2012 Sustainability Report

Global Harmony

with people, society & environment

SAMSUNG ELECTRONICS

About This Report

This is the fifth Sustainability Report issued by Samsung Electronics and is intended to communicate our sustainability efforts and performance to stakeholders. At Samsung Electronics, we firmly believe that we can deliver positive value by protecting the environment and improving the social conditions of the communities in which we operate while generating economic performance.

Reporting Period

This report covers the period from January 1 to December 31, 2011. For quantitative measures of performance, the report includes data for the three years from 2009 to 2011 to help readers identifying trends and year-on-year comparison. For material issues, the report covers information up to March 2012.

Reporting Scope

Financial data in this report was prepared on a consolidated basis according to newly introduced K-IFRS (International Financial Reporting Standards), while the coverage scope of environmental and social performance includes the major overseas subsidiaries. Information that pertains only to the performance of the headquarters has been footnoted accordingly.

Assurance

To ensure credibility of the report contents and reporting procedures, this report has received third party assurance from PwC. This report was independently assured in accordance with ISAE 3000 and the AA1000 AccountAbility Assurance Standard (AA1000AS Type II Assurance).

Reporting Principles

This report refers to the G3.1 Guidelines of GRI (Global Reporting Initiative) and is prepared with reference to the AA1000 APS (2008) principles (inclusivity, materiality and responsiveness). Explanations are provided for any changes in calculation standards from those applied in past reports. This report complies with the GRI G3.1 Guidelines with an application level of A+.

Additional Information and Relevant Websites

Samsung Electronics Website
http://www.samsung.com/us

Sustainability Report
http://www.samsung.com/us/aboutsamsung/sustainability/sustainabilityreports/sustainabilityreports.html

IR Website
http://www.samsung.com/us/aboutsamsung/ir/newsMain.do

Green Management
http://www.samsung.com/us/aboutsamsung/sustainability/environment/environment.html

Semiconductor
http://www.samsung.com/us/business/oem-solutions/index.html

Star Program
http://www.samsung.com/printer/star

Official Blog
http://www.samsungtomorrow.com

Facebook
http://www.facebook.com/samsungtomorrow

Twitter
http://www.twitter.com/@samsungtomorrow

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Global Harmony

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CEO Message

Samsung Electronics has been making continued efforts to promote sustainable management under the business philosophy of "devoting our human resources and technology to creating superior products and services, thereby contributing to a better global society."

I would like to thank everyone for the support and interest you have shown in Samsung Electronics. We published the 2012 Sustainability Report to look back on the progress we have made so far and share our achievements with stakeholders.

In 2011, Samsung Electronics recorded the highest sales despite the global economic recession and intense competition from competitors, while firmly rooting our leadership in the global electronics industry. We have striven to become the top global company and that achievement was made possible thanks to sustainable management efforts to foster a creative corporate culture, compliance management, shared growth with suppliers, and our social contribution activities. I would like to give my personal pledge for Samsung Electronics' continued efforts in 2012 towards a sustainable future. I also would like to introduce our sustainable activities from 2011.

First, we made a strong effort to create a more open and flexible organizational culture capable of responding to the fast-changing business environment. We implemented a flexible work hour scheme and remote working policies to provide a work environment that fosters

creativity and to stimulate self-motivation. The Creative Development Institute was also created to foster a culture that respects the value of constructive failures. A great emphasis was also placed on the incorporation of various policies for female employees, the disabled and overseas employees to ensure management based on mutual respect and mutual understanding.

We also promoted compliance management to become a respected corporate citizen with a firm belief that legal compliance and integrity management are the keys to maintaining a healthy society and a strong market-based economy. We reinforced the compliance management organization and strengthened training programs to raise awareness of the importance of business ethics.

Shared growth has been another area of strong emphasis in the business management at Samsung Electronics, as we believe in the support and approval of society as a source of our competitiveness. We operated a comprehensive supplier support program to enhance their competitiveness including technology development collaboration to produce tangible outputs on realizing shared growth. More specifically, we have implemented shared growth initiatives, including 'Globally Competitive SMEs', a 'Supplier Support Fund' and 'New Technology Development Contest' programs, which are not limited to simple financial assistance. We are also implementing various measures to ensure that second- and third-tier suppliers benefit from our shared growth initiatives. In addition to supplier support, we have conducted social contribution activities including 'Hope Children's Learning Center' for students of low income families and the 'Stepping Stone Scholarship Program' for disabled college students.

Lastly, we have been striving to develop innovative eco-products and to establish green operation sites. In 2011, we focused on achieving greenhouse gas reduction, product energy efficiency improvement, and the implementation of a water resource management system in order to respond to global environmental issues.

Dear stakeholders,

Samsung Electronics will continue to make every effort to strengthen its market leadership and long-term business competitiveness in order to become an exemplary company matched by no other. In addition, we will proactively fulfill our social responsibilities and strengthen stakeholder engagement based on the trust built on our responsible actions.

I would like to ask for your unstinted support and encouragement in our endeavor to create a brighter, more prosperous future.

