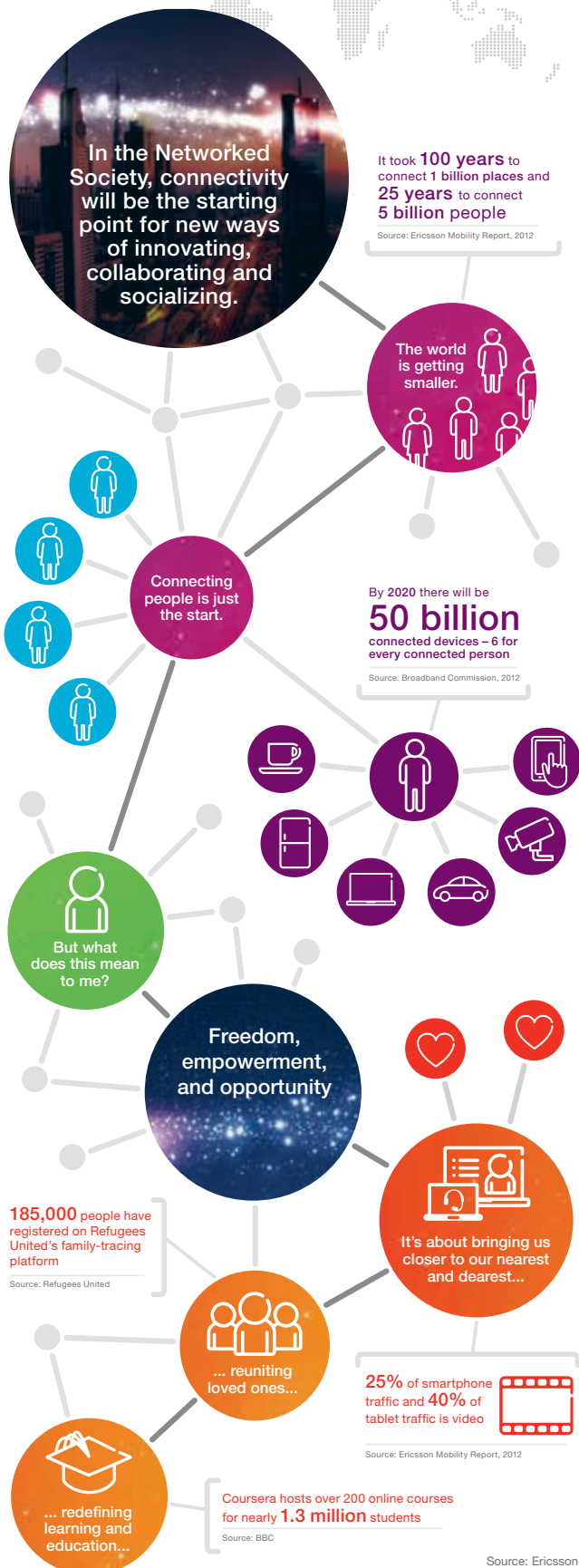
ERICSSON



# TECHNOLOGY FOR GOOD

ERICSSON SUSTAINABILITY AND  
CORPORATE RESPONSIBILITY REPORT 2012

# A CONNECTED WORLD IS JUST THE BEGINNING



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This year's cover is a word cloud based on inputs from our Facebook followers and employees on words they associate with Technology for Good.

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## THE ERICSSON VISION

The Company's vision is to be the prime driver in an all-communicating world. Ericsson envisions a continued evolution, from having connected 6 billion people to connecting 50 billion "things". The Company envisions that anything that can benefit from being connected will be connected, mainly via mobile broadband in the Networked Society that is beginning to come to life.

## ABOUT ERICSSON

Communication is changing the way we live and work. When one person connects, his or her world changes. With everything connected, our world changes. Ericsson plays a key role in this evolution, using innovation to empower people, business, and society. We are enabling the Networked Society with efficient real-time solutions that allow us all to study, work, and live our lives more freely, in sustainable societies. Since the company was established in 1876, we have been a leader in telecommunication and we are now expanding our role into an ICT (Information and Communication Technology) solutions provider. Our offering comprises services, software and infrastructure, mainly for telecom operators. Some 40% of the world's mobile traffic runs through networks that are supplied by us. We provide solutions and services to all major telecom operators in the world. The networks we manage for operators serve about 950 million subscribers.

Today we are more than 110,000 people serving customers in more than 180 countries. Our business includes four segments: Networks (the infrastructure that is the basis for all mobile communication), Global Services (managed services, consulting, and systems integration, customer support, network design and optimization and network rollout), and Support Solutions (software for operations support systems and business support systems, TV and media management, and m-commerce). The fourth segment is joint venture ST-Ericsson, offering modems and ModAps (integrated modem and application processor platforms) for handset and tablet manufacturers.



## TECHNOLOGY FOR GOOD

In the Networked Society, Ericsson is the leading advocate of Technology for Good. Mobility and broadband will continue to play a decisive role in the transformation of society, and in five years we believe that 90% of the world's population will have access to mobile communication. With this scale, we are presented with an unprecedented opportunity to help address global sustainable development challenges.

By using broadband, cloud and mobility to address poverty, education, health, human rights, climate change and other challenges, we work to ensure that our technology is a force for good and lasting 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. We focus on the areas where we believe our company and our technology can have the greatest impact on social, economic and environmental development. Our approach is to use our core business – our technology and our expertise – to increase the positive impacts and minimize risks, where ever we operate in the world. For more information, visit [www.ericsson.com/sustainability](http://www.ericsson.com/sustainability).



LISTEN TO MANY OF OUR STAKEHOLDERS AND ERICSSON EXPERTS PROVIDE INSIGHT ON TOPICS DISCUSSED IN THIS REPORT. THE VIDEOS ARE AVAILABLE AT THE ERICSSON TECHNOLOGY FOR GOOD YOUTUBE CHANNEL.

We also welcome you to engage with us via our Technology for Good blog, and to follow us on Facebook and Twitter.



[www.ericsson.com/technology-for-good-blog](http://www.ericsson.com/technology-for-good-blog)



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Technology for Good videos  
(<http://www.youtube.com/playlist?list=PL3DDD369426CF84BA>)



Technology for Good photos  
([www.flickr.com/photos/ericsson\\_images/collections](http://www.flickr.com/photos/ericsson_images/collections))



Technology for Good online pinboard  
([www.pinterest.com/ericssonpins/technology-for-good/](http://www.pinterest.com/ericssonpins/technology-for-good/))

## ABOUT THIS REPORT

This report, together with additional information available online, summarizes our 2012 sustainability and corporate responsibility (CR) performance.

Sustainability and CR are central to Ericsson's core business and our commitment to the triple bottom line of responsible financial, environmental and socio-economic performance. Corporate responsibility is about maintaining the necessary controls to minimize risks, while creating positive impacts for our stakeholders and our brand. A sustainable and responsible approach results in value creation for the company, our employees, our customers, our shareholders and society as a whole. Conducting business responsibly through high standards in business ethics is a top priority. We believe this approach delivers new business opportunities, more efficiency, less risk, greater brand value, market leadership and attractiveness as an employer, and we describe our progress in this report.

For 2012, for the first time we are reporting Communication on Progress according to the UN Global Compact (UNGC) Advanced Level criteria, which sets a higher standard for reporting among UNGC signatories. Unless otherwise stated, all information and data pertains to activities undertaken from January 1, 2012 to December 31, 2012. The report covers the Ericsson Group, i.e. Telefonaktiebolaget LM Ericsson and its subsidiaries, and provides performance highlights from our joint venture ST-Ericsson. The 2012 Ericsson Annual Report 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 2012.

The 2012 Annual Report and other financial information can be found at [www.ericsson.com/investors](http://www.ericsson.com/investors).

The Sustainability and CR Report is available in limited print versions and can be downloaded from our website with additional content online at [www.ericsson.com/sustainability](http://www.ericsson.com/sustainability), including our Global Reporting Initiative (GRI) performance summary.

To help us improve reporting and ensure transparency, we welcome your feedback and questions on our report and performance. Please email: [corporate.responsibility@ericsson.com](mailto:corporate.responsibility@ericsson.com).

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



## EXTERNAL ASSURANCE AND GRI APPLICATION LEVEL

This report has been assured by PwC according to Far RevR6 (based on the international standard ISAE3000) and AA1000, see Assurance Statement on pages 52-53. PwC also performed a CO<sub>2</sub>e audit on Ericsson's own emissions. The GRI G3 guidelines have been used in compiling this Report and a complete GRI compilation appears online.

Ericsson's Sustainability and Corporate Responsibility Report 2012 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.



AA1000  
Licensed Assurance Provider  
000-150

## DEAR STAKEHOLDERS,

The Networked Society presents enormous opportunities to advance sustainable development. Our data shows that by 2017, 85% of the world's population will have access to 3G mobile communication and 50% will have access to 4G. This will dramatically change the ways we can address many of the world's global sustainability challenges.

As an ICT industry leader, we align our sustainability and corporate responsibility (CR) priorities with those set at the global level, like the Millennium Development Goals. We are actively engaged in shaping future sustainable development goals, through activities around the Rio+20 UN Conference on Sustainable Development and other discussions exploring the post-2015 development agenda. We continue to support the ten principles of the UN Global Compact providing a universal framework for business conduct, and this year we are reporting according to Global Compact Advanced.

### Setting high ambitions

Sustainability and CR have been a natural part of Ericsson's identity and strategy since the days of our founder. Now, it is more important than ever. As of 2012, our Vice President for Sustainability and Corporate Responsibility Elaine Weidman-Grunewald reports directly to me. For 2013, we elevated a Sustainability and CR Leadership target to the Group's top-level scorecard.

We set demanding targets and long-term objectives for our sustainability and CR performance. In 2012 we achieved our five-year carbon intensity reduction target a year early, and set new ambitious targets on reducing the carbon footprint of our own activities.

By continuing to drive global standards and economies of scale, combined with innovative public-private partnerships, we aim to make mobile communications more affordable and accessible. We also work to demonstrate the positive role of technology, where it can shape low-carbon economies, increase access to education, and support other humanitarian issues such as refugees, peace and conflict resolution, and disaster response.

### Focus on business ethics

Ericsson's strong commitment to ethical business practices is based on respect for internationally agreed principles. Our governance system ensures a consistent approach in how we run the business. Openness, transparency, and accountability are central to our long-term strategy and success and we recognize that growth must be balanced with responsibility.

In 2012, Ericsson re-established a presence in Myanmar for the first time since 1998, following ongoing political reforms. Our research shows the clear positive benefits of mobile communications for the people of Myanmar, but at the same time we must engage responsibly in Myanmar with respect to human rights. In 2012, we joined the Institute for Human Rights and Business initiative on Myanmar and will work with the non-profit, human rights expert group Shift over the next two years to strengthen our human rights framework.

### Engaged in the solutions

Different issues will rise in importance on the global agenda, which is one of the main reasons I think Ericsson has a responsibility to take a leading role in ongoing discussions. Some of the work



groups in which I am personally involved are the Broadband Commission for Digital Development, and the Leadership Council of the UN Sustainable Development Solutions Network, a multi-stakeholder initiative formed in 2012 promoting a solutions-oriented approach to the post-2015 development agenda.

### Tackling the challenges

Technological developments are happening faster than ever and will always come with challenges. We are involved in debate and discussions in the areas most relevant for us. We constantly strive to improve energy efficiency in our portfolio. The many positive benefits of our technology includes fulfillment of human rights such as freedom of expression, but unintended use of technology can negatively impact those rights. Through multi-stakeholder dialogue and collaboration, we look for ways to secure ICT's positive benefits and minimize any negative impacts. In 2012, we worked on further integrating the UN Guiding Principles on Business and Human Rights into our business.

### Vision and value

Sustainability and CR leadership offers significant value to our business. It offers vision: Bringing affordable and accessible communication to all reflects our 137-year history and unites our 110,000 employees. It demonstrates integrity and high ethics and helps earn stakeholder trust. It enables a positive contribution to the local economies where we operate, minimizes risks, offers a competitive advantage and saves costs, not least in reducing our environmental impact.

It is difficult to predict all the ways our technology will be used in the future. Yet I am certain that as billions more begin to enjoy the benefits of connectivity, we will identify new opportunities to innovate in ways that sustain our long-term business as well as help us leverage the benefits of ICT for all.

HANS VESTBERG  
PRESIDENT AND CEO ERICSSON

# TAKING A STRATEGIC APPROACH

At Ericsson, sustainability and CR is a strategic priority. We seek opportunities to leverage our influence as a leader in our sector to further sustainable development. Supported by our strategy (see box), we define sustainability as the successful integration of social, environmental and economic issues in a triple bottom line context:

- **Social equity:** Contributing to making communications affordable and accessible to all as a basic human need
- **Environmental performance:** Demonstrating leadership and responsibility in addressing our direct and indirect environmental impacts, and in enabling a low carbon economy
- **Economic prosperity:** Building on sustainable business models and alliances with stakeholders who share our commitment

Corporate Responsibility is about maintaining the necessary controls to minimize risks to the business and the brand and about being a good corporate citizen.

### Integrating sustainability and CR

The Sustainability and CR Strategy is fully integrated in the development of Ericsson's business strategy, target setting and risk management (see illustration) and is actively implemented across the business. Continuous dialogue with external and internal stakeholders helps prioritize the issues most material for Ericsson. Execution of the Strategy is measured at

## ERICSSON'S SUSTAINABILITY AND CR STRATEGY

- 1 Lead in energy and environmental performance for telecom networks and services
- 2 Advocate the role of broadband in sustainable urbanization and in shaping a low carbon economy
- 3 Drive the socio-economic value proposition of broadband and its role in shaping society
- 4 Be the trusted partner among our stakeholders by managing corporate responsibility business risks
- 5 Improve Ericsson's own environmental performance

relevant levels according to target fulfillment.

Our Sustainability Policy describes how Ericsson strives towards excellent sustainability performance, and the Ericsson Code of Conduct policy includes our commitment to the UN Global Compact ten principles in the areas of human rights, labor standards, environment and anti-corruption. Ericsson's Code of Business Ethics summarizes the Group's basic policies and directives governing its relationships internally, with its stakeholders, and with others. It also sets out how the Group works to achieve and maintain its high ethical standards.

We focus on the sustainability and corporate responsibility issues most material to Ericsson, our sector and our stakeholders, and we report on our performance annually.

### Driving results

The Ericsson Sustainability and CR Steering Group, comprised of senior executives, aligns sustainability and CR work within Ericsson and approves the strategy, objectives and targets. Annual targets and long-term objectives support our commitment. Each year, we report on a range of objectives and achievements within our most material issues (see pages 48-50).

### STRATEGIC, TARGET SETTING AND RISK MANAGEMENT CYCLE

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



Source: Ericsson

# 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, and includes a materiality process (page 10), stakeholder engagement (page 11), and the results of our Life-Cycle Assessment (LCA) process.



In determining our key issues, Ericsson also considers relevant reporting guidelines such as the Global Reporting Initiative, industry commitments such as the UN Global Compact and international standards and guidelines, such as the UN Guiding Principles on Business and Human Rights, as well as the Millennium Development Goals. Through this process we have determined that our key material issues are:

## Accessibility and affordability of mobile communication

Increased accessibility and affordability of mobile communication can contribute significantly to sustainable development by supporting economic growth, health, education, quality of life, and more. Despite over 6 billion mobile subscriptions worldwide, there is still work to be done to ensure more equitable digital, social and financial inclusion, particularly at the base of the pyramid (page 12).

## Energy and material performance

By designing and manufacturing products and solutions with energy and materials efficiency and reduced energy consumption, we can reduce our own environmental footprint and that of our customers. We also place great emphasis on reducing the carbon footprint of our own internal operations. Other important focus areas are reducing energy consumption, phasing out hazardous substances and improving transparency of conflict minerals in our supply chain (page 20).

## Climate change and urbanization

The ICT sector has significant 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, and continue to raise awareness of this potential (page 28).

## Business ethics

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 believe that it is important that our business is conducted with respect for universal human rights. Still, the Networked Society brings new ethical dilemmas in terms of ICT's impact on issues like privacy and freedom of expression (page 34).

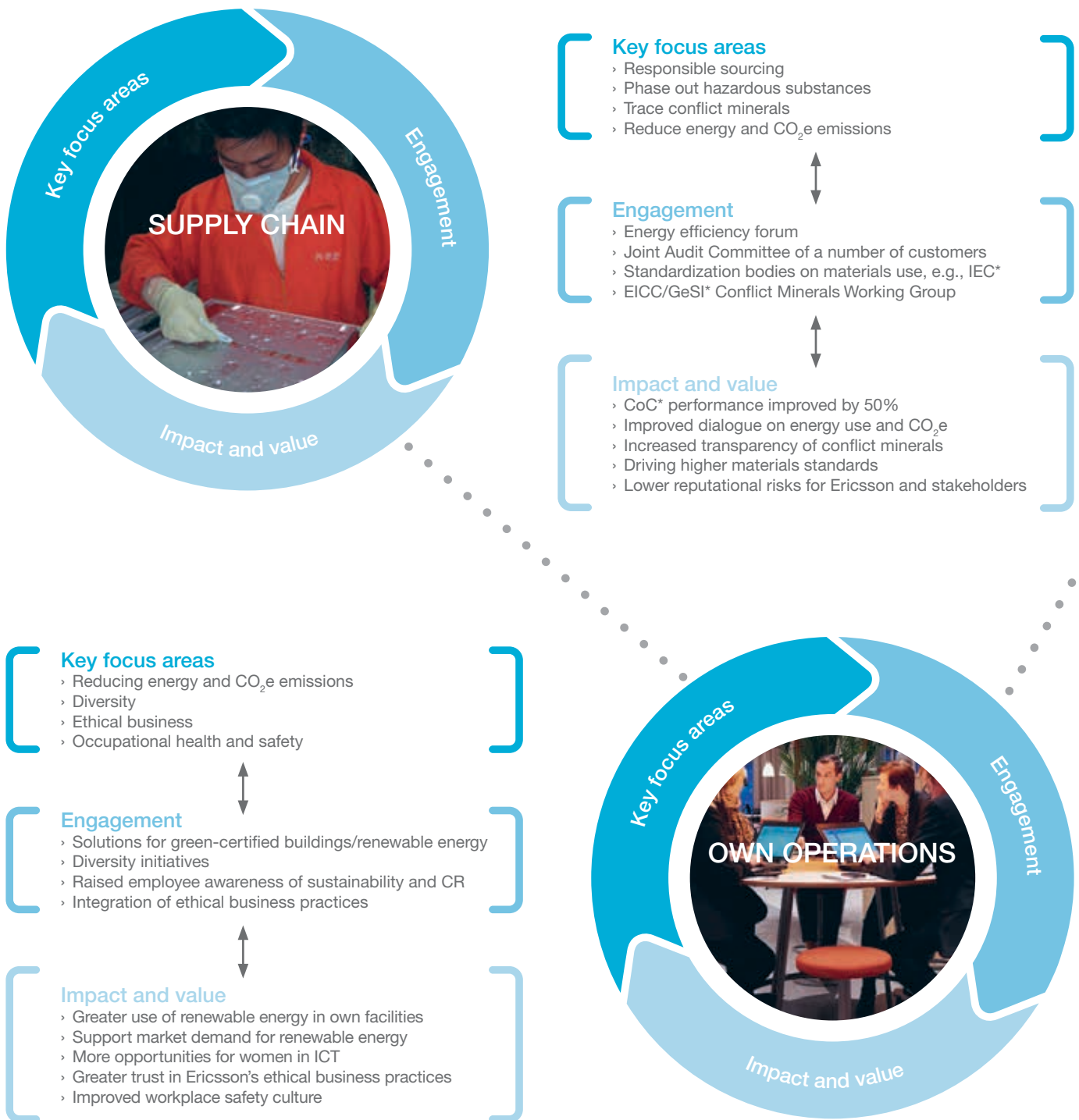
## Employee engagement

With an engaged and diverse workforce that emphasizes leadership, learning and values, we can better achieve our sustainability and CR aims, attract and retain talented people, respond to our customers' needs and maintain a competitive advantage. Our vision is to build the best talent in the industry. High health and safety standards are also a top priority (page 42).

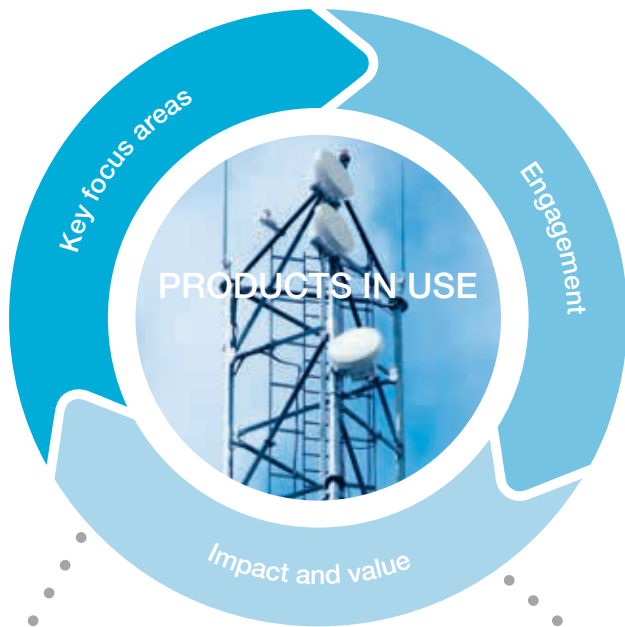
# TAKING A VALUE CHAIN PERSPECTIVE

Sustainability and CR issues are addressed throughout our business operations and within our sphere of influence, we consider both direct and indirect impacts. Further details are found throughout this report. In a value chain perspective, we map the key focus areas as identified in our materiality process (see page 10) in each phase of our value chain. Through stakeholder engagement we aim to leverage our influence and enhance value creation.

ERICSSON VALUE CHAIN, SUSTAINABILITY AND CR PERSPECTIVE







**Key focus areas**

- › Carbon footprint & climate change
- › Energy and materials performance
- › Role of ICT in low-carbon economy
- › Human rights (unintended use of products)
- › ICT socio-economic impact
- › Radio waves and health

**Engagement**

- › Optimize energy-efficient networks with operators
- › Solutions on wider societal challenges
- › Roll out Technology for Good programs\*
- › Dialogue and guidelines on responsible use of ICT
- › Research on radio waves and health

**Impact and value**

- › Energy-efficient and low energy-consuming networks
- › Reduce negative environmental impact
- › ICT-enabled solutions to reduce carbon emissions
- › Reduced risk for unintended use of products
- › Greater digital and social inclusion
- › Greater knowledge on impact of radio waves and health

**Key focus areas**

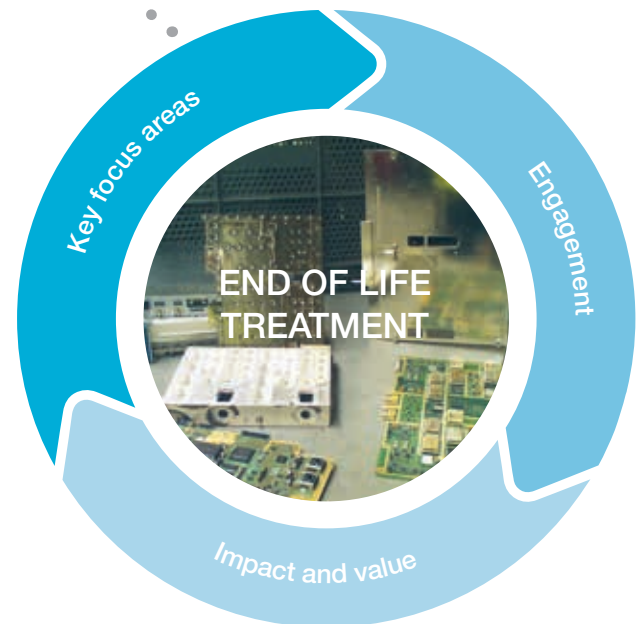
- › Design for disassembly (low environmental impact)
- › Proper handling of e-waste\*
- › Phase out of hazardous substances

**Engagement**

- › Promote proper e-waste handling with UN StEP\* initiative
- › Raise standards among recyclers
- › Encourage greater uptake of proper e-waste handling
- › Partner to improve proper e-waste handling in markets where lacking

**Impact and value**

- › Improved e-waste handling
- › Harmonized global approach to e-waste handling
- › Strengthened requirements for recyclers
- › Safer handling of e-waste for workers/environment



**Definitions**

CoC = Code of Conduct

IEC = International Electrotechnical Commission

EICC = Electronic Industry Citizenship Coalition

GeSI = Global e-Sustainability Initiative

EC = European Commission Human Rights Sector Guidance Project/ICT industry

Technology for Good Programs = e.g., Connect To Learn, Ericsson Response, Refugees United

E-waste = Electrical and electronic waste

UN StEP = UN Solving the E-Waste Problem initiative

# THROUGH THE MATERIALITY LENS

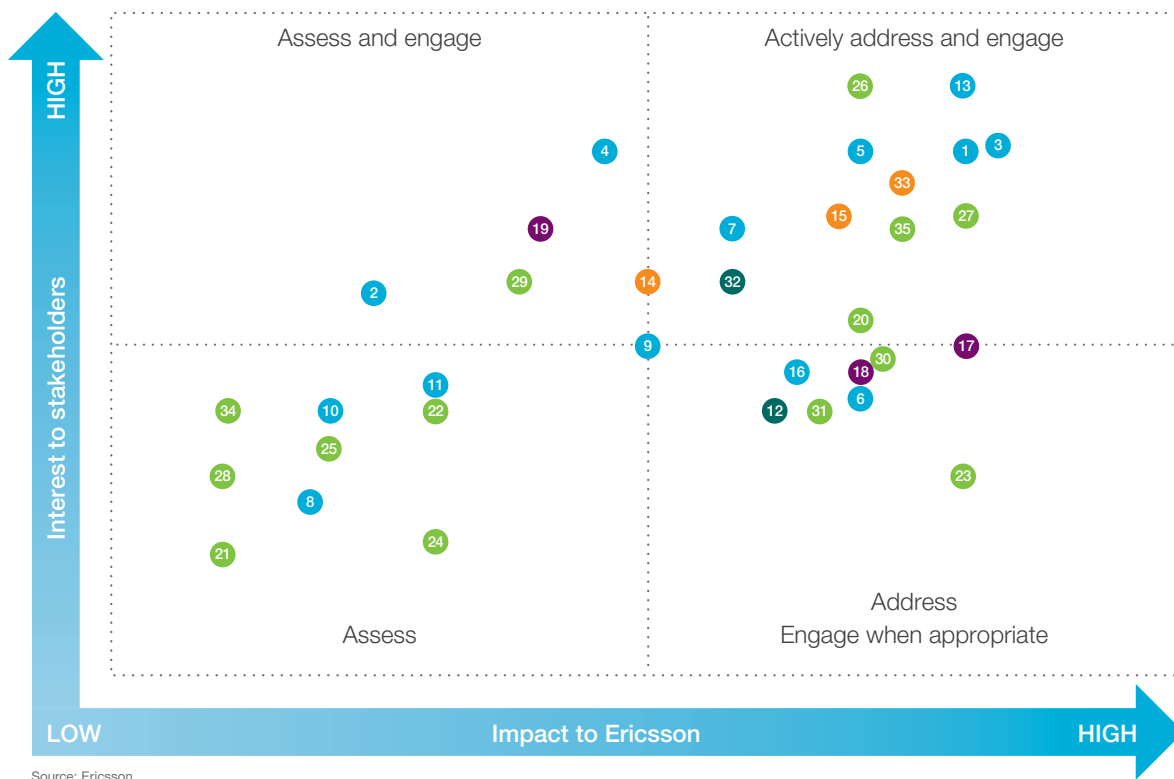
Materiality is the point at which a topic becomes relevant both in the context of stakeholders' interest and Ericsson's strategic priorities. The materiality map below is the result of a five-step process in which Ericsson ranked an issue based on the degree of interest to stakeholders and the impact to Ericsson's business to show where these issues align. This allows us to identify priorities and align strategy and reporting with emerging stakeholder expectations.

We first created a universe of topics based on investor surveys and dialogue, customer requirements, employee priorities, research, and trendmapping and grouped the topics according to our key issues (see page 7). Next, the topics were weighted from two perspectives: impact to Ericsson's business (based on

risk assessments, our Life-Cycle Assessments, the Sustainability Strategy process, Supplier Code of Conduct program, and results of internal and external audits of our management system) and interest from our stakeholders (using a wide variety of inputs). Finally, internal sustainability experts analyzed the outcome of the process, making adjustments based on their understanding of stakeholder priorities and insight into the business.

This is the first time Ericsson applied this materiality process. It will be conducted periodically and further refined to create a method that best reflects the issues most relevant to Ericsson, provides deeper insights into stakeholder expectations, and allows materiality to be comparable over time.

## MATERIALITY



Source: Ericsson

- Conducting business responsibly
- Enabling communication for all
- Leading with values
- Reducing our environmental impact
- Enabling Low-Carbon economy

### Explanation to the table:

**Assess:** review and determine the importance of a topic  
**Address:** direct efforts and attention to work with the topic  
**Engage:** with stakeholders to address a topic  
 The materiality of the topic determines how it is covered in our annual sustainability and CR reporting. The most material topics are covered in this report or online.

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>1 Anti-corruption</li> <li>2 Disaster response</li> <li>3 CR risks assessment</li> <li>4 Whistle-blower procedure</li> <li>5 Human rights (unintended use of ICT)</li> </ul> | <ul style="list-style-type: none"> <li>6 Cybersecurity</li> <li>7 Radio waves and public health</li> <li>8 Child labor</li> <li>9 Information security and privacy</li> <li>10 Forced labor</li> <li>11 Freedom of association</li> <li>12 Policy engagement and advocacy</li> <li>13 Responsible sourcing</li> <li>14 Access to education</li> <li>15 Digital inclusion</li> <li>16 Tracing of conflict minerals</li> <li>17 Diversity and non-discrimination</li> <li>18 Occupational health and safety</li> <li>19 Employee engagement</li> <li>20 Electrical and electronic waste management</li> </ul> | <ul style="list-style-type: none"> <li>21 Biodiversity</li> <li>22 Emissions (effluents, air emissions other than GHG)</li> <li>23 Environmental legal compliance</li> <li>24 Waste management (office and production)</li> <li>25 Water consumption</li> <li>26 Ericsson carbon footprint and climate change</li> <li>27 Product energy efficiency</li> <li>28 Responsible land use</li> <li>29 Use of renewable energy</li> <li>30 Hazardous substances avoidance</li> <li>31 Efficient use of materials (excluding hazardous)</li> <li>32 ICT contribution to low-carbon economy</li> <li>33 ICT socio-economic impact</li> <li>34 Product information and labeling</li> <li>35 Energy consumption (Ericsson own activities)</li> </ul> |
|---|---|--|

# ENGAGING WITH STAKEHOLDERS

Addressing sustainability and corporate responsibility issues in an effective way requires engagement with a wide range of stakeholders, including customers, employees, investors, suppliers, industry partners, government, consumer and business users of telecommunications services, non-governmental organizations, standardization bodies, research institutes, and media. Through collaboration we seek to understand their views and incorporate their feedback into our ways of working, so that we can arrive at better solutions to address challenges.

To understand how stakeholders perceive us on sustainability and CR issues, we conduct surveys with employees, customers and investors. We also put effort into responding to surveys of others, including investors, NGOs and customers, and pay close attention to improving our rankings. We engage with customers regularly on many issues, including supply chain management, energy efficiency, and our Technology for Good programs.

Here we present a snapshot of some key stakeholder engagement activities during 2012. For more examples, visit [www.ericsson.com/sustainability](http://www.ericsson.com/sustainability).

## Sustainability and CR briefings for investors

Increasingly mainstream, as well as Socially Responsible Investors seek greater insights into how companies manage sustainability and corporate responsibility, particularly in regard to long- and short-term risks affecting the business. Ericsson meets with investors regularly, and provides information on our strategy and approach, risk management, anti-corruption program, handling of human rights and sales compliance

## SHIFT LISTENS TO STAKEHOLDERS ON HUMAN RIGHTS

Ericsson has engaged in a Business Learning Program on Human Rights with the non-profit centre Shift (see pages 36, 38). As part of its independent research, Shift undertook a recent trip to Myanmar where it conducted approximately 100 interviews and identified a number of concerns among communities and ethnic groups related to companies entering Myanmar. A number of these were specific to the ICT industry. Discussions with these local stakeholders will be an important part of Ericsson's own human rights due diligence both before and during its business operations in Myanmar. Ericsson will carefully consider these and other risks to human rights:

- Strengthening the police or military's control over villages
- Crony and/or corrupt subcontractors
- Land-grabbing associated with ICT network coverage
- Forced labor associated with public infrastructure
- Lack of grievance channels
- Security crackdown on public protests
- Privacy crackdowns linked to the internet
- Increased corruption and discrimination around access to ICT

Read more at [www.shiftproject.org](http://www.shiftproject.org)

processes, among other issues. We answer many investor surveys and strive to report in a thorough and transparent manner.

## Supplier forum on carbon emissions

Ericsson held a forum with selected key suppliers to discuss energy efficiency and greenhouse gas emissions, since suppliers play an important role in helping Ericsson to reduce our indirect emissions. The forum enabled sharing of best practices and focused on challenges related to reducing, measuring and reporting greenhouse gas emissions and established networks for knowledge sharing and joint initiatives.

## Channeling social media

The increasing importance of the role of social media in sustainable development

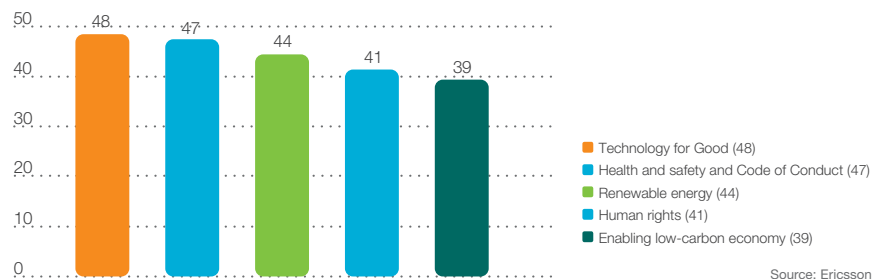
discussions was evident at two events in which Ericsson was a key partner: Rio+Social, held in conjunction with the UN Sustainable Development Conference (Rio+20), and the Social Good Summit, in conjunction with the UN General Assembly annual meeting in New York. Both offered platforms to engage a wide audience on global challenges. Other partners included Mashable, the UN Foundation, the 92<sup>nd</sup> Street Y, the UN Development Programme, and the Bill and Melinda Gates Foundation. For more, visit [www.ericsson.com/sustainability](http://www.ericsson.com/sustainability).



LISTEN TO BLOGGERS AT THE SOCIAL GOOD SUMMIT TALK ABOUT TECHNOLOGY AS A FORCE FOR GOOD.

## Employees rank top sustainability issues 2012

Each year we conduct a detailed employee survey to assess employees' views on the sustainability issues they consider the most relevant for Ericsson to focus on. A total of 3,633 employees participated in 2012. (See graph for results in percent).





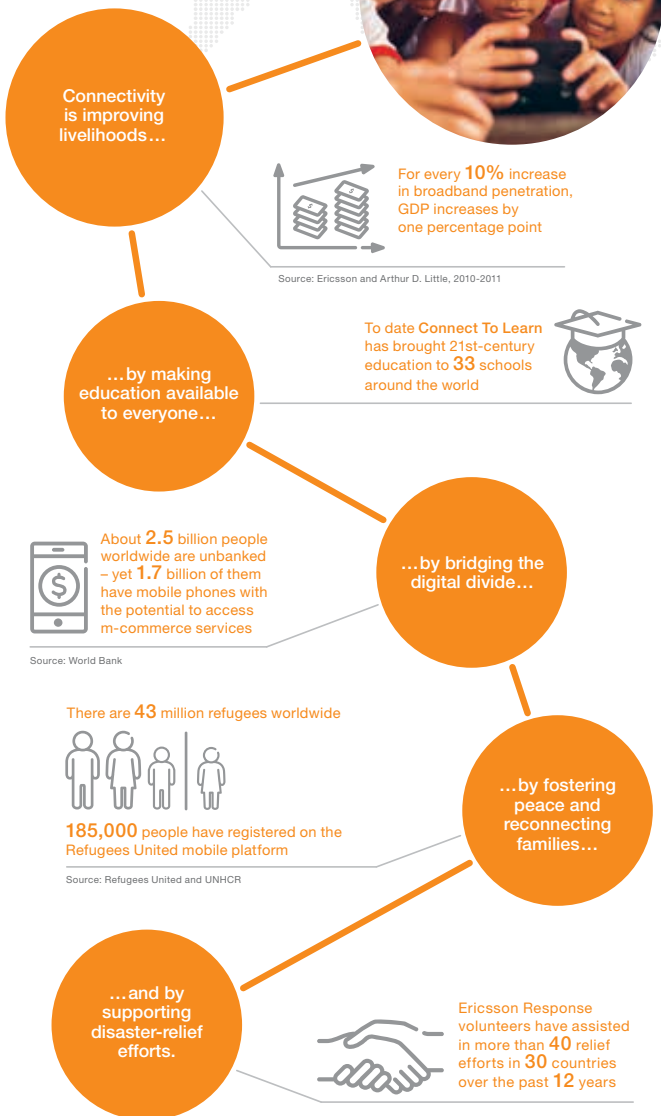
# ENABLING COMMUNICATIONS FOR ALL

From increasing GDP growth and boosting livelihoods to enhancing access to education and health, ICT is a powerful way to unlock the full economic potential of developing nations. Our strategy is to drive the socio-economic value of mobile broadband to shape a world where everyone can benefit from the Networked Society. Together with partners, we drive initiatives and innovative solutions that address our most pressing global challenges, in line with the Millennium Development Goals.

# CONNECTING THE LAST BILLION

## COMMUNICATIONS FOR ALL

We believe that connectivity is a starting point for economic growth and improved quality of life.



Broadband penetration has been proven to have a significant effect on economic development. Every 10% increase in broadband penetration is shown on average to deliver GDP growth of 1%. Furthermore, 80 jobs are created for every 1000 broadband connections. Doubling the broadband speed increases GDP by 0.3%, according to a study of 33 OECD countries conducted by Ericsson, Arthur D. Little and Chalmers University.

The potential is evident, and billions have benefited from the continued growth of the industry. The challenge is to unlock it for the benefit of the “last billion” users at the base of the pyramid.

While broadband is getting more affordable, and one-third of the world can now get online, many are not part of the digital age, according to the *State of Broadband 2012: Achieving Digital Inclusion for All*, a report from the Broadband Commission for Digital Development to which Ericsson contributed. Currently 20% of households in developing countries have Internet access, a figure the Broadband Commission wants to double by 2015.

**LISTEN TO DR. HAMADOUN TOURÉ, SECRETARY GENERAL OF THE ITU TALK ABOUT THE STATE OF BROADBAND.**

### A collaborative approach

For many years, Ericsson has committed to support the achievement of the Millennium Development Goals (MDGs) by promoting affordable access to telecoms. Ericsson’s approach to enabling communication is built on these pillars:

- Initiatives linked to our core business
- Public-private partnerships for higher quality, relevance, reach and outcome
- Customer engagement to leverage shared value
- Sustainable, scalable business models for long-term impact
- Measuring and monitoring impact

One of the first examples where Ericsson put this approach into action was as lead telecom partner in the Millennium Villages Project, together with the Earth Institute at Columbia University and Millennium Promise, where we wanted to show that connectivity could play a decisive role in fighting poverty in Africa. Today, more than half a million people in eleven countries in sub-Saharan Africa are benefiting from mobile connectivity through the project, improving access to health and education and boosting livelihoods, among other benefits.

# THE WORLD AS THE CLASSROOM

About 70% of girls in some sub-Saharan countries never get a secondary education. Education is a powerful tool to end poverty and secure a productive life. According to UNESCO, one extra year of schooling increases an individual's earnings by up to 10%. For young people in Africa and other developing regions, ICT can have a transformational role in scaling up access to quality education through innovative programs, such as cloud-based curricula and school-to-school connectivity.

### Three-fold mission

In response to the challenges of access and inequality in secondary education, and in support of UNESCO's Education for All goals, Connect To Learn was launched in 2010 by Ericsson, Columbia University's Earth Institute and Millennium Promise. Connect To Learn is aimed at enhancing education in the Millennium Villages of sub-Saharan Africa and has a three-fold mission to provide:

- Quality learning and teaching resources through mobile broadband connectivity
- Improved access to secondary education by providing scholarships and other support to girls
- A global advocacy platform for the importance of quality education

While the Millennium Development Goals have been focused on primary education, and have made considerable progress to date, Ericsson and partners identified a gap in secondary education. According to UNESCO, 200 million young people lack basic literacy and numeracy skills essential to learning further skills for work. As well as addressing these basic skills gaps, ICT also provides access to

21st century skills necessary for the knowledge society.

As of 2012, Connect To Learn's ICT program was established in twelve schools in Millennium Villages in six countries: Ghana, Tanzania, Kenya, Uganda, Malawi and Senegal, and during 2013 Ericsson will continue to expand Connect To Learn's ICT program in the Millennium Villages.

### Extending the reach

Building on the success of Connect To Learn in Africa, new ICT programs were started in schools in Djibouti, Brazil, Chile, South Sudan, Uganda, India and China. Ericsson is working with the government of Guangdong and China Mobile to bring cloud computing-based learning to schools in that region.

As of the end of 2012, over 15,000 students globally were benefitting from Ericsson's ICT programs, more than three times the number in 2011.

### Collaborative action

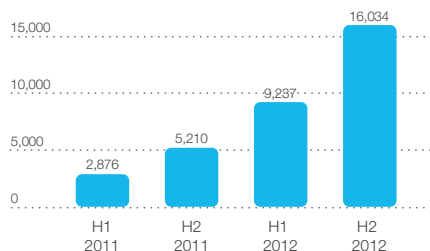
A collaborative action research study together with the Earth Institute is looking at developing an intervention model to overcome challenges and barriers in implementing ICT programs in schools in resource-poor settings. The findings, available in 2013, will be used as input to future development of the program. See also [www.connecttolearn.org](http://www.connecttolearn.org).



Connect To Learn is opening the door to a new world of knowledge and possibility.

### CONNECT TO LEARN

Number of students



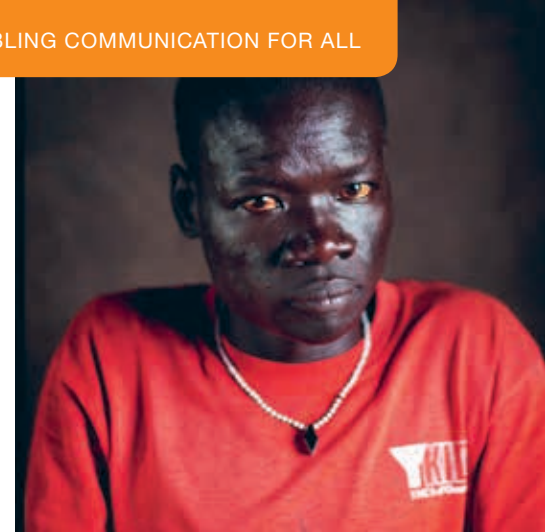
Source: Ericsson



Erika, 30, is looking for Cecilia. Erika is from Ogujebe.



After five years these two sisters were united with the help of a borrowed phone and an online database.



Ben Mori, 30 is looking for David. Ben came from South Sudan in 1991.

## FOR REFUGEES, A CHANCE AT RECONNECTION

Ericsson has supported humanitarian situations actively since 2000, but first became involved in the refugee issue in 2007, when we assisted the United Nations High Commissioner for Refugees (UNHCR) in providing connectivity to two refugee settlements in northern Uganda.

Globally, UNHCR estimates that there are more than 43 million people forcibly displaced by conflict or persecution. UNHCR is actively seeking solutions for these underserved populations, who could benefit significantly from greater access to communications.

In 2010, Ericsson representatives met David and Christopher Mikkelsen, founders of Refugees United, who had developed an online family reconnection service to help refugees locate loved ones separated by war, conflict, famine or natural disasters. However, at that time, less than 2% of their target population had access to computers and Internet, while some 40% had access to mobile phones. Ericsson assisted Refugees United with the development and deployment of a mobile phone application to further support reconnections.

The service includes a SMS message and WAP version to suit low-bandwidth phones and needs of the users, and specifically adapted mobile applications for the search service, taking into account illiteracy, privacy, low bandwidth, cost, language and trust.

**LISTEN TO CHRISTOPHER MIKKELSEN OF REFUGEES UNITED TALK ABOUT THE AIM TO REACH 1 MILLION REFUGEES.**

### Registrations tripled in 2012

The number of refugees registered for the service more than tripled in 2012, and marked 185,000 registrations by the start of 2013. With the urgent need for more outreach, the long-term objective is for 1 million refugees to actively use the service by 2015.

Thanks to extensive awareness raising activities, new methods of community outreach, and the support of mobile operators (including Safaricom in Kenya, MTN in Uganda and Vodafone in Egypt), about 100 families have been reconnected. According to Refugees United the number may be higher; since the service is



# 185,000

refugees were registered on the Refugees United platform at the start of 2013. A long-term objective is to reach 1 million by 2015.

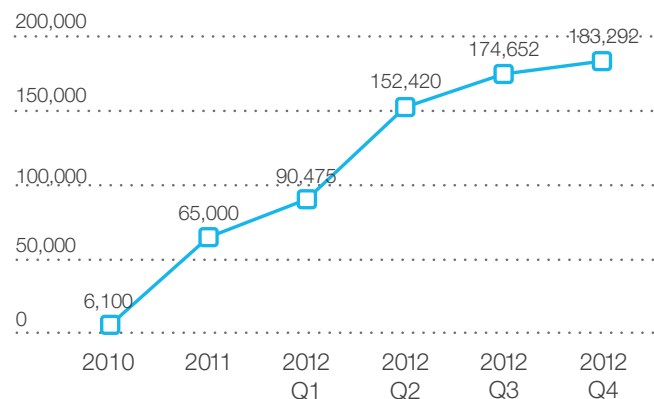
anonymous, and not every refugee who makes a reconnection wants to be reported.

Part of the reason for the increased momentum in 2012 was the launch of the first radio campaign in one of the world's largest refugee settlements in Dadaab, Kenya. In partnership with MTN Uganda and the UNHCR, Refugees United sent out its first SMS campaign, specifically targeting refugees in the southern and northern parts of Uganda with information about the service. Many families were reconnected as a result. In Kampala and Nairobi, information about the mobile service is provided at registration booths run by UNHCR personnel. We are aiming to deploy the service in many more countries in 2013. For more, visit [www.refunite.org](http://www.refunite.org).

**LISTEN TO REFUGEE UNITED VOLUNTEER BAHATI'S STORY OF HOW HE HELPED TWO SISTERS RECONNECT.**

### REFUGEES UNITED

Number of refugees registered



Source: Refugees United



The 3G enabled hospital boat makes it possible for villagers in the Amazon to consult with outside specialists. It is also a floating teaching hospital.

## AMAZON GETS GOOD SIGNALS

Connectivity is bringing positive social and economic changes to the people of the remote Belterra region in the Brazilian Amazon, where over 30,000 people in some 175 communities along the Tapajós River now benefit from mobile broadband for the first time. The digital inclusion program began in 2009 as a partnership between Ericsson, mobile operator Telefonica|Vivo, and the non-profit organization Saude & Alegria.



Telefonica|Vivo and Ericsson accept the 2013 Global Mobile Award for Best Mobile Product, Initiative or Service for Emerging Markets.

The Amazon, one of the most bio-diverse areas on the planet, is a vast region that spans across eight rapidly developing countries with a population of more than 25 million people. For the inhabitants of Belterra, mobile broadband has had significant impact on daily life.

**LISTEN TO DJALMA MOREIRA LIMA, A LOCAL BUSINESS MAN IN BELTERRA, TALK ABOUT HOW ICT DEVELOPED HIS BUSINESS.**

### Ripple effect

By 2010, changes precipitated by the connectivity services were already apparent. Most significantly, the region's Abaré floating hospital boat was 3G enabled, allowing patients to get second opinions and collaborative diagnoses from outside medical specialists. Recognizing the positive benefits of the Abaré boat, local governments have also initiated a program to launch 100 additional river hospital boats, and a third of these boats are funded and scheduled for operation. Today the Abaré boat is not only a travelling health resource but also serves as a floating teaching hospital.

Livelihoods got a boost as well, for example, a family bread-and-honey business was able to receive crucial pre-orders via mobile phone before making long-distance trips to the market to sell their goods.

In 2011 the partners expanded the 3G coverage to an extremely remote community, with an off-grid site in Sururacá village, situated on the other side of the Tapajós river, within a nature reserve of the Amazonia National Park. By 2012, the new computers and Internet access allowed students at João Franco Sarmento school to benefit from virtual classes given by volunteers, including Ericsson employees, and to connect remotely with other students in Rio.

In a 2012 survey, the majority of respondents from Belterra noted increased entrepreneurial activity and job creation as a result of telephony services; 90% of respondents said they believed the new services have had a positive role in regional development.

**LISTEN TO SCHOOL DIRECTOR RAIMUNDA BENTES MARTINHO OF THE SURURACÁ COMMUNITY IN THE AMAZON TALK ABOUT CONNECTING HER CLASSROOM FOR THE FIRST TIME.**



# POWERING PEACE

Conflict and lack of peace present significant barriers to development for many people around the world and can have a particularly devastating impact on the future of young people. Together with the PeaceEarth Foundation led by UNESCO Goodwill Ambassador Forest Whitaker, Ericsson is exploring the role of ICT and mobile broadband to create conditions to foster peace among youth, many of whom are victims of conflict.



**LISTEN TO PEACEEARTH FOUNDATION FOUNDER, ACTOR FOREST WHITAKER, HOPE NORTH FOUNDER SAM OKELLO AND UGANDAN YOUTH TALK ABOUT ICT'S ROLE IN PEACE.**

The non-profit PeaceEarth Foundation was formed to promote peace amongst troubled youth everywhere, from rural African conflict areas to troubled urban

U.S. inner city neighborhoods. Ericsson serves as technology partner with Peace Earth and UNESCO, in order to deploy ICT technology and education solutions to Peace Earth projects and in doing so accelerate the peace-making process.

### Using technology for peace

As part of the three-year program, Peace Earth students will study and learn conflict resolution and peace promotion, and spread it outward in their communities as part of the Youth Peacemaker Network. An initial commitment from Ericsson to Peace Earth is delivery of Internet access via mobile broadband, computers, and ICT training to 60 troubled youth in two locations – Hope North, in Uganda, a school dedicated to the young victims of Uganda’s civil war, and also in Juba, South Sudan. For these young people,

connectivity is basic but vital, providing the fundamentals on how to send email and to access and use social networks responsibly. After the first deployments, the importance of ICT skill building and collaboration became an even more integral part of the overall peace-building curricula.

### Community Peace Building

Access to the Internet’s knowledge bases and resources is fostering active collaboration between participating youth and plays an important role in their community peace building, by enabling them to collaborate with each other and their communities.



Hope North is dedicated to healing the young victims of Uganda’s civil war, including orphans and former child soldiers. Now ICT is one of the tools to empower them to become voices for peace and development.



# BANKING THE UNBANKED

Worldwide, there are some estimated 2.5 billion people who are unbanked – and yet 1.7 billion of them have mobile phones. Mobile commerce (m-commerce) enables the handling of financial tasks directly from a mobile phone, such as paying bills, replenishing mobile phone prepaid (top up) accounts, remittances or person-to-person money transfers, and conducting business transactions. Mobile financial services also contribute substantially to economic and social inclusion in societies.

## Empowered consumers in Africa

In 2012, Ericsson's ConsumerLab studied Ghana, Tanzania, and South Africa and found that consumers rely on m-commerce to improve quality of life, security and convenience. The study also examines how men and women maintain different roles in the household economy, with women often responsible for both the household economy and family savings, as well as playing key roles in the ever-increasing numbers of small businesses started by extended families.

Consumers have new levels of empowerment in creating accounts, which in turn is spurring local economic activity.

 LISTEN TO ERICSSON ON M-COMMERCE'S POTENTIAL TO OPEN UP THE ECONOMY FOR THE UNBANKED.

## Creating the right platform

M-commerce has seen great success in different countries, primarily in Africa and Asia. One of the greatest challenges to mobile money has been cross-border financial transfers. Ericsson's Wallet Platform integrates a number of financial services and is a natural progression of Ericsson's expertise and long experience in real-time transactions with billing and payment solutions.

Ericsson's aim is to mobilize a wide range of small financial transactions, such as small person-to-person payments, to make them significantly more affordable and accessible for everyone in the transaction value chain. Huge numbers of tiny transactions such as top-ups, phone calls, SMS, tweets, shares, etc, are already made possible through mobile communications, making m-commerce the natural next step in the evolution of services. Our global presence and reach will help make such services available across existing financial eco-systems.

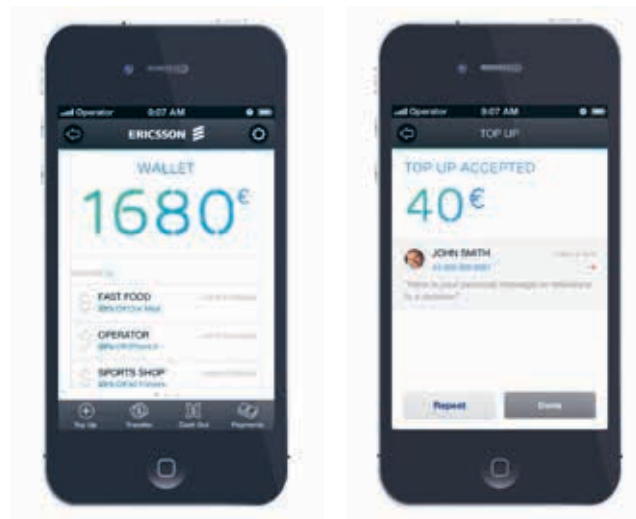
In 2012 Ericsson announced a strategic alliance with Western Union, where the Ericsson Wallet Platform was certified by Western Union's Mobile Money Transfer Network. This will aid mobile operators in offering consumers a robust package of m-wallet options for money exchanges.

Ericsson is working on a common standard for transferring m-wallet funds between countries, much like the SMS standard that allows texting to work globally. Ericsson's Interconnect service is a step in that direction, allowing a mobile phone user in one country to instantly and safely send money to a receiver in another country.



A baker in the Amazon uses the mobile for commerce.

While Ericsson will continue to expand access to services across Africa, Asia, the Middle East, and Latin America, we will also look for opportunities to provide the benefits of bank services to the estimated 60 million unbanked consumers in the United States.





Currently, more than 130 volunteers from about 30 countries are involved in Ericsson Response, and meet regularly to update their disaster preparedness training.

## ERICSSON RESPONSE™

In South Sudan, some 350 aid organizations are struggling to respond to the desperate humanitarian crisis caused by ongoing conflict that has left half of the country's 9.7 million people without enough to eat, according to Oxfam. Being able to coordinate efforts is essential. Ericsson Response, the company's flagship corporate responsibility and employee volunteer program, helped them do that in 2012. Ericsson worked with Emergency Telecommunications Cluster (ETC) partners – World Food Programme (WFP) and emergency.lu to provide vital communications services to relief workers in South Sudan using Ericsson Wi-Fi technology.

The combined ETC response solution from WFP, Ericsson Response and

emergency.lu provides free, reliable, high-speed Internet connectivity that allows the humanitarian community to perform its life-saving work in remote areas more efficiently.

### Source of motivation

The initiative in South Sudan is just one of many missions being carried out by Ericsson Response, which for more than 12 years has provided essential mobile communications to support disaster relief and humanitarian aid. 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.

### Active around the world

In 2012, Ericsson Response assisted UN partners and other aid organizations in many places around the world. Volunteers went to Haiti to share ICT knowledge and for on-the-job training as UNICEF ICT officers. Ericsson volunteers helped with deployment and maintenance of communications technology for partners in Mali and in Tanzania (where servers were damaged in flooding in 2012). Another volunteer served as a technical instructor at a mission in Uganda with UNICEF. Other volunteers provided technical support to the OneUN project, aimed at developing a unified collaboration platform for multiple UN agencies to enhance their communication on the ground.



**LISTEN TO AID HUMANITARIAN WORKERS TALK ABOUT THE ROLE OF ERICSSON RESPONSE IN HUMANITARIAN CRISIS IN SOUTH SUDAN.**

### Faster communication

In 2012, after the UN requested that Ericsson Response supply a network that offered additional functionality, Ericsson developed a new container for mobile communication and multiple-access technologies which will significantly improve communication in disaster zones. The new container is based on the latest technology for radio-access networks with the ability to include all three standards in the future: GSM/EDGE, WCDMA/HSPA, and LTE. As part of its longer-term strategy, Ericsson Response has established an Ericsson Response Logistics and Training Center in Linköping, Sweden.

## FIRST RESPONDERS RELY ON ICT

Mobile communications are increasingly important to quickly and efficiently save lives and protect property. Emergency services receive many calls each day and lives often depend on the 4G/LTE technology that will be the backbone of the national public safety broadband network. Large-scale planning and coordination, and accurate, timely information sharing helps get personnel and resources to the right place quickly. Systems that handle these challenges must be scalable and flexible to provide the same level of command, control and communication during large-scale emergencies, such as natural

disasters in an urban area, as to an everyday car accident.

As an example of how mobile communications can improve emergency response, Ericsson and their alliance partner Motorola are ready to deliver 4G/LTE technology systems that are scalable and configurable solutions. These range from telecom operators offerings where no dedicated public safety spectrum is available (e.g., Europe), to a dedicated national public safety mobile broadband network as in the U.S. These networks will allow emergency personnel and first

responders to access rapid downloads and uploads of information and video to be shared at the incident scene, across the mobile data network and interconnected with new and existing public safety and government data network systems.

The high-speed LTE network means first responders can use several different services to make their work safer, including the ability to send video to the central office so personnel there can better support responders at the scene. First responders gain new multimedia tools that aid their mission to serve and protect.



# REDUCING OUR ENVIRONMENTAL IMPACT

We demonstrate leadership in the energy and environmental performance of telecom networks and services to minimize our carbon footprint and environmental impacts. Our Life-Cycle Assessment approach shows that our greatest environmental impact is from when our products are in use, so our strategy is to provide energy-efficient and low energy-consuming products and solutions. We also focus on reducing the carbon footprint of our own activities and tracking other environmental impacts such as emissions to air, waste and water.

# LIFE-CYCLE APPROACH IDENTIFIES PRIORITIES

## REDUCING OUR ENVIRONMENTAL IMPACT

We are reducing our environmental impact throughout our value chain.



The carbon footprint of an average ICT user is estimated to decrease 20% between 2007 and 2020...



By 2017, 85% of the world's population will have access to mobile-broadband coverage via 3G networks

...so we are designing products and solutions to make this happen ...

Ericsson's Psi Ψ 3G coverage solution reduces power consumption by up to 40%



The Antenna-Integrated Radio (AIR) cuts energy consumption by 40%

Ericsson increased its video conference rooms globally by 60% in 2012, contributing to the reduction of CO<sub>2</sub>e emissions per employee



...finding smarter ways of working ...



34% of our global facilities use certified green electricity

...and reducing carbon emissions in our own operations.



In Sweden, we have used 100% certified green electricity since 2008

and 74% at measured European facilities

Source: Ericsson

Ericsson takes a full life-cycle approach, through raw material extraction, manufacture, transport, use, disassembly and end-of-life with particular focus on energy efficiency, materials management and product take-back. Life-Cycle Assessments (LCA) confirm that energy use of products in operation remains our most significant environmental impact. We also work actively to reduce the environmental impact of our own activities and focus our efforts in two distinct areas:

- Improving environmental performance of Ericsson's own activities
- Optimizing energy and environmental performance for telecom networks and services

Our carbon footprint for 2012 can be seen in the graph below.

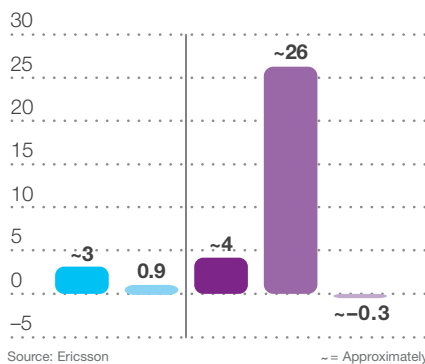
A five-year target which aimed to reduce the Ericsson carbon footprint intensity by 40% was set in 2009 (with a 2008 baseline). The target comprised two focus areas: Ericsson's own activities and the life-cycle impacts of products in operation (see graph, Carbon footprint intensity target). In 2012, Ericsson exceeded the annual 10% reduction target, and as a result, the target has been achieved in four years instead of five, with the following results:

- A 22% reduction in direct emission intensity from Ericsson's own activities was achieved during 2012, including facilities' energy use, product transportation and business travel.
 

**This was achieved by:**

  - Reducing absolute emissions from business travel by 16%
  - Reducing absolute emissions from product transportation by 12%
  - Decreasing facility energy consumption by approximately 3%, while related emissions increased by 13%
- A 16% reduction in indirect emission intensity from life-cycle impacts of products in operation was achieved in 2012. This is due to a combination of improved product energy efficiency and the mix of products sold.

ERICSSON LIFE-CYCLE ASSESSMENT  
CARBON FOOTPRINT 2012 (Mtonnes CO<sub>2</sub>e)



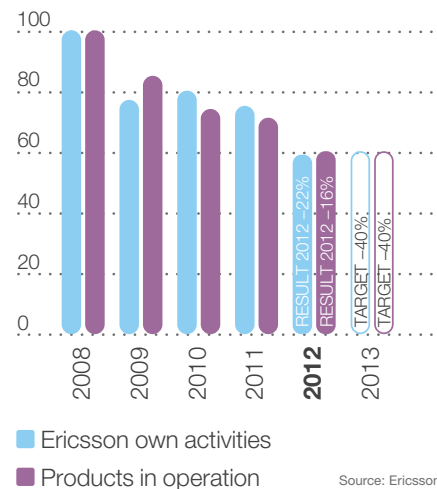
Activities in 2012

- Supply chain
- Ericsson own activities

Future (lifetime) operation of products delivered in 2012

- Operator activities
- Products in operation
- End-of-life treatment

CARBON FOOTPRINT  
– INTENSITY TARGET (Percent)



# HELPING CUSTOMERS MEET ENERGY CHALLENGES

Enabling our customers to solve their energy efficiency challenges is a priority for Ericsson. Our goal is to lead our industry in developing innovative network products and solutions that help operators curb rising energy costs, reduce energy consumption and lower their carbon footprint.

## When more means less

In most parts of the world, for our customers, increasing energy efficiency and decreasing energy consumption are on top of their minds. The challenge is often compounded in emerging markets, by unreliable energy supply and a dependency on off-grid diesel fuel that is expensive, subject to theft, and environmentally costly.

Ericsson's aim is to help deliver high-quality performance in an environmentally responsible way while keeping operational expenditures down. Our fixed and mobile networks are designed for energy efficiency, increased lifespan and fewer maintenance and site visits. In a typical radio access network, up to 90% of energy is consumed in radio base stations. For more than a decade, Ericsson has increased 3G energy efficiency by 85% in radio base stations, allowing networks to meet bandwidth demands without increasing energy consumption per subscriber.

As radio sites become more energy-efficient and the cost of solar panels decreases, renewable power supply solutions such as solar and wind are becoming an increasingly cost-efficient and environmentally attractive option, particularly for providing coverage in off-grid areas.

## Hub of excellence

Over many years, Ericsson has collaborated with customers to address challenges and determine the optimal combination of hardware, software, custom engineering and other related services that will bring down energy costs while creating the most value for the operator. This has included looking at network and site energy-efficient solutions or fuel, electricity, and alternative energy sourcing. It also means evaluating energy consumption, logistics and battery management. Energy infrastructure is also constantly assessed as part of operation and maintenance.

During 2012 we formed a Global Energy Consulting Hub to help customers address these challenges. The Hub consists of a cross-functional team offering end-to-end energy management for our customers, including operations assurance, energy optimization, supply and consumption management, along with energy solution design and deployment. This helps operators combine substantial cuts in energy-related OPEX with improvements in network availability, quality and energy consumption.

The Hub is primarily focused on innovation in two areas: energy-efficient network equipment – where optimized network design reduces the amount of energy required by the equipment; and energy-efficient solutions for powering the network equipment, e.g. energy-efficient rectifiers, batteries, generators, and alternative sources of energy such as solar, and wind. The combined effect is major cost savings as well as lower environmental impact.



# SCALING ENERGY-SMART PRODUCTS

Close to 100% of our radio base station deliveries now comprise the RBS 6000 family. Launched in 2011, the **Antenna-Integrated Radio (AIR)** is part of this suite and is based on a unique design that integrates the radio unit with the antenna, cutting energy consumption by 40% through reduced feeder loss and simplified cooling.

Featured at the 2012 Broadband World Forum, Ericsson's energy-aware optical transport is the first adaptive power management technology for optical transport. The **Energy Aware Smart Packet Optical (SPO) 1400** demonstration showed how power management modes can be applied using traffic load measurement and prediction with lower power consumption. Traditionally, telecom equipment always runs at full throttle, even when traffic levels vary over the course of the day or week. In the demonstration the prototype modulated energy consumption based on actual use while maintaining network performance based on the bandwidth required. This dynamic power management results in measurable energy savings. For example, a small, regional network might require a minimum of 100 SPO nodes. Using energy-efficient dynamic nodes could potentially reduce yearly energy costs by EURO 300,000 and results in carbon dioxide emission reductions equivalent to removing 7,000 cars from the road.

## Leading energy innovation

Our approach to energy efficiency is about finding core portfolio offerings that can scale. One of the challenges that operators face is how to build out 3G coverage expansions in a cost-effective and efficient manner. Among the solutions we provide to address this are:

### The Ericsson $\Psi$ (Psi) Coverage:

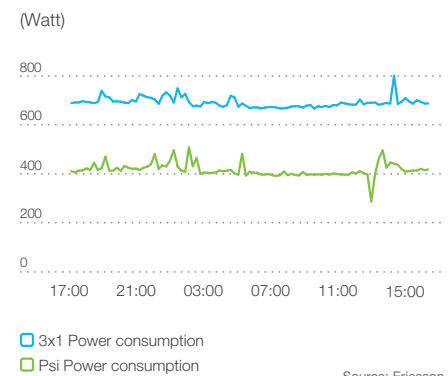
a solution that provides mobile broadband (3G) coverage. The name  $\Psi$  reflects the shape of the solution with just one standard base station radio connected to three antennas rather than the traditional deployment of a single radio per antenna. It has been shown in the field to reduce power consumption by up to 40% compared to earlier installations with same coverage; this translates into a 240 W power saving per site or 550 liters of diesel saved annually.  $\Psi$ -Coverage was successfully launched in the field in August 2012.

**ECO Mode:** Since 2011, the Ericsson MINI-LINK provides an ECO Mode solution enabling up to 40% power consumption reduction for microwave communication. Traditionally, the microwave radio unit consumes the same amount of power independent of the used output power. With MINI-LINK ECO Mode, the radio units can effectively adjust power requirements according to the used output power in the

radio interface, which varies according to the actual link conditions and output margin design. During 2012 further ECO Mode improvements were introduced, providing power consumption reduction even with maximum output power in the radio interface.

**Managed Rural Coverage:** bundles a managed service with a cost-efficient solar powered 2G, 3G or LTE-mini-site solution including satellite transmission, designed to connect people in areas without voice- and data communication.

## POWER CONSUMPTION REDUCTION WITH ERICSSON ( $\Psi$ ) COVERAGE



In the field, over a 24-hour period, the solution shows an average power consumption reduction of 40%.

## RBS6000 FAMILY



The RBS 6000 family of radio base stations offers 80% lower energy consumption per subscriber and requires 75% less space compared to previous generations.

# REDUCING OUR DIRECT CARBON IMPACT

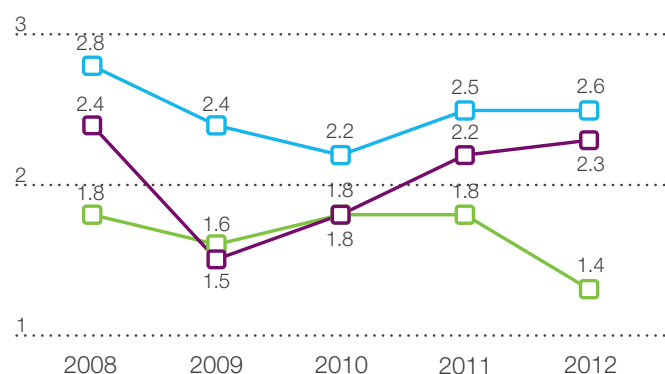
Continuously improving sustainability performance is fundamental to Ericsson's strategy – and a chief priority is reducing the carbon intensity of our operations. In 2012, a number of measures were taken to reduce our direct carbon footprint and a long-term objective was set to reduce CO<sub>2</sub>e per employee by 30% over five years. The Ericsson carbon footprint reduction goal is to keep absolute CO<sub>2</sub>e at 2011 levels by 2017, despite forecasted growth in sales and number of employees. Our approach is to reduce our carbon footprint while simultaneously improving productivity and achieving a cost-benefit balance. Our primary focus areas are facilities, product transport and business travel.

## CO<sub>2</sub>e Ericsson own activities

	2012	2011	2010	2009	2008	Unit
Total	909	881 a)	647 a)	562 a)	784 a)	ktonne

Our LCA approach shows that with the growth of our Managed Services business, the direct carbon emissions of our car fleet is increasing and therefore we are setting new environmental targets to address this impact in 2013.

### CARBON INTENSITY – ERICSSON OWN ACTIVITIES



- Facilities: Tonnes CO<sub>2</sub>e/employee
- Transports: Tonnes CO<sub>2</sub>e/tonne products
- Travel: Tonnes CO<sub>2</sub>e/employee

Source: Ericsson

## Green-certified buildings

To stimulate the market for high environmental performance buildings, Ericsson seeks to have major facilities built according to green-rated building systems like LEED Gold (Leadership in Energy and Environmental Design), an internationally recognized green building program. In India, Ericsson facilities in Bangalore, Noida and Gurgaon and a new building in Kista, Sweden have been certified as LEED Gold. High environmental performance buildings carries many benefits including indoor environmental quality, improved energy and water efficiencies, and optimized use of materials and resources, and innovation and improved design process.

**Notes to Environmental KPI graphs and tables in this chapter:**  
Ericsson follows ISO 14040 and ISO 14044 standards when performing Life-Cycle Assessments.

**Mpkm:** Million personal kilometer = Million distance traveled  
**Mtonnekm:** Million \* tonne\* kilometer = Million transport work

- a) Restated due to new measurements and corrections
- b) First time calculated

S1, S2 and S3 mean Scope 1, Scope 2 and Scope 3 according to GhG protocol

## Facilities management

We exceeded our 2012 aim of reducing energy usage in our facilities by 3% per head, achieving a 3.6% decrease by:

- Creating more efficient work environments through introduction of more flexible ways of working including 'free seating' (non-assigned workspaces) and greater usage of video conferencing (video conferencing increased by 60% during 2012).
- Purchasing renewable or green energy certificates wherever practical. In Sweden, we have had 100% green-certified electricity since 2008. In 2012, total share of certified green electricity in our facilities measured and calculated was 34% globally, and 74% measured in Europe.

## Energy consumption

	2012	2011	2010	2009	2008	Unit
Electricity	808	830	650	651	670	GWh
District heating	56	60	93	95	100	GWh
Other energy	121	130	100	97	100	GWh

## CO<sub>2</sub>e direct and indirect emissions

	2012	2011	2010	2009	2008	Unit
Total	355	260	204 a)	201 a)	224 a)	ktonne
Energy (S1)	30	32	30	26	28	ktonne
Car fleet (S1)	62 b)	-	-	-	-	ktonne
Energy (S2)	263	228	174	175	196	ktonne

## Production and office waste

	2012	2011	2010	2009	2008	Unit
Total	29,512	31,045	23,863	20,788	35,269	tonne
Recycling	13,500	16,300	11,100	9,521	23,870	tonne
Energy	9,900	8,400	6,600	6,089	6,250	tonne
Landfill	5,400	5,400	5,100	4,456	4,350	tonne
Hazardous	712	945	1,063	722	799	tonne



In our test environment labs we created a baseline for energy usage and monitor PUE (Power Usage Effectiveness) for continuous improvement. Our plan from 2013 includes securing that our test environment labs and data center over the next few years will be more energy efficient.

**Product transport**

Ericsson is strategically shifting from air to surface freight in product transport, and in 2012, 80% of outbound freight went by surface, thereby exceeding our target to increase outbound surface freight to 75%. Requirements for transport suppliers were raised and customer order points are being moved closer to the regions. We are also working with logistics service providers to optimize consolidation of material and routes.

**Product transportation**

	2012	2011	2010	2009	2008	Unit
Air transport	452	481 a)	346	226	525	Mtonnekm
Road transport	372	360 a)	257	300	300	Mtonnekm
Ship transport	338	99 a)	58	165	240	Mtonnekm

**Business travel and commuting**

During 2012, Ericsson’s target was to reduce flight trips by 10% from a 2011 baseline. By year-end, these were down by 12%. As part of our sustainability strategy, Ericsson prioritizes developing alternatives to travel to improve productivity and reduce carbon dioxide emissions. This includes deploying our own technology and communication and collaboration tools and creating more modern and flexible work environments. For example, we have increased the number of video conferencing rooms by 60% during 2012.

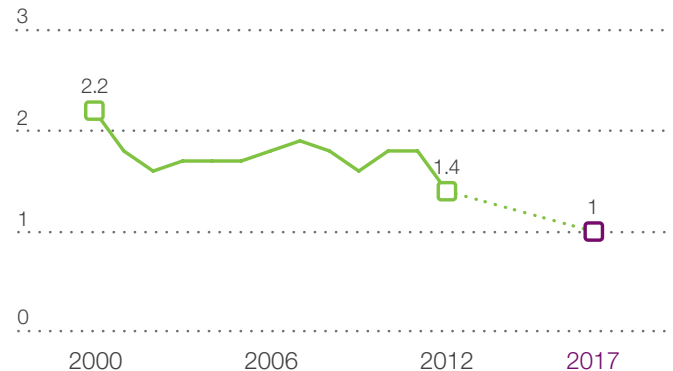
As noted above, we are also setting new environmental targets to address our car fleet, which is increasing in significance as our Managed Services business grows.

**Business travel**

	2012	2011	2010	2009	2008	Unit
Air travel	1,200	1,400	1,250	1,003	1,090	Mpkm
Road travel	74	129	90	90	97	Mpkm
Car fleet	339 b)	-	-	-	-	Mpkm
Commuting	415	375	300	295	280	Mpkm

**BUSINESS TRAVEL – LONG-TERM OBJECTIVE**

Tonnes CO<sub>2</sub>e/employee



Source: Ericsson

Ericsson’s long-term objectives is to reduce carbon emissions from business travel to 1 Tonne CO<sub>2</sub>e per employee by 2017.

**CO<sub>2</sub>e indirect emissions**

	2012	2011	2010	2009	2008	Unit
Total	554	621 a)	443	361	560	ktonne
Travel (S3)	159	189	164	134	145	ktonne
Transport (S3)	326	370 a)	229	180	370	ktonne
Commuting (S3)	69	62	50	47	45	ktonne

Use of videoconferencing tools is increasing rapidly at Ericsson.



# UNDERSTANDING TRENDS IN ICT AND CARBON EMISSIONS

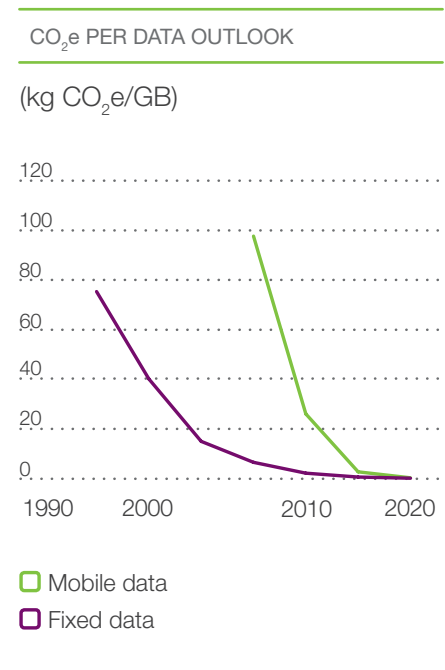
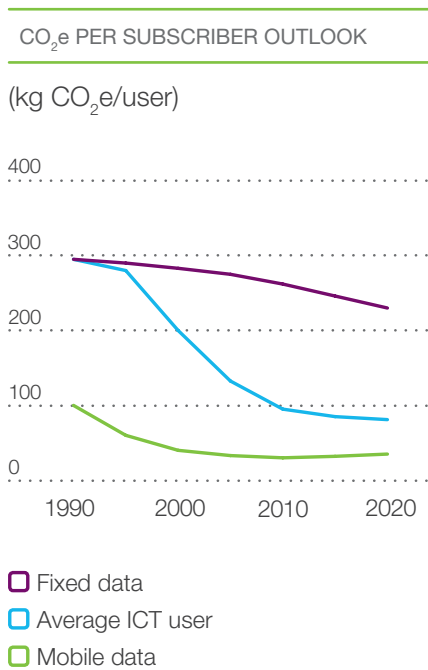
Ericsson conducts extensive research on energy and carbon trends within the industry. Our sector is estimated to account for around 2% of total CO<sub>2</sub>e emissions. It also has significant potential to reduce the 98% of emissions that come from other industries. Our research and own activities focus both on reducing the 2% and enabling a reduction of the other 98%.

A recent study Ericsson conducted with telecom operator TeliaSonera on the future carbon footprint of the ICT and Entertainment & Media (E&M) sectors shows that the ICT sector's own footprint is expected to not exceed 2% by 2020.

## Limiting the ICT footprint

Expected growth in data traffic volumes, subscribers and number of devices are the main drivers behind ICT's increased carbon footprint in absolute emissions, with PCs and servers in data centers as key contributors. However, our research shows that carbon footprint per average ICT user and per amount of data continues to decrease over time.

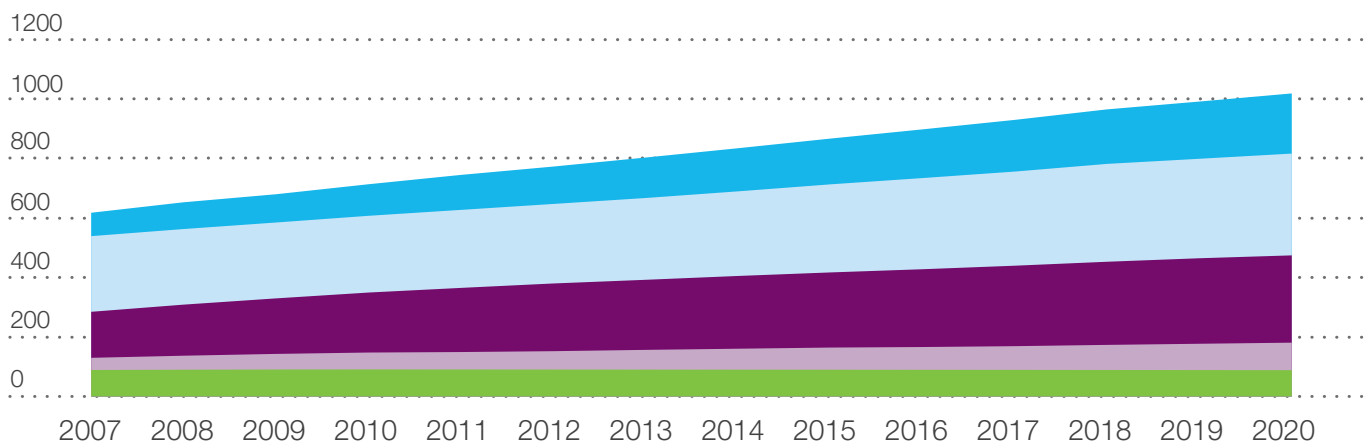
The carbon footprint per average ICT user



Carbon footprint per average ICT user and per amount of data continues to decrease over time.

## ICT CARBON FOOTPRINT OUTLOOK

Mtonnes CO<sub>2</sub>e



- Mobile networks and mobile devices (incl. tablets)
- PCs (all types, excl. tablets)
- Data centers, data transmission & enterprise networks
- Home devices (fixed phones, Customer Premises Equipment (CPE))
- Fixed networks

Source: Ericsson

over fixed and mobile systems is estimated to decrease from about 100 kg CO<sub>2</sub>e in 2007 to about 80 kg CO<sub>2</sub>e in 2020.

Similarly, the carbon footprint per average GB of data is reduced by a factor of 35. This is due to a number of factors that limit the ICT carbon footprint, particularly energy-efficiency improvements of network equipment, better power management and lower stand-by power consumption of user equipment.

Taking into account even an aggressive M2M or machine-to-machine scenario adds only marginally to the expected sector footprint which remains around 2%. Our scenario considers the impact from the billions of connectivity circuits, sensors and tags that are expected to be used by all industry sectors. Embedding connectivity in appliances, electric vehicles, and other objects or devices will only give a limited increase in energy usage. Indeed, we expect a relatively low impact on energy usage and CO<sub>2</sub>e emissions due to the low energy need of connectivity circuits, sensors and tags, and, when batteries are used, efficient battery operation.

Ericsson contributed to the Global e-Sustainability Initiative (GeSI) report "SMARTer2020," published in 2012 which looked at the ICT sector carbon footprint as well as ICT-enabled carbon

abatement.

### SMARTer2020 analysis

According to "SMARTer2020," widespread adoption of ICT devices has raised ICT's total associated GHG emissions. From 2002 to 2011 emissions rose from 0.53 Gt CO<sub>2</sub>e to 0.91 Gt CO<sub>2</sub>e and are projected to rise to 1.27 Gt CO<sub>2</sub>e by 2020. This represents a slight increase in ICT's share of total global emissions, to 2.3% by 2020. Which is in line with our own results in the Ericsson TeliaSonera study.

### Collaborating on energy research

Ericsson takes a leading role in a number of multi-stakeholder research projects within the ICT industry including our customers and suppliers, government, and academia to drive greater energy efficiency in both fixed and wireless networks.

### Towards well-defined standards

Ericsson monitors closely sustainability-related market and regulatory developments worldwide and contributes actively the development of well-defined standards that drive materials and energy efficiency and for assessing climate change impact.

## CLOSING THE LOOP

Since 2005, Ericsson has offered free-of-charge product take-back to customers worldwide as part of its extended producer responsibility. Our end-of-life approach exceeds legislative requirements for recycling and we apply the EU Waste from Electrical and Electronic Equipment (WEEE) directive globally. This helps minimize risks by ensuring proper handling and treatment of waste.

Our key material streams are ferrous metals, precious metals and plastics. The majority of the metals re-enter the commodities market as raw materials, reducing depletion of non-renewable resource reserves and helping to abate global carbon dioxide emissions.

### Choosing recyclers carefully

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

Ericsson's approved recycler for WEEE in India recently extended their facility in Chennai to include a chemical e-waste processing plant, becoming the first full e-waste processing facility in India. Until suitable conditions exist in all markets, Ericsson will continue to ship waste to other sites where environmentally preferred recycling methods can be assured.

### Towards further improvement

Ericsson cooperates with a number of global organizations focused on improving the handling of WEEE such as the UN StEP (Solving the E-waste Problem) and GeSI.

Of all material collected and processed during 2012, less than 2% was sent to landfill and more than 98% was recovered. Between 2011 and 2012, the number of tonnes of take-back orders increased from 5,567 tonnes to 9,271 tonnes. As a result, the program reached its recovery target, exceeding the stipulated EU WEEE target of 75%.

Our new take-back target for 2013 is to achieve 10% take-back vs. equipment put on market (PoM) – more than double the 2012 target. Our objective is to reach a level of 60% of PoM by 2016, primarily through increased customer awareness and better integration of decommissioning services with the Ericsson take-back process.

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

	2012	2011	2010	2009	2008	Unit
Product T-B	9,271	5,567	5,672	9,772	3,660	tonne
WEEE Treated	8,248	5,567	5,672	9,772	3,660	tonne
Reuse	1	5	2	3	9	%
Recycling	94	88	91	89	88	%
Energy	4	5	6	6	1	%
Landfill	2	2	1	3	2	%



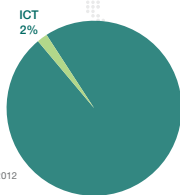
# ENABLING A LOW-CARBON ECONOMY

Our strategy to shape the low-carbon economy is two-pronged. First, we work in partnership to develop intelligent ICT-enabled solutions for our customers, including primarily operators but also utilities, transportation, governments and others. And second, we actively engage with stakeholders and policymakers nationally and globally to inform public policy, and to drive initiatives that will accelerate the potential of broadband to transform cities, reduce carbon, increase efficiency, spur innovation, and enhance life quality.

# A BRIDGE TO A MORE SUSTAINABLE WORLD

## ENABLING A LOW-CARBON ECONOMY

The ICT sector contributes about 2% of global CO<sub>2</sub>e emissions, but can help eliminate a significant portion of the remaining 98% from other industries.



Source: Ericsson and TeliaSonera, 2012

By 2050, 70% of the global population will reside in an urban area or city.

Source: UN HABITAT



The SMARTer 2020 study estimates that ICT-enabled solutions could reduce global CO<sub>2</sub>e emissions by **16.5%** in 2020

Source: GeSI

ICT solutions will enable the low-carbon economy of the future...



The CO<sub>2</sub>e from an annual mobile subscription is equal to driving a car for about **1.5 hours**



Smart grids can help address **67%** of the energy lost due to inefficiencies before reaching the consumer

Source: Ernest Orlando Lawrence Berkeley National Laboratory and GeSI

...and will transform industries and cities.



Stockholm Royal Seaport is an ICT-enabled city district that will be climate-positive by 2030

Source: Stockholm Royal Seaport Innovation Center

**373**  
MILLION

A 2012 study of eight ICT-related services in six countries showed they could produce energy savings of 373 million barrels of oil equivalents per year

Source: Yankee Group and GeSI

Source: Ericsson

As an essential part of our Sustainability and CR strategy, Ericsson advocates broadband's role for sustainable urbanization and in shaping low-carbon economies of the future. We put emphasis on proofpoints combining business opportunities with low-carbon offerings to help drive the transition to a smart, sustainable society, and ICT as a catalyst for change.

ICT is transforming the economy across many diverse industries, from utilities to transport to healthcare and also governments. Ericsson, through its products and solutions, is helping to deliver on that potential around the world. Intelligent transport systems help make transport cleaner, safer and more seamless while smart grids and smart meters increase energy efficiency by enabling applications like home-energy management and grid automation.

The SMARTer2020 study, found a total potential reduction of global CO<sub>2</sub>e emissions across six sectors of the economy of 16.5% amounting to \$1.9 trillion in gross energy and fuel savings and a reduction of 9.1 Gigatonnes carbon dioxide equivalent (Gt CO<sub>2</sub>e) of greenhouse gases.

In another study, produced by Yankee Group and GeSI members Ericsson, BT, Deutsche Telekom, and Verizon, the energy reduction impact of eight online or ICT-related activities within households was explored in France, Germany, Italy, Spain and the U.K (referenced as the EU-5) and in the US. The findings showed that the greatest benefit by far could come from an increase in telecommuting. This shift could produce energy savings equivalent to 102 million barrels of oil per year in the EU-5, and 214.6 million barrels of oil in the US.

Unleashing the full potential of ICT across the economy requires multi-stakeholder engagement and the right government incentives and legislative frameworks. Ericsson is therefore active in the global policy agenda and research to position ICT as a primary solution for social and environmental challenges such as rapid urbanization, climate change and natural resource depletion. As part of our strategy, we take a leading role in standardization and development of methods to assess the carbon reduction potential of ICT-enabled products and services and to understand their impacts at many levels, including city level.

# ADVOCATING FOR CHANGE

Ericsson is actively engaged in driving a global policy agenda and raising greater awareness so that policymakers and global leaders can hasten and strengthen the power of ICT and broadband to accelerate global progress towards a low-carbon economy.

## Making ICT's voice heard

In 2012 Ericsson joined the European Roundtable of Industrialists and its Working Group Energy and Climate Change, to further dialogue on ICT's role to address areas facing Europe such as energy security and emission reduction policies and regulations. Other advocacy initiatives in which Ericsson is engaged include:

- **Broadband Commission for Digital Development.**  
An ITU/UNESCO initiative promoting role of broadband to benefit digital inclusion and low carbon economies (see box)
- **UN Sustainable Development Solutions Network (SDSN).**  
A new initiative to support sustainable-development problem solving at local, national, and global scales.



Hans Vestberg, Ericsson's President and CEO, at the Clinton Global Initiative Annual Meeting.

- **GeSI.** Ericsson is a founding member, Board member and helps lead GeSI's public policy work and is an active member in several working groups and initiatives.
- **ICT's role at Conferences of the Parties (COP).** For several years, Ericsson has joined with other industry partners to represent the ICT industry in conjunction with the COP annual sessions to assess progress and advocate the role of broadband as a solution industry in the UN Framework Convention on Climate Change (UNFCCC) process. At the COP in Doha, Qatar in 2012 Ericsson supported the GeSI launch of the "SMARTer2020" report.

## 10 RECOMMENDATIONS BY THE BROADBAND COMMISSION



LISTEN TO DR. HAMADOUN TOURÉ, SECRETARY GENERAL OF THE ITU TALK ABOUT HOW BROADBAND LINKS TO CLIMATE ACTION.

Recommendations for policymakers were part of a report released by the Broadband Commission for Digital Development in the lead-up to the 2012 United Nations Conference on Sustainable Development (Rio+20) in June. The work was conducted by the Commission's Working Group on Climate Change, chaired by Ericsson President and CEO Hans Vestberg. At the COP in Doha, Qatar in 2012, the Arabic translation of the report was launched, now available in six languages.

**Lead with vision:** adopt a long-term National Broadband Plan/Strategy based on universal affordability and accessibility, open markets and innovation, and consciously connect this to your climate goals.

**Bring convergence:** bring convergence to ICT policy formulation so that it aligns with other policy areas such as energy, health, education and climate in order to maximize impact.

**Ensure regulatory certainty:** with regards to policy and regulations on climate and broadband to create a framework of investment certainty.

**Be an example:** drive cross-ministry collaboration and integrated decision-making to align climate and digital goals and use government procurement to send the right market signals.

**Foster flexibility:** identify and remove the regulatory and policy barriers currently hindering research and investment in 21st century ICT-based broadband-enabled infrastructure and low carbon solutions.

**Provide incentives:** encourage uptake of low-carbon solutions and support market change by rewarding or incentivizing desired consumer behaviors. Spur innovation among individuals, companies and sectors.

**Build the market:** fund and facilitate scalable pilots to demonstrate feasibility and effectiveness of broadband as an enabler of low-carbon solutions and build a strong business case to attract private investment.

**Form partnerships:** cultivate 'connectivity' and 'co-creativity' across public, private and non-governmental sectors and industries to help develop a collaborative mindset, shared goals, common language and break down silos.

**Measure & standardize:** develop harmonized metrics and measurements and common standards for calculating both ICT's environmental impacts and the positive contribution it can make to other sectors – from individual products to systems, and from individual households to city or national levels.

**Share knowledge & raise awareness:** actively disseminate project findings, share best practice and learn from mistakes to identify success factors and facilitate leapfrogging, especially among lesser developed markets. Communicate the opportunities and synergies that can be achieved through an integrated, trans-sector approach to digital development infrastructure and low carbon solutions.

**Source:** The Broadband Bridge: Linking ICT with Climate Action. Read the full report at [www.broadbandcommission.org](http://www.broadbandcommission.org)

# REINVENTING THE CITY

Explosive growth of cities and rapid uptake of broadband are occurring just as the world is facing up to serious economic, environmental and social challenges. Enabling cities to be more creative, connected and sustainable is a major challenge and a tremendous opportunity to improve the lives of billions of people along with the environment.

Today, half the world's population lives in cities. By 2050, that will rise to 70%, according to the United Nations. Since 70% of CO<sub>2</sub> is generated by cities, national governments are looking for ways to reduce the urban carbon footprint.

## ICT-enabled solutions

Smart, sustainable cities around the world have become a testing ground for many of the digital infrastructure and services that provide transformative solutions to minimize carbon emissions while enhancing convenience and connectivity. ICT is also a key enabler solutions such as e-education, e-health, m-health, e-governance, energy-efficient buildings and collaboration tools for remote working.

Among the sustainable urban solutions in which Ericsson made headway in 2012 were smart grids and smart meters (see page 32) and deployment of intelligent transportation systems (see page 33).

## Creating a climate-positive Stockholm

Utilizing climate-smart and efficient infrastructure, the city of Stockholm is building Stockholm Royal Seaport (SRS) to create a climate-positive city district by 2030. Some 10,000 homes, and 30,000 workspaces will be connected. The first inhabitants moved in at the end of 2012.

Led by Ericsson, the Smart Communication project at SRS is using ICT to develop an attractive living and working environment, while ensuring that the tough sustainability goals for the SRS are met. Ericsson engaged with the City of Stockholm during the earliest planning stages and supported the development of an approach for taking advantage of ICT across several dimensions of the project. This evolved into a formal partnership in Stockholm Royal Seaport Innovation, with our active leadership and participation in cross-sector innovation projects in several areas of the new city district.

The first step has been to make the core ICT infrastructure of the area smarter, focusing initially on energy. Ericsson is leading the ICT aspect of the development of the SRS's Urban Smart Grid project, managed by the Finnish utility company Fortum.

Ericsson is also leading a mobility management pre-study on how travel and transport in the area can be optimized and substituted, where usage of electrical vehicles and new business models are areas being addressed.

## Johannesburg: Digital City

In Johannesburg, South Africa, Ericsson is providing a network and systems integration for a next-generation, fiber-optic network and strategic advisory services to help the city reach its 2040 Growth and Development Strategy, launched in 2011. The network will provide broadband technologies to city offices across Johannesburg – making Johannesburg the first true Digital City in sub-Saharan Africa.



LISTEN TO THE MAYOR OF JOHANNESBURG, SOUTH AFRICA TALK ABOUT DIGITAL DEVELOPMENT.



LISTEN TO AN URBAN PLANNER IN STOCKHOLM, THE HEAD OF THE NEW CITIES FOUNDATION, AND INDUSTRY PARTNERS TALK ABOUT SUSTAINABLE CITIES.

## MASTER OF HER WORLD



Gunilla Svingby is one of the first occupants of Stockholm Royal Seaport, one of the world's leading examples of a climate-positive city district. "As a private person, I am part of the

world. I have a responsibility to act, to help the sustainability of the environment, and I can do that by moving here, because then I have much more influence on what I can do and what I want to do," says Svingby, a professor of education at Malmö University. "I work in Malmo part of the time and so I want the heater turned on and off when I leave, and not in between; in that way, the interactive technology, and the information it gives me, will make me happy and much more the master of my life."



LISTEN TO GUNILLA SVINGBY TALK ABOUT HOW CONNECTIVITY HELPS HER LIVE A LOW-CARBON LIFESTYLE.

# INTELLIGENCE IN THE GRID

The power sector emits over 21% of the world's GHG emissions, according to the SMARTer2020 report. By helping facilitate the integration of renewables and enabling the smart grid, ICT can significantly reduce the inefficiencies of the power sector and the dependence on fossil fuels – the estimated abatement potential by 2020 is 2.0 Gt CO<sub>2</sub>e.

Smart grids use ICT to gather and act on information about the behavior of suppliers and consumers using the grid. This information can then be used to improve the efficiency, reliability and sustainability of electricity production and consumption in the grid.

The shift from passive electricity distribution to intelligent, active distribution is resulting in a thousand-fold increase in the number of connected devices along the grid, and electric vehicle charging will increasingly be part of that picture (see page 33). Ericsson is working closely with customers and other industry sectors such as utilities to enable this transformation of the energy sector.

Government incentives and regulations, rising energy prices and increased use of renewable energy are contributing to the uptake of smart grids. A number of reports indicate that more than 540 million smart meters will be deployed worldwide before year 2017. As a result, Ericsson sees good growth in our smart grid and smart meter solutions.

For instance, we have provided smart grid and smart meter solutions to utilities Hydro-Quebec in Canada and Acea in Italy. Ericsson also plans to deploy, integrate systems and run a smart-metering network for the utility Elektrilevi in Estonia and

its nearly half a million subscribers. Following a pilot project with 5,700 smart meters, 630,000 smart meters will be rolled out from 2013 to 2016.

## Measuring the impact

To better understand the sustainability potential of such solutions, Ericsson conducted a Life-Cycle Assessment (LCA) of smart metering for electricity distribution, based on an Australian case, as part of our series of studies exploring ICT solutions and the potential CO<sub>2</sub>e emissions reductions they can achieve. The case modeled CO<sub>2</sub>e emissions for the total system over a lifetime of 20 years, including both negative impacts from the ICT products and the positive impacts of their usage, in a scenario including 30,000 customers.

The results showed that three main benefits – elimination of manual meter reading, fewer vehicles leased for meter reading, and reduction of energy used in the home – yielded a positive net effect on emissions already at around 1% energy savings in the home (1% corresponds to a saving potential of about 80kg CO<sub>2</sub>e). The impact would be substantial at 2% and 4% (corresponding to about 160 kg and 320kg CO<sub>2</sub>e). Thus, energy savings in the home have the greatest enabling effect, which far outweighs the direct environmental impact of smart metering installation and operation.

The full case study "Smart metering in Australia" is available online at [www.ericsson.com](http://www.ericsson.com).

An Ericsson LCA study of smart metering for electricity distribution showed energy savings in the home could cut carbon significantly.





# ICT FOR SMART TRANSPORT SOLUTIONS

Fully integrating transport infrastructure, vehicles and users with ICT has been shown to significantly reduce environmental impacts and deliver improved safety and efficiency, and enables the connectivity required to support infrastructure for electric vehicles (see box).

In the “connected car,” connectivity and service management enable new safety features intended to avoid crashes and to share information if accidents have occurred. Timely emergency response to an accident scene is essential to mitigating the negative impacts of traffic accidents. With partners in the automotive industry and road authorities, we are piloting road safety services, including Harmonized eCall European Pilot (HeERO), aimed at implementing the standardized eCall, an automatic emergency call system activated in the event of a serious accident. The EU requires all cars to be equipped

with eCall by 2015. In addition, Ericsson has been developing a cellular road hazardous warning project and the feasibility of cellular car-to-infrastructure communications in a public-private initiative, the Cooperative Cars project.

## Connected commuting

Beyond safety, connectivity can enhance the commuting experience. The Connected Commuting report produced in 2012 by Ericsson and the New Cities Foundation found that real-time, mobile sharing of information between commuters added predictability to their journey, reducing stress and even saving time. Read the full report at [www.ericsson.com](http://www.ericsson.com).

## Tracking carbon savings in buses

The 3.2 million citizens of Curitiba, Brazil, and public transport operators are benefiting from an electronic ticketing and fleet management system enabled by

mobile broadband in a joint project with Vivo, Dataprom, and Ericsson.

Ericsson conducted an ICT enablement assessment study of the Curitiba bus operation in 2012. Although it is hard to predict the exact impact of ICT-enabled efficiencies, there are indications that ICT solutions could increase the amount of public transportation and replace car travel while also improving public transportation efficiency. These developments will in turn make bus travel more attractive, thereby reducing the amount of car travel.

The study, which looked at a bus operation representing 1,928 buses, found if the bus operation can be made 1% more efficient in terms of CO<sub>2</sub>e (based on less fuel used), the potential direct CO<sub>2</sub>e savings would be about 2,000 tonnes of CO<sub>2</sub>e per year. Read the full study at [www.ericsson.com](http://www.ericsson.com).



LISTEN TO PASSENGERS IN CURITIBA, BRAZIL TALK ABOUT THE BENEFITS OF 3G-ENABLED PUBLIC BUSES.



## PROVIDING A PLATFORM FOR ELECTRIC VEHICLES



As more and more countries identify electric vehicles (EV) as one of the solutions for a more sustainable society, ICT will play a critical role in the infrastructure to enable volume deployment of EVs. Charging large numbers of cars simultaneously across the electricity grid is challenging. With ICT-enabled solutions, real time information can be used to control EV charging and manage peak energy demand on the grid. This allows utilities to handle the added demand with only modest changes to the distribution network.

With Volvo Car Corporation, utility Goteborg Energi, a leading utility in Sweden, and Viktoria Institute, a nonprofit IT research



institute, Ericsson is engaged in a project to bring mobile connectivity to electric cars and put choice and control over the charging schedule into the hands of drivers. 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.



# CONDUCTING BUSINESS RESPONSIBLY

Our strategy is to earn the trust of our stakeholders by reducing corporate responsibility risks throughout our business operations. Good governance and strong business ethics are embedded in our value chain, from supply chain management to our own operations to responsible use of our products. All our business practices, from a rigorous sales compliance process to zero tolerance for corruption, are aligned with our Code of Business Ethics, anchored in universal values of human rights. By engaging with stakeholders, we are better able to manage emerging ethical dilemmas.

# GOOD GOVERNANCE, STRONG ETHICS BUILD TRUST

Demonstrating integrity and upholding the same high ethical standards wherever we operate are strongly rooted within Ericsson's corporate culture. Good governance builds trust with stakeholders, ensures accountability across the Group and helps us manage our corporate responsibility risks.

The corporate governance framework is provided by the Ericsson Group Management System (EGMS). Among other things, this framework includes the Ericsson's Code of Business Ethics, the Code of Conduct and the Sustainability Policy. Our Global External Assessment Program, monitored by assurance provider Intertek, audits Ericsson-wide application of Group policies and directives, management of operational risks and achievement of corporate responsibility objectives.

## Managing and assessing risk

Risk management is embedded in Ericsson's Strategy and Target Setting process, and our risk assessment processes include human rights, corruption, and other sustainability-related risks. Risk drivers, and relevant actions to address them, are reported quarterly across the company.

Risks are categorized into four different groups, Industry and Market, Commercial, Operational and Compliance and their probability and impact on the business is assessed. Management accepts, reduces, or eliminates risk through mitigating actions and central Group Risk Management ensures that risks are followed up in various governance forums. Environmental and Social Governance (ESG) risks are among the key elements of our risk management approach.

## Top level targets and governance

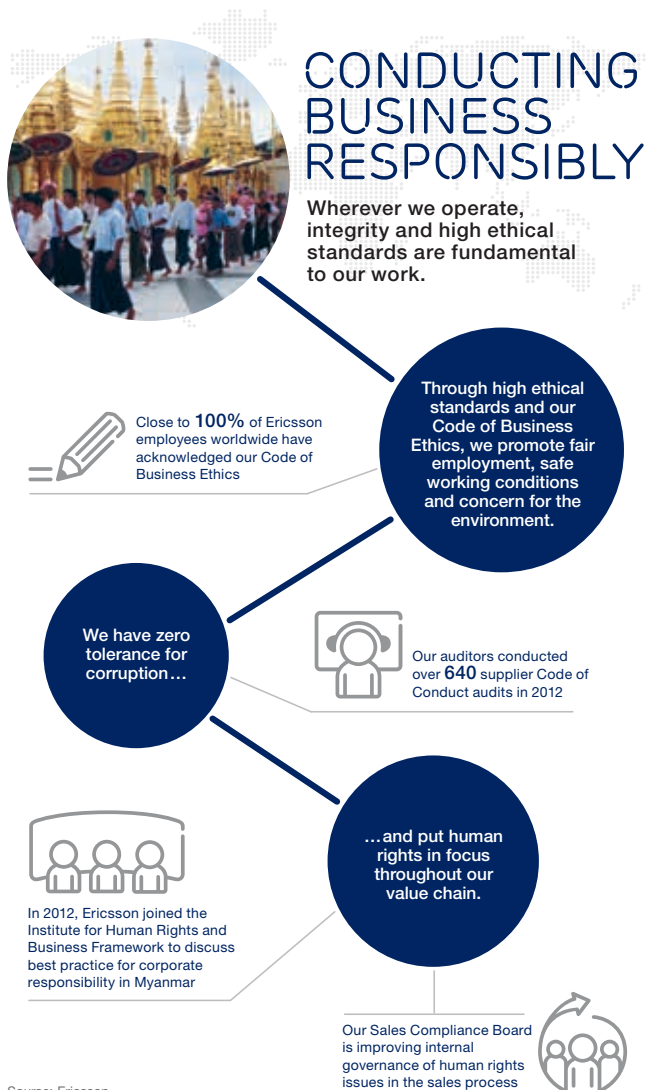
A sustainability leadership target is part of the 2013 Group balanced scorecard and performance against sustainability objectives is included in the performance assessment of senior managers. Additional targets and long-term objectives relating to specific areas are highlighted on pages 48-50.

A cross-functional Sustainability and CR Steering Group meets regularly to follow up on strategic and operational issues. The Board of Directors is kept regularly informed about key issues facing Ericsson. In 2012, in addition to strategy, targets and annual performance, key topics on which the Board was briefed included CR risks and Internal operations, as well as our human rights progress and our strengthened Sales Compliance Board processes.

## Business ethics

In 2012, the Code of Business Ethics was updated to reflect the new UN Guiding Principles on Business and Human Rights. Implementation of these principles throughout Ericsson's operations will continue into 2013.

Upholding Ericsson's high standards for sustainability and CR is also the responsibility of every employee. In 2012, close to 100% of Ericsson employees worldwide have completed the acknowledgement process for the Code of Business Ethics. To improve transparency, the Code of Business Ethics, including information on reporting of violations was published on the Ericsson website in more than 30 languages. Online training on sustainability and corporate responsibility is available to all employees.



Source: Ericsson



Mobile communications is expected to contribute significantly to employment in Myanmar, according to an Ericsson and Deloitte study.

## IN SUPPORT OF HUMAN RIGHTS

Respect for human rights is central to Ericsson's Code of Business Ethics and we work hard to embed it throughout our business operations.

Ericsson supports the UN Declaration of Human Rights and International Labor Organisation Conventions and has been a signatory to the UN Global Compact's ten principles in the areas of human rights, labor, environment and anti-corruption since 2000. From 2006-2009, Ericsson was a member of the Business Leaders Initiative on Human Rights. In 2012 our commitment to uphold high human rights standards was stepped up and organizational processes strengthened, notably within our sales process.

### Growing expectations

The impact of ICT on human rights is complex, with rapid technological developments raising new questions, and is an area of increasing concerns to a wide range of stakeholders, from investors to human rights organizations.

Ericsson engages with a range of stakeholders to promote the positive use of ICT to uphold human rights and prevent the technology's misuse, and we support

efforts to develop a multi-stakeholder approach to human rights across the full ICT ecosystem.

### Embedding human rights in the value chain

Integration of the UN Guiding Principles on Business and Human Rights into Ericsson's governance framework began when the Code of Business Ethics was updated in 2012 to reflect the principles. In 2012, Ericsson launched a two-year Business Learning Program with Shift, an independent, non-profit center for business and human rights. Shift was centrally involved in shaping and writing the UN Guiding Principles and aims to help organizations put them into practice. The aims of our Business Learning Program are to further strengthen our framework on human rights, develop an Ericsson Human Rights Impact Assessment (HRIA) tool and increase internal assessment competency in the area, and to gain an external expert view on the implementation of our commitment to respect human rights.

### Sales Compliance Board

In 2012, the Sales Compliance Board was

strengthened to improve internal governance of human rights issues in the sales processes. The Board meets bi-monthly, and a core operational team meets more regularly to discuss and review different potential risks and to prepare and inform the decisions of the Board on specific sales. The Board has broad company representation including, Legal Affairs, Trade Compliance, Government & Industry Relations, Sales & Marketing, Communications, Business Units and Sustainability & Corporate Responsibility. It provides a forum on a range of issues affecting policies and sales decisions for products and markets such as human rights, corruption and sanctions, and aims to reduce the risk that the company's technology directly or indirectly impacts negatively on human rights.

During 2012, the Board focused on establishing a country risk screening process which assesses country risks for potential violations of human rights across Ericsson business. The Board also works to ensure that sales decisions in the portfolio adhere to the Ericsson policies and directives. Risks are evaluated using the Ericsson country human rights risk-

ranking index, which is analyzed together with market and portfolio information to assess risks, as part of the decision base in the Ericsson sales approval process.

The country risk screening process is based on the risk indices of Maplecroft, a UK-based global risk and strategic consulting firm, which provides an independent ranking available to all Maplecroft users. Our process focuses primarily on the following Maplecroft indices:

- Human Rights Risk adjusted for telecom
- Corruption
- Democratic Governance
- Freedom of Opinion and Expression

### Complying with trade sanctions

Ericsson has a Group-wide trade compliance policy and process for managing compliance with relevant export control, customs and other trade laws and regulations, such as international sanctions. An automated 'sanctioned parties' list screening (utilizing black lists from the UN, the US and the EU) is embedded in Ericsson's business system to further ensure compliance with sanctions and other export control regulations.



At the Social Good Summit 2012 in New York, Elaine Weidman Grunewald, VP Sustainability and CR, discusses how Ericsson technology is enabling the right to education in many places around the world.

Respect for trade sanctions against Syria and Iran has been raised as an area of concern by stakeholders. Ericsson adheres to the embargo and sanctions imposed by the US, EU and other countries partly based on UN sanctions. Due to the ongoing conflict in Syria, our business there was at a standstill in 2012.

In Iran, since 2010, when further sanctions were implemented, we only see out existing

contracts. During 2012, we continued to deliver on contracts dating back to before 2010, and we anticipate that sales of infrastructure related products in Iran will be phased out during 2013. We anticipate that our business activities will thereafter be limited to existing software license agreements and the provision of services under existing contracts or with respect to equipment already delivered by Ericsson.



## CYBER SECURITY IN THE SPOTLIGHT

Communications networks are critical infrastructure in today's global economy and users of the digital information ecosystem need to know their data is safe. Dealing effectively with cyber threats is therefore vital and Ericsson considers cyber security a highly significant and important issue. Security is a key priority in product development, both at node and system level.

Cybersecurity is a primary aim of the OECD Council 2011 recommendation on Principles for Internet Policy Making and the European Parliament's 2012 adoption of the "Resolution on cyber security and defense". A European Commission cyber security directive for the full ICT value chain is also due in 2013.

Ericsson recognizes that network functionality, data and the right to privacy must be protected, so all products are designed with appropriate levels of security, and risk analysis is conducted to protect products against threat scenarios. Our advanced security research covers all network, terminal and application environments.

The company's Information Security Management framework is aligned with the international information security management standard ISO/IEC 27001. Ericsson is also actively engaged in discussions over security assurance standards and compliance methodology for the telecom industry and within the area of standardization, as well as leading the development of industry specifications on security architecture, protocols and networks.

# TOWARDS POSITIVE, RESPONSIBLE CHANGE IN MYANMAR

In 2012 Ericsson re-established a presence in Myanmar for the first time since 1998, following ongoing political reforms, the suspension of sanctions by the European Union and lifting of prohibitions on U.S. investment in the country.

Many international observers see real opportunities for positive and meaningful developments to improve the human rights situation and deepen the transition to democracy in Myanmar. Ericsson strongly believes that access to telecommunications would be beneficial to the people, economy and society of Myanmar.

## Multi-stakeholder approach

In conjunction with re-establishing presence in Myanmar, Ericsson is identifying and collaborating with respected human rights stakeholders to assess the human rights situation, and the socio-economic impact of telecommunication. We have joined an initiative by the Institute for Human Rights and Business (IHRB) and the Danish Institute for Human Rights (DIHR) to apply human rights principles and standards in business activities in Myanmar using a multi-stakeholder engagement process. The initiative is based on applying the United Nations Guiding Principles on Business and Human Rights.

## Relatively untouched by ICT

Myanmar has been almost untouched by the tremendous developments in telecommunications of the last two decades. Of an estimated population of over 60 million, only around one million people today enjoy the benefits of a mobile telephone, and it is estimated that fewer than 400,000 have Internet access. A study conducted by Ericsson and Deloitte in 2012 forecasts that potential GDP impact of telecommunications in Myanmar could be around 7.4% over the next three years, if subscriber penetration rises to 35%, in line with regional trends. The full study is available at [www.ericsson.com](http://www.ericsson.com).

## Cautious optimism

In anticipation of business activity in Myanmar, Ericsson has initiated a Human Rights Impact Assessment based on the

UN Guiding Principles (see box below). We recognize that human rights considerations must be carefully considered when doing business in Myanmar. Human rights and corruption risks remain a concern and must be the subject of continuous dialogue and risk management processes. In 2012 Ericsson joined a dialogue in Myanmar facilitated by the governments of Sweden and Myanmar to discuss best practice in corporate social responsibility.

We also joined civil society experts from Myanmar and abroad, policy-makers and other business representatives at the global forum Wilton Park to discuss challenges related to investment in Myanmar, such as corruption, inadequate labor standards, land disputes, and armed conflict between ethnic groups, emphasizing the need for good governance, transparency, account-



ability and enhanced due diligence. As Myanmar continues its political transition, business can help foster an open and transparent business climate.



## ASSESSING OUR HUMAN RIGHTS IMPACT



As groundwork for conducting business in Myanmar, Ericsson intends to conduct a human rights impact assessment with the following aims:

- Describe the social, operational and human rights context for doing business in the country
- Identify the "rights-holders" potentially impacted by operations in country
- Identify possible actions to mitigate or adapt to the risks while meeting obligations to rights-holders and the reasonable expectations of all stakeholders
- Provide a framework for ensuring that we respect human rights across our business operations in line with the Ericsson Global Management System
- Assemble relevant facts, figures and recommendations to enable constructive engagement with stakeholders
- Avoid complicity in human rights violations, and in any unintended use of products, services or solutions
- Identify effective and locally appropriate grievance mechanisms and remediation procedures

# COUNTERING CORRUPTION

As a signatory to the UN Global Compact, Ericsson aspires to fulfill its 10<sup>th</sup> principle, namely to: “work against corruption in all its forms, including extortion and bribery.” The Ericsson Code of Business Ethics summarizes Ericsson’s zero-tolerance policy against any type of corruption.

Ericsson’s anti-corruption program is headed by a Chief Compliance Officer and monitored by Corporate Audit and the Board of Director’s Audit Committee. A Compliance Forum (consisting of representatives from Corporate Audit, HR, Legal and Security) and a global Compliance Legal Network ensure regular communication on compliance matters.

In 2012 the program was strengthened and a new anti-corruption directive issued to ensure that Ericsson’s zero tolerance policy against corruption applies throughout the organization. Further guidance was also provided on how to handle different situations to avoid breaches. Areas covered included the offering and receiving of gifts and other benefits; arranging and attending events, relationships with suppliers and business partners, and facilitation payments (which Ericsson prohibits). A new directive on donations and sponsorships means these must now be approved by a central committee.

## Guidance for employees

Training is vital for effective compliance, and up until the end of 2012, more than 70 000 employees had taken the anti-corruption training. In early 2013 we launched a new, updated training, which included top management engagement from all Regions. As of Q1 2013, some 25 000 employees have taken the course. It is a rolling program, and all units have deadlines for when they are expected to complete the training during 2013. The training helps employees identify problematic situations and evaluate appropriate courses of action.

An anti-corruption pilot project focusing on Central Asia (a region considered high risk by Transparency International) was launched in 2012, which includes a review of policies, directives and selection of business partners. Our aim is for similar projects to be run in other regions during 2013.



## Reporting violations

In 2012 Ericsson’s reporting violation process, the process whereby suspected violations of law or the Code of Business Ethics can be reported through e-mail or postal letter to Corporate Audit, was expanded in scope. It was previously limited to only accounting and auditing matters, and to Ericsson employees. It is now open to allow a broader stakeholder group, for example, suppliers, customers and other partners, to report suspected violations of laws or of the Code of Business Ethics. Furthermore, the reporting violations process is now published on [www.ericsson.com](http://www.ericsson.com) to give all stakeholders access. In 2012 the number of violations reported through Corporate Audit’s reporting violations mailbox increased somewhat, from seven in 2011 to 16 in 2012. Of the 16 reported incidents, two concerned corruption (bribe-taking).

All received reports are reported to and discussed in the Compliance Forum which takes a decision on how the report shall be handled and initiates an appropriate investigation. This investigation is carried out through our Corporate Audit unit or

other appropriate functions. What happens next depends firstly of the outcome of that investigation and secondly on the nature of the matter. Our basic principle is that all breaches of the code or other misconduct result in at least a formal warning for the employee or other person concerned and then there is a number of steps that the company will take depending on the nature and severity of the breach including termination of employment and reporting to the local police. In addition to investigations related to the reporting violation process, Corporate Audit is conducting on-going audits of Ericsson’s operations worldwide. Audit findings in those audits, which are based on a risk assessment and other available information, could also lead to further investigations when there are indications of potential breaches of the Code of Business Ethics.

The Audit Committee of the Board of Directors are regularly informed about audits conducted and all matters that are reported through our reporting violations system on a regular basis.



## PARTNERING TO FIGHT CORRUPTION

Ericsson joined the World Economic Forum Partnering Against Corruption Initiative (PACI) in 2012, a private-sector initiative to counter bribery and provide a platform for corporate anti-corruption programs. Part of PACI’s mission is to establish rules and provide industry guidance on how to deal with corruption. As a signatory, Ericsson commits to a zero-tolerance policy against corruption, and to implement systems and controls that fulfill that commitment. Ericsson will now engage in joint efforts with other signatories to combat corruption.

# CLEAR LINKS IN THE SUPPLY CHAIN

Ericsson focuses on continuous improvement in managing our supply chain to ensure our suppliers meet the high social, environmental and ethical standards set out in the Ericsson Supplier Code of Conduct (S-CoC) requirements. Online training in 13 languages is publicly available for suppliers and other stakeholders on Ericsson's website, along with other material.

## Assessing risk

All Ericsson Regions and Business Units have trained auditors and procedures in place to identify and assess high-risk suppliers and to conduct and follow up S-CoC audits and on-site assessments. A systematic and documented approach for identifying high-risk suppliers assesses regional risk factors. Prioritized risk areas include working at heights and chemical handling and prioritized risk categories include die-casting and network roll-out; tower manufacturing and galvanization; enclosures; mechanical parts; power supply; printed circuit board manufacturing, warehousing, logistics and recyclers.

## Monitoring supplier performance

In 2012, over 640 supplier Code of Conduct audits and on-site assessments were performed by Ericsson's 179 S-CoC auditors (see graph). The number of audits rose while on-site assessments decreased. This is in line with our effort to prioritize the more robust audit procedure rather than assessments.

Year on year, analyses of our auditing activities demonstrate significant improvement in the supply chain. A review of audit reports from 65 suppliers audited in both 2011 and 2012 showed that critical findings declined by more than 50%. Improvement areas vary between regions and supplier categories but include areas such as overtime, environmental management, corrective and preventive actions following incidents and communication of CoC requirements further down the supply chain.

Environmental management and performance have always been prioritized in S-CoC audits. To further enhance this area, a program for focused Environmental Audits was launched in India

and Northeast Asia in 2012, as a complement to the existing S-CoC audits. In 2013, this program will include at least two additional regions.

In 2012, Ericsson published detailed Supplier Occupational Health and Safety (OHS) requirements, including 11 "operational OHS standards". These requirements are intended to further help our suppliers improve their OHS performance. At the same time they are contractually binding, as part of the S-CoC requirements.

## Meeting customer requirements

The Joint Audit Cooperation (JAC) is a cooperation of nine European telecom operators. JAC members conduct Corporate Responsibility audits of their suppliers, including Ericsson factories, and share the audit results between the nine JAC members. The members of JAC, all of whom are Ericsson customers, are: Belgacom, Deutsche Telekom, France Telecom, KPN, Swisscom, Telecom Italia, Telenor Group, TeliaSonera, and Vodafone. Ericsson sites and Ericsson suppliers have been audited by JAC auditors in 2011 and 2012, with satisfactory results.

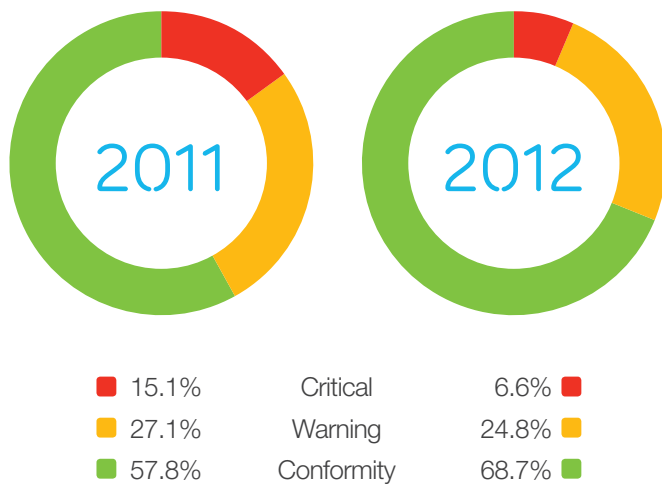


LISTEN TO ERICSSON'S EXPECTATIONS FOR SUPPLIERS IN THE SUPPLIER CODE OF CONDUCT PROGRAM.

## Reaching out to our suppliers

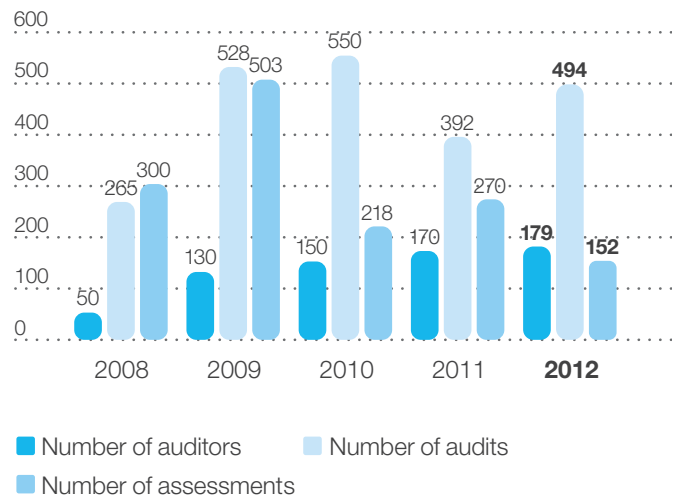
Ericsson held a forum in 2012 with selected key suppliers to discuss energy efficiency and greenhouse gas emissions, since suppliers play an important role in helping Ericsson to reduce its indirect emissions. The forum resulted in sharing of best practices and challenges related to reducing, measuring and reporting greenhouse gas emissions and established networks for knowledge sharing and joint initiatives.

PERFORMANCE OF SELECTED SUPPLIERS – GLOBALLY



Source: Ericsson

SUPPLIER CODE OF CONDUCT – AUDITS AND ASSESSMENTS



Source: Ericsson



# TRACING CONFLICT MINERALS

Ericsson is taking steps to increase the transparency regarding ‘conflict minerals’ in our supply chain. These minerals include tantalum, tin, gold, or tungsten, which may be mined in conditions of armed conflict and human rights abuses, notably in the Democratic Republic of Congo (DRC) and neighboring countries. All the four minerals can be used in electronic components in our products. Tin is the most widespread and used in the solder in almost all electronic products.

Due to the small quantities and the long supply chain with several actors between Ericsson and the smelters, and between the smelters and the actual mine, traceability is very complex.

To effectively address the issue of conflict minerals, including compliance with section 1502 of the Wall Street Reform and Consumer Protection Act and the disclosure rule adopted by the US Securities and Exchange Commission during 2012, Ericsson takes active measures in accordance with its sourcing and product management processes. The first disclosure is due in May 2014.

Ericsson’s suppliers are expected to comply with the Ericsson list of “Banned and Restricted Substances”, which now states that suppliers must establish due diligence processes consistent with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas

and to report, upon Ericsson’s request, on the use of conflict minerals and on actions taken to verify the origin of used conflict minerals.

Our longstanding use of material declarations means the company already has significant awareness of the products where conflict minerals are used, which will assist greatly in identifying suppliers important in the further assessment of mineral origin.

Most suppliers in the pilot were well prepared for the upcoming legislation and were able to report on smelters used in their supply chain. Extensive inquiries and due diligence efforts are expected to be required in order for Ericsson to be able to fulfill the new rules and make the requested disclosures. During 2012, Ericsson piloted the common industry questionnaire developed by the Global e-Sustainability Initiative (GeSI) and the Electronic Industry Citizen Coalition (EICC) with our major suppliers of tantalum- and tungsten-containing components. We found that most suppliers in the pilot were well aware of the issue. We received more than 160 unique smelter names in this pilot.

Ericsson is a participant of the Extractives Workgroup, a collaboration between GeSI and the EICC, focusing on conflict minerals. Ericsson is also active in the ongoing standardization regarding conflict minerals via the Electronics Industries Association, IPC.

## USES OF CONFLICT MINERALS IN ERICSSON PRODUCTS

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



## CONFLICT-FREE SMELTERS

The Electronic Industry Citizenship Coalition (EICC) and Global e-Sustainability Initiative (GeSI) have jointly developed the Conflict-Free Smelter (CFS). This voluntary program, open to all industries, involves independent third party evaluation of smelter and refiner procurement to determine whether processed materials originate from conflict-free sources. Due to the complexity of global supply chains and several steps between the original equipment manufacturers and the mine it is very difficult, or almost impossible, for individual companies to ensure that minerals contained in their products

are conflict free. This is where the CFS global program fills an important gap in responsible sourcing by creating a credible system for all industries to enable conflict free sourcing of minerals. The CFS program assesses smelters or refiners of targeted minerals and provides validation that they are conflict-free. To date only a few of all worldwide smelters are certified, and at the end of 2012 there were still no certified smelters for tin or tungsten. Participation from other industries is vital for the success of the program.

A photograph of three business professionals (two women and one man) sitting around a table in a meeting. They are looking at documents and talking. A large white lamp hangs above them. The text 'LEADING WITH VALUES' is overlaid in large white letters.

# LEADING WITH VALUES

Our People Strategy centers on building the best talent in the industry. We aim to attract the best people, develop them to reach their full potential, and engage them every step of the way. Our core values of respect, professionalism and perseverance are embedded in all that we do, and provide the foundation for achieving a diverse, talented and high-performing workplace.

# ENGAGING A DIVERSE WORKFORCE

At Ericsson, people are our most valuable asset, critical to maintaining our global leadership in an increasingly complex and dynamic market. Our People Strategy is focused on building the best talent in the industry. We aim to attract, retain, and develop a diverse workforce that can deliver on a profitable growth strategy for the company.

## Efficient, effective, engaged

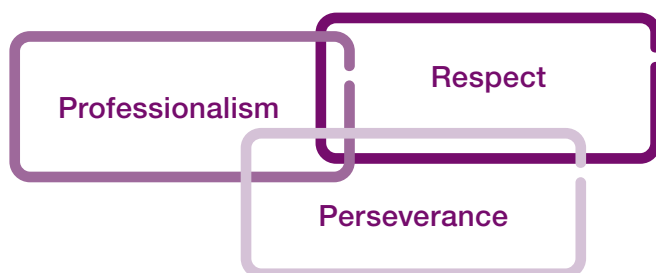
We nurture talent throughout the entire employee life-cycle, from finding the right person for the job to providing opportunities to grow and develop, to engaging people throughout their careers. We utilize workforce planning to help ensure a high-performing workplace.

Three factors must be in balance to attract, retain and develop the best people: efficient use of resources, effectiveness to achieve quality performance, and engagement. Ericsson has a very high level of employee engagement, supported by the consistently high response rate to the annual employee survey, Dialog. In 2012, this was 94%, exceeding industry benchmarks.

## Values at the core

The Ericsson core values – respect, professionalism and perseverance – guide all that we do, and form the basis of how we demonstrate leadership. We see all of our 110,000 employees as leaders. We also expect our managers to lead, not just manage, by providing proper feedback, setting clear goals and being good communicators.

### ERICSSON'S CORE VALUES



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



We are more than 110,000 people working for customers in more than 180 countries

During 2012, we have made big investments in globalizing our processes and tools to further improve our effective management of talent, and this will continue during 2013.

## Sustainability motivates talent

Increasingly, people want to work for a company with values, which affords them opportunities to develop and thrive, and which contributes in positive ways to society. For Ericsson, that translates into Technology for Good.

This is especially important for attracting and developing young talent. They are not only among the most well-informed generation of workers, thanks to the digital age, but seek out companies with a social conscience.

All employees at Ericsson are encouraged to learn about sustainability and corporate responsibility through an e-learning program. Since 2010, over 20,800 employees have completed the program, and the training is part of New Employee Learning Milestones. In addition, they have opportunities to actively engage in sustainability and corporate responsibility through global programs like Ericsson Response (page 19) but also through contributions at the local level in many ways.

## Employee engagement

	2012	2011	Unit
Engagement index	77	77	%
"I am proud to say that I work for Ericsson"	88	89	%
Overall, I am extremely satisfied with Ericsson as a place to work	80	80	%
I would recommend Ericsson as a great place to work	77	78	%

“Having a purpose beyond profit is increasingly important for attracting top talent today, especially among young people, and Technology for Good is an excellent example of what makes us stand out as an employer.”

**Bina Chaurasia**  
Senior Vice President and Head of Human Resources



## MEETING DEMAND FOR GLOBAL LEADERSHIP

We constantly re-examine the leadership competencies needed to lead our business. As our business reality evolves, so do our definitions and demands on high-quality leadership. A rigorous annual process identifies, assesses, and develops people to assume strategic roles in the company. We continuously review our leadership pipeline to ensure we are developing the right leadership competencies and capabilities at all levels of the organization.

High engagement and performance requires strong leadership, which in turn fosters innovation. We expect our leaders to communicate well, set clear goals and ensure that goals are followed up regularly – feedback and coaching is part of the daily routine.

We have best-in-class management development programs like Excellerate and Ericsson R&D Global Graduate Program which help attract top talent from around the world.

### Securing the talent pool

Finding the top talent in the industry means attracting and selecting the best. At university level we focus our recruiting efforts at global and regionally distinguished institutions. When selecting experienced hires, we attract from the foremost companies in the industry, and utilize a selection process aligned to our critical competencies.

There is a great need to encourage more young people to pursue careers in ICT, even before they enter university. We have engaged in programs like Connect To Learn, focused on secondary education for girls, in part to encourage more girls to pursue ICT (page 14). While still a young program, we hope to explore in the future how Connect To Learn could contribute to increasing female talent, especially in emerging markets where we see the greatest potential for growth in the future.

### Employees

	2012	2011	2010	2009	2008	Unit
Year end	110,255	104,525	90,261	82,493	78,740	No.
Average	112,758	103,130	91,825	86,360	78,989	No.
Average employment	7.6	7.5	8.0	8.0	7.5	Years
Full time	109,071	103,524	89,251	81,391	-	No.
Part time	1,184	1,001	1,010	1,102	-	No.
Temporary employees	766	901	978	693	1,124	No.
Employees who have left Ericsson	12,280	10,571	10,066	9,147	3,415	No.
Employees who have joined Ericsson	18,010	24,835	17,834	12,900	8,144	No.
Employees working on overseas assignment	1,094	1,184	1,240	1,428	-	No.

# FUTURE READY

Our competence development programs prepare our people to meet the challenges of an industry experiencing dramatic technological shifts. Through classroom or online learning, employees constantly acquire knowledge and evolve new competencies, with learning plans agreed and documented in individual performance plans.

In 2012, over 1.7 million total hours were spent on formal learning (online or classroom based) with an average 18 hours of training per employee and over 75% of employees have taken some form of structured e-learning or classroom training, as well as on-demand course materials and tutorials.

## Learning with business results

The Everyday Learning suite of learning methods and tools helps employees align learning activities, skills acquisition and capabilities in the workplace for current and future needs.

According to the 2012 employee engagement survey Dialog, employees believe that they are getting the training and development needed to keep up with customer demands (5% above industry average) and that they are given a real opportunity to improve their skills and competencies through leveraging Everyday Learning methods and enablers (6% above industry average). The Dialog results also showed that managers are being proactive and engaged in their employees' growth and development needs (8% above industry average).

## Learning at fingertips

The internal learning 'smart' web portal managed by Ericsson Academy handles over 25,000 unique visitors per month and provides approximately 7,000 learning targets, ranging from instructor-led training, technical labs and workshops to tutorials, webinars, and collaboration forums.



## OUR LEARNING VISION:

- Just enough.
- Just in time.
- Just for me.

An efficient infrastructure and IT tools for collaboration support learning and knowledge sharing among employees, and with our partners, customers and suppliers.

## Focusing on key competencies

Maintaining our key competencies in technical areas is critical. For 2012, we set a target to expand the Ericsson Technical Certification Program (ETCP) to include more technology areas. The current scope of the technical domains includes IP Broadband and Core, Media and Applications, Radio Access Networks, and Solutions. The cumulative number of passed exams increased by nearly 200% during 2012.



In a fast-paced industry, competence development is at the top of the agenda for Ericsson.

# FOCUS ON DIVERSITY

A diverse workforce is a strong, competitive, innovative and resilient workforce. 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.

## Focus on diversity

As we are working for customers in 180 countries around the world, a diverse workforce is extremely important to Ericsson. Our definition of diversity extends beyond gender, race, religion, ethnicity, age and other established parameters to differences in experience, personalities, thoughts, family situation etc.

While we focus on enhancing diversity from many different perspectives, a particular effort has been made over the past few years to increase female representation in leadership roles. Nearly a third of the members of the Executive Leadership Team were women in 2012 (see graph), a substantial increase in the past five years; the same percentage have nationalities other than Swedish. Similarly, the number of women in the top 250 most senior positions also continued to rise (see graph).

There is still much work to be done. The number of women in Ericsson's total workforce is 22%, reflective of a male-dominated industry and the recruitment base from engineering schools. To address this challenge Ericsson has a three-fold global program which starts with top-level commitment, is built in as part of the talent management process, and empowers regional leadership to tailor diversity activities to their needs and their markets. Now that we have diversity plans in place for every Region, Business Unit and Group Function, our focus for 2013 is to execute on these plans.

### Our main focus will be on:

- Recruiting more women into core business areas
- Identifying female leadership talent early in career
- Developing talent to increase proportion of senior and executive female leaders



At Ericsson, diverse teams stimulate innovative thinking and new approaches to challenges.

- Securing support mechanisms for recruiting, promoting and retaining women

### Addressing ICT gender gap

Externally, Ericsson supports a host of activities in support of greater diversity in society, particularly focused on women in executive roles and encouraging girls and women in ICT careers or education:

- In March 2012 Ericsson, as a member of the European Round Table of Industrialists signed a voluntary target to increase the number of women in decision-making roles
- Ericsson is among ten Swedish companies in the Battle of the Numbers, a private sector project

aimed at raising the number of women in operational and decision-making positions

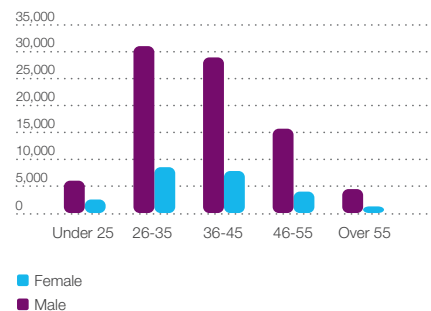
- Ericsson is a member of the Women Leading Women in ICT Action Group, launched in September 2012, co-led by the Institute of International Education (IIE), the US Office of Global Women's Issues and the Global Fund for Women, to help build the pipeline of women and girls entering ICT and enhance the retention and advancement of women studying and working in ICT, among other aims
- Ericsson is a member of the Broadband Commission Working Group on Gender

FEMALE REPRESENTATION (Percent)



Source: Ericsson

EMPLOYEES BY AGE AND GENDER 2012



Source: Ericsson

### Diversity

	2012	2011	2010	2009	Unit
Executives with a background other than Swedish (Top 250 positions)	55	50	50	-	%
Executives with a background other than Swedish (ELT)	29	29	36	15	%



## HEALTH AND SAFETY TOP PRIORITY

A strong health and safety culture, backed by a rigorous system of responsibility and accountability, is a top priority at Ericsson. Beyond regulatory compliance, a robust global approach to Occupational Health and Safety (OHS) delivers business benefits through reduced costs, improved morale and increased productivity. Customer demands for OHS excellence are increasing. In 2012, we updated our OHS policy and strengthened our practices to meet these expectations.

Ericsson's global operations are certified to the OHSAS 18001 requirements to deliver better risk control and improved performance. OHS is integrated in working processes and as part of the Ericsson Group Management System (EGMS) undergoes internal audits as well as annual external audits by assurance provider Intertek to ensure Ericsson meets OHSAS 18001. In 2012, we introduced a best-in-class OHS Supplier Requirements Standard (see Supply Chain page 40) to underscore the importance of this area in our supply chain.

### Tracking root cause

Our aim is to reduce the number and severity of OHS incidents. All incidents are investigated for root causes and OHS professionals in the organizations receive regular training. An improved framework for reporting incidents will be launched in 2013. Sharing best practices and measuring incident investigation quality are among the OHS global targets for 2013.

### Safety culture

Ericsson works hard to increase OHS awareness among employees. In 2012, a target to roll out basic OHS training to 25% of employees was exceeded by 10%. In 2013, each region will carry out a locally tailored health and safety campaign, with progress reviewed quarterly.

Regrettably, major incidents do arise. In 2012, seven workplace fatalities, one at Ericsson and six at suppliers', occurred at Ericsson operations (down from 11 in 2011), in the following risk areas: climbing and working at heights, driver and vehicle safety and construction/civil work and working at construction sites. Ericsson considers workplace fatalities unacceptable and is stepping up OHS practices to achieve its ultimate goal of zero fatal incidents.

### OCCUPATIONAL HEALTH AND SAFETY

#### Fatalities and major incidents, Ericsson operations

	Fatalities		Major incidents	
	2012	2011	2012	2011
Total	1	1	20	21
North America	0	0	0	0
Latin America	0	1	19	19
Northern Europe & Central Asia	0	0	0	1
Western & Central Europe	0	0	0	0
Mediterranean	0	0	0	0
Middle East	0	0	0	0
Sub-Saharan Africa	0	0	0	0
India	1	0	1	0
China & North East Asia	0	0	0	1
South East Asia & Oceania	0	0	0	0




## RADIO WAVES AND HEALTH

Although declining in most countries, there is still some public concern that radio waves from mobile phones and base stations may cause health problems. Yet numerous science reviews by the World Health Organization (WHO) and other expert organizations conclude that electromagnetic fields at levels within the limits prescribed by public health authorities cause no adverse effects to human health. Ericsson applies stringent product testing and installation procedures with the goal of ensuring that radio wave exposure levels are below established safety limits, and supports independent research into radio waves and health. For more information, visit [www.ericsson.com](http://www.ericsson.com).







# OBJECTIVES AND ACHIEVEMENTS

As part of the sustainability strategy process, Ericsson has for several years set a series of annual objectives within the five key issue areas of our sustainability and CR performance. Progress on achievement of the annual targets is reported on pages 48-49 along with new objectives set for 2013. See our long-term objectives on page 50.




## ENABLING COMMUNICATIONS FOR ALL

STATUS	OBJECTIVES 2012	ACHIEVEMENTS 2012	OBJECTIVES 2013
	Deploy Connect To Learn in eight new schools in Millennium Villages, and extend the Connect To Learn to two additional countries.	Deployed Connect To Learn in four schools due to political unrest in two countries; expanded to four additional countries.	Deploy ICT in education projects to 10,000 students by 2013.
	Define baseline for independent monitoring and evaluation study for ICT and education.	Defined baseline with data from 25 schools to serve as input to a Collaborative Action Research project with Earth Institute at Columbia University.	Complete Collaborative Action Research project on ICT and education with Earth Institute at Columbia University.
	150,000 refugees registered in the Refugees United database.	Registered approximately 185,000 users in the Refugees United database.	Increase number of refugee registrations in Refugees United database to 300,000.  Support Youth Peacemaker Network and PeaceEarth Foundation with ICT tools and training in three countries.  Have Ericsson mobile wallet platform ready for service in ten countries by the end of 2013 to increase financial inclusion among unbanked.

## REDUCING OUR ENVIRONMENTAL IMPACT








STATUS	OBJECTIVES 2012	ACHIEVEMENTS 2012	OBJECTIVES 2013
	10% Ericsson carbon footprint intensity reduction measure as CO <sub>2</sub> emissions per subscriber, including Ericsson own activities and products in operation.	Reduced Ericsson carbon footprint intensity by 22% for Ericsson own activities and 16% for products in operation.	The five year carbon footprint intensity target has been achieved in four years. For products in operations, in 2013 we will establish a new energy performance baseline.  Reduce CO <sub>2</sub> emissions per employee by 5% on Ericsson own activities (business travel, logistics and facilities).
	Reduce the number of air flight trips by 10% (baseline 2011).	Reduced the number of employee air flight trips by 12%.	See objective 2013 above and long-term objective.
	Increase outbound surface shipping to 75% using the global share of surface transport indicator by weight.	Increased outbound surface shipping to 80%.	See objective 2013 above and long-term objective.
	Reduce energy usage by 3% per head.	Reduced energy usage in Ericsson offices by 3.6% per head.	See objective 2013 above and long-term objective.
	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.	Defined implementation plan including baseline estimates of the energy usage of our test environment labs, and PUE (Power Usage Effectiveness).	See objective 2013 above and long-term objective.
	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 over 5% of WEEE take-back vs. Equipment Put on Market, while disposing less than 2% of waste in landfill.	Achieve 10% of WEEE take-back vs. Equipment Put on Market, while continuing to ensure less than 5% of WEEE treated by Ecology Management Program is disposed of in landfill.

## ENABLING A LOW-CARBON ECONOMY

STATUS	OBJECTIVES 2012	ACHIEVEMENTS 2012	OBJECTIVES 2013
	Show how ICT contributes to a low-carbon economy by investigating the impact of at least five different solutions.	Assessed impact of three ICT-enabled solutions for low-carbon economy: smart grid, smart work, and connected buses.	Develop selected cases demonstrating the ICT-enablement potential for the low-carbon economy.
	Launch Broadband Commission Report on Climate Change, and support Broadband Commission Statement for Rio+20.	Launched Broadband Commission Report, and A Call to Action statement from the Broadband Commission to Rio+20.	
	Implement the new International Telecommunication Union (ITU) recommendation for greenhouse gas inventory of organizations.	Implemented the main requirements for data collection, calculation and record keeping when calculating emissions. A plan to implement the remaining ITU-T L.1420 requirements is in place.	Develop a platform for dialogue and knowledge sharing on ICT impact on energy in the low-carbon economy.  Define broadband blueprint and assessment methodology for sustainable cities.



## CONDUCTING BUSINESS RESPONSIBLY

STATUS	OBJECTIVES 2012	ACHIEVEMENTS 2012	OBJECTIVES 2013
	Conduct annual Sustainability and Corporate Responsibility review for the Ericsson Board of Directors.  Update Code of Business Ethics to reflect UN Principles for Business and Human Rights Guidelines and initiate a new acknowledgement request for all employees.	Conducted the annual Sustainability and CR annual review for the Ericsson Board of Directors.  Updated Ericsson Code of Business Ethics to reflect UN Guiding Principles on Business and Human Rights Guidelines.  Close to 100% of Ericsson employees worldwide have completed the acknowledgement process.	Continue annual Sustainability and Corporate Responsibility review for the Ericsson Board of Directors.  Launch Business Learning Program on human rights with Shift. Ensure country risk-screening process fully operational and complete at least one Human Rights Impact Assessment (HRIA).
	Implement Environmental Audit in at least two Regions.	Implemented Environmental Audits in two Regions: India and Northeast Asia.	Implement expanded Environmental Audit program in at least two regions which indicate higher risk.
	Achieve 90% of all Strategic Sourcing personnel complete the Code of Conduct training for Suppliers.	Achieved 92% completion rate for training of Regional Strategic Sourcing.	Achieve 95% completion rate of Code of Conduct Training for Suppliers by Strategic Sourcing personnel.
	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.	Updated risk-based audit plans in all Regions and Units, and performed and followed up audits according to plans among critical suppliers.	All regions and relevant units to have Supplier Code of Conduct auditors who conduct and follow up risk based audits to ensure continual improvements.
	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.	The number of critical findings was reduced by 56% from selected suppliers audited in both 2011 and 2012.	Reduce the number of critical findings by >50% among selected suppliers audited two consecutive years.
	Arrange key supplier forum on initiatives relevant on sustainability and corporate responsibility issues.	Held forum with selected suppliers to discuss energy efficiency and greenhouse gas emissions.	Complete Supplier Code of Conduct Auditor refresher training for 100% of all Supplier Code of Conduct auditors.  Arrange at least four local Supplier Workshops with Code of Conduct focus.
	Complete update to processes and procedures around conflict minerals, including individual supplier assessments.	Updated Banned and Restricted Substance list to cover conflict minerals, used both in supplier agreements and product management process. Selected suppliers were assessed using a Conflict Minerals Reporting Template developed by EICC and GeSI.	

## LEADING WITH VALUES

STATUS	OBJECTIVES 2012	ACHIEVEMENTS 2012	OBJECTIVES 2013
	Expand Ericsson Technical Certification Program (ETCP) to cover more technology areas.	Certification domains expanded to include IP Broadband and Core, Media and Applications, Radio Access Networks, and Solutions.	Increase our commitment to technical leadership by expanding our technical certifications supported by training from 22 to 33.
	Expand the Employee Engagement Program as part of the wider Brand Engagement Program open to all Ericsson employees.	Conducted employee engagement pilot and will continue to assess expansion in 2013.	Establish diversity council and long-term goals on diversity.  Launch global learning solutions which address key competence gaps critical for employee and company success.
	Increase employee knowledge and awareness of OHS issues: 25% of employees will take a basic OHSAS training in 2012.	35% of employees completed the basic Occupational Health and Safety e-learning.	Launch a Global Employee Referral Program to further integrate our employee engagement into our ways of working and bringing exceptional talent to Ericsson.  Conduct Occupational Health and Safety campaign on health aspects in each Region.  Establish root cause analysis in Occupational Health and Safety incident investigations.

# LONG-TERM OBJECTIVES

In 2012, as part of our long-term strategy to continuously improve our sustainability and CR performance, Ericsson has set long-term objectives (3-5 year) in each of our key issues areas. We will report on the progress towards these long-term objectives annually.

## ENABLING COMMUNICATIONS FOR ALL

### LONG-TERM OBJECTIVES

Advocacy and support for Broadband Commission for Digital Development's 2015 targets and post 2015 development agenda.

Deploy ICT in education projects to 50,000 students by 2015.

Achieve one million registrations in the Refugees United database by 2015.

Document connection between technology, development and peace with ICT tools and training by 2015.

Be one of the key drivers to increase financial inclusion in an open financial ecosystem, and make it significantly simpler and more affordable to make a financial transaction, over a mobile device, wherever or whenever you are.

## REDUCING OUR ENVIRONMENTAL IMPACT

### LONG-TERM OBJECTIVES

Maintain absolute CO<sub>2</sub>e emissions from Ericsson own activities for business travel, logistics and facilities in 2017 at the same level as 2011, supporting Company's long-term growth ambition.

Achieve 50% of WEEE take-back vs. Equipment Put on Market in 2017 while continuing to ensure less than 5% of WEEE treated by Ecology Management Program is disposed of in landfill.

## ENABLING A LOW-CARBON ECONOMY

### LONG-TERM OBJECTIVES

Deliver opportunities to address sustainable development challenges using our core business in three cities to address sustainable urbanization.

Develop selected cases that show the connection between business opportunities and the low-carbon economy.

Establish a globally agreed industry position around the potential of ICT for low carbon economy with key stakeholders.

## CONDUCTING BUSINESS RESPONSIBLY

### LONG-TERM OBJECTIVES

Continue to regularly engage Ericsson Board in Sustainability and CR as appropriate.

Complete two year Business Learning Program, on Business and Human Rights, and implement improvements.

Integrate adequate human rights and CR risk measures in group management systems.

No observed or reported failure by Ericsson Sourcing to fully consider Code of Conduct and Environmental compliance when evaluating and selecting suppliers by 2017.

Ericsson's supplier-related ethical and environmental risks are continually reduced.

The supplier year-on-year improvement, measured as the reduction of critical findings, shall exceed 60% in 2017.

Maintain 100% up to date training level for supplier code of conduct auditors.

Reduce amount and severity level of Occupational Health and Safety incidents and accidents.

## LEADING WITH VALUES

### LONG-TERM OBJECTIVES

Reduce amount and severity level of occupational Health and Safety incidents by consistently identifying and controlling our health and safety risks, working toward our long term goal for zero fatalities.

Increase employee knowledge and awareness significantly on Occupational Health and Safety.

# ST-ERICSSON

ST-Ericsson is a world leader in developing wireless platforms and semiconductors, providing smarter communication, enhanced on-the-go entertainment and mobile broadband connectivity worldwide. 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.

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

## Respecting the environment

ST-Ericsson implements a voluntary worldwide program aiming to minimize our environmental footprint in four main areas: CO<sub>2</sub> footprint, energy, paper consumption and electronic waste. Targets were set for 2020, with a 2010 baseline.

- **Reducing our carbon footprint by 30 to 50%:** Minimize our environmental impact by reducing direct and indirect emissions. This will be done by increasing performance of our facilities, rationalizing operations, limiting business travel, and expanding use of video conference facilities and IT sharing tools.
- **Reduce our energy consumption by 30 to 50%:** We are moving to low power generation PCs and servers and by streamlining our R&D centers.
- **Reduce drastically our paper consumption:** We aim to be a paperless company to minimize depletion of natural resources and also reduce hazardous substances used in printing. In 2012 we reduced paper usage by 27% with use of SMART printing services (secured by pin code, double side print).
- **Reduce electronic waste (WEEE) in Kg/employee by 15 to 25%:** Our goal is to minimize our environmental impact by promoting waste recycling or reuse and ensuring safe disposal of remaining waste.

## Product responsibility

ST-Ericsson is actively supporting sustainable development in wireless communications by reducing the energy consumption of its products and to offer our customers the most energy-efficient products on the market.

The ST-Ericsson PowerHUB™ product family for power management supports better battery life in mobile devices. In 2012, ST-Ericsson announced the CG2905, the industry's first connectivity platform solution, which provides better power consumption.

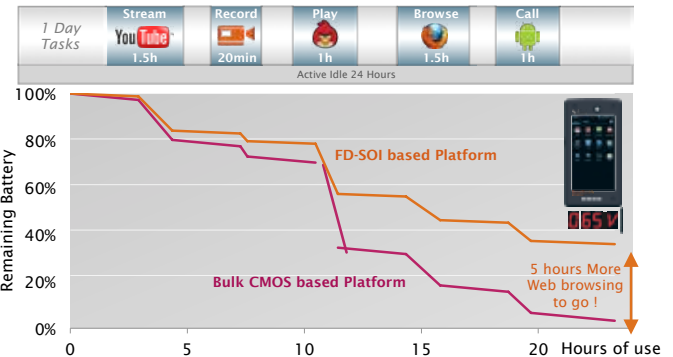
Another new product, the NovaThor™ L8540, integrates a dual-core application processor with our industry-leading LTE multimode modem, saving power consumption.

We are also developing future NovaThor platforms using FDSOI 28nm technology which will allow ST-Ericsson to produce the world's fastest and lowest-power integrated LTE smartphone platform. FDSOI technology eliminates the need for an electrical signal on the gate to close the transistor, which saves power.

## FDSOI – COOLER

### Cooler Smartphone can be used for longer time

NovaThor™ platform running at 1GHz with V<sub>ARM</sub> supplied at 0.65V



The sleep mode consumes no power consumption. In addition, FD-SOI products will enable:

- Cooler operation, consuming 25% less power than rival architectures.
- Low power mode that consumes 50% less power compared with alternative solutions in bulk CMOS.

Moreover, ST-Ericsson is contributing to the reduction of hazardous substances. All products designed by ST-Ericsson are Ecopack<sup>®</sup> 2 (lead free + free of brominated and chlorinated flame retardants) which enable us to deliver in 2012 more than 99% of products in this category.

## 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 EICC and to verify compliance by providing information and allowing access to their premises.

ST-Ericsson also supports the United Nations Global Compact initiative. Our Code of Conduct is based on the Global Compact's ten principles and is made publicly available.

During 2012, ST-Ericsson has supported many community initiatives. A campaign to collect old GSM phones in France resulted in hundreds of phones being collected within our sites, recycled and the benefits of second hand sales donated to the French Red Cross.

## Promoting economic development

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.



## Auditor's Combined Assurance Report on the Sustainability & Corporate Responsibility Report

### To the readers of the Ericsson Sustainability & Corporate Responsibility Report 2012

We have been engaged by the Executive Leadership Team of Telefonaktiebolaget LM Ericsson (publ) ("Ericsson") to perform an examination of the Ericsson Sustainability & Corporate Responsibility (CR) Report for the year 2012. 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 examination.

#### The scope of the examination

We have performed the assurance engagement in accordance with RevR 6 *Assurance of Sustainability Reports* issued by Far (institute for the accounting profession in Sweden), as well as AA1000AS (2008) issued by AccountAbility (type 2 engagement). The objective of an audit is to obtain reasonable assurance that the information in the Sustainability & CR Report is free of material misstatements. An audit includes examining, on a test basis, evidence supporting the quantitative and qualitative information in the Sustainability & CR Report. A review is mainly limited to making inquiries of personnel responsible for sustainability issues, and applying analytical and other review procedures. Hence, the conclusion based on our review procedures does not comprise the same level of assurance as the conclusion of our audit. Since this assurance engagement is combined, our conclusions regarding the audit and the review will be presented in separate sections. Our assurance engagement includes examination of the following areas, with the purpose of either providing reasonable assurance (hereafter referred to as audit) or limited assurance (hereafter referred to as review):

1. Our review has included all pages in the Sustainability & CR Report, except page 51.
2. Our audit is limited to the carbon dioxide emissions data regarding Ericsson own activities on page 24-25.

Our assurance, reasonable or limited, does not comprise the assumptions used by the company as to whether or not it is possible for the company to reach certain future targets described in the report (e.g. goals, expectations and ambitions).

The criteria on which our examination is based are the parts of the *Sustainability Reporting Guidelines G3*, published by the Global Reporting Initiative (GRI), which are applicable to the Sustainability & CR Report, as well as the accounting and calculation principles that the company has developed and disclosed. We consider these criteria suitable for the preparation of the Sustainability & CR Report.

In accordance with AA1000AS (2008), we confirm that we are independent of Ericsson. Our review has been performed by a multidisciplinary team specialized in reviewing economic, environmental and social issues in sustainability reports, and with experience from the industry Ericsson operates within.

#### Review procedures

The main procedures of our review have included the following:

- a. update of our knowledge and understanding of Ericsson's organization and activities,
- b. assessment of the outcome of the company's stakeholder dialogue,
- c. interviews with representatives of the management to ensure that Ericsson responds to important stakeholders' concerns in the sustainability report,
- 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,



### Audit procedures

Our audit has included the following procedures:

- a. evaluation of design and functionality of relevant internal controls within the systems and processes used to collect, manage and validate information on the selected indicators during the reporting period, and
- b. reconciliation of reported information with internal and external source documents, and performing detailed tests of the selected indicators regarding Ericsson own carbon dioxide emissions on page 24-25 in the Sustainability & CR Report.

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

### Conclusions

#### *Our conclusion based on our review*

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

#### *Our conclusion based on our audit*

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

### Other information

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

#### *Regarding inclusivity*

We see a strong commitment to stakeholder accountability and evidence of numerous engagement activities at corporate level. We encourage Ericsson to further develop documentation on stakeholder participation processes, and increase awareness of the AA1000APS principles throughout the organization.

#### *Regarding materiality*

We commend the updated process for determining material sustainability issues that Ericsson has launched during the year. We support Ericsson's plans to further refine this process, including the criteria used to identify and select relevant issues.

#### *Regarding responsiveness*

We observe that Ericsson has processes in place to respond to significant stakeholder concerns, including extensive communication using various channels. We have no specific recommendations regarding responsiveness.

Stockholm, April 5<sup>th</sup> 2013

PricewaterhouseCoopers AB

Peter Nyllinge  
Authorized Public Accountant

Fredrik Ljungdahl  
Expert Member of Far

# MEMBERSHIPS AND AFFILIATIONS

## Broadband Commission for Digital Development

The Broadband Commission for Digital Development was launched in 2010 by the International Telecommunications Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). Ericsson is a founding member of the Broadband Commission and CEO Hans Vestberg is a Commissioner and leads the Climate Change working group. [www.broadbandcommission.org](http://www.broadbandcommission.org)

## Business Call to Action – UNDP

Ericsson is a member of Business Call to Action (BCtA), which aims to accelerate progress toward the Millennium Development Goals by challenging companies to develop inclusive business models that offer potential for commercial success and development impact. [www.businesscalltoaction.org](http://www.businesscalltoaction.org)

## Clinton Global Initiative

The Clinton Global Initiative (CGI) convenes global leaders to devise and implement innovative solutions to some of the world's most pressing challenges. CGI gathers government officials, business leaders, and non-profit directors for collaboration, sharing ideas, and forging partnerships. Members devise practical solutions to global issues through specific and measurable Commitments to Action. [www.clintonglobalinitiative.org](http://www.clintonglobalinitiative.org)

## European Roundtable of Industrialists

This forum brings together around 50 Chief Executives and Chairmen of major multinational companies of European parentage covering many industrial and technological sectors. As member, Ericsson signed a voluntary target to increase the number of women in decision-making roles and is also in the Energy and Climate Change Working Group.

## Global E-sustainability initiative (GeSI)

Ericsson is a founding member of the Global e-Sustainability Initiative (GeSI), represented on the Board of Directors and co-chair of 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](http://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](http://www.newcitiesfoundation.org)

## Symbio City

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](http://www.symbiocity.org)

## United Nations Global Compact

In 2012 we reported according to GC Advanced level. Ericsson was one of the first signatories of the UN Global Compact. [www.unglobalcompact.org](http://www.unglobalcompact.org)

## UN Sustainable Solutions Development Network

The network was formed in 2012 to mobilize scientific and technical expertise from academia, civil society, and the private sector to support sustainable-development problem solving at local, national, and global scales. Ericsson CEO Hans Vestberg is part of the Leadership Council. [www.unsdsn.org](http://www.unsdsn.org)

## AWARDS AND RECOGNITION

### Global 100 Most Sustainable Corporations in the World

Ericsson is ranked No 30 on the 2013 Global100 list announced at the World Economic Forum in Davos in January 2013. The Global 100 is an annual project initiated by Corporate Knights, the company for clean capitalism.

### FTSE4Good

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

### GSMA Global Mobile Award

The Amazon Connection program won the 2013 Global Mobile Award Best Mobile Product, Initiative or Service for Emerging Markets at Mobile World Congress. The program is a partnership between Ericsson, mobile operator Telefonica|Vivo and the non-profit Saude and Alegria.

### Lundquist CSR Online Awards

Ericsson was the top-ranked company in the Nordic competition of the CSR Online Awards Nordic 2012. 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.

### Miljörapporten

The Swedish environmental magazine MiljöRapporten, together with an external unanimous jury, ranked the Ericsson 2011 Sustainability & Corporate Responsibility Report first among reports among 54 companies on the OMX Stockholm Large Cap list. Evaluation criteria were: overall impression; accessibility; long-term approach; the business advantage of sustainability; and credibility. Ericsson was recognized for its comprehensive approach, linking operations to solutions to the global sustainability challenges most relevant to the business.

# REDUCING OUR ENVIRONMENTAL IMPACT

We are reducing our environmental impact throughout our value chain.



The carbon footprint of an average ICT user is estimated to decrease 20% between 2007 and 2020...



By 2017, 85% of the world's population will have access to mobile-broadband coverage via 3G networks

...so we are designing products and solutions to make this happen...

Ericsson's Psi Ψ 3G coverage solution reduces power consumption by up to 40%



The Antenna-Integrated Radio (AIR) cuts energy consumption by 40%

Ericsson increased its video conference rooms globally by 60% in 2012, contributing to the reduction of CO<sub>2</sub>e emissions per employee



...finding smarter ways of working...



34% of our global facilities use certified green electricity

and 74% at measured European facilities

...and reducing carbon emissions in our own operations.

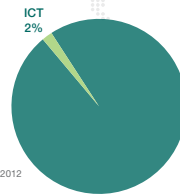


In Sweden, we have used 100% certified green electricity since 2008

Source: Ericsson

# ENABLING A LOW-CARBON ECONOMY

The ICT sector contributes about 2% of global CO<sub>2</sub>e emissions, but can help eliminate a significant portion of the remaining 98% from other industries.



Source: Ericsson and TeliaSonera, 2012

By 2050, 70% of the global population will reside in an urban area or city.

Source: UN HABITAT



The SMARTer 2020 study estimates that ICT-enabled solutions could reduce global CO<sub>2</sub>e emissions by 16.5% in 2020

Source: GeSI

ICT solutions will enable the low-carbon economy of the future...



The CO<sub>2</sub>e from an annual mobile subscription is equal to driving a car for about 1.5 hours



Smart grids can help address 67% of the energy lost due to inefficiencies before reaching the consumer

Source: Ernest Orlando Lawrence Berkeley National Laboratory and GeSI

...and will transform industries and cities.



Stockholm Royal Seaport is an ICT-enabled city district that will be climate-positive by 2030

Source: Stockholm Royal Seaport Innovation Center

373 MILLION

A 2012 study of eight ICT-related services in six countries showed they could produce energy savings of 373 million barrels of oil equivalents per year

Source: Ericsson

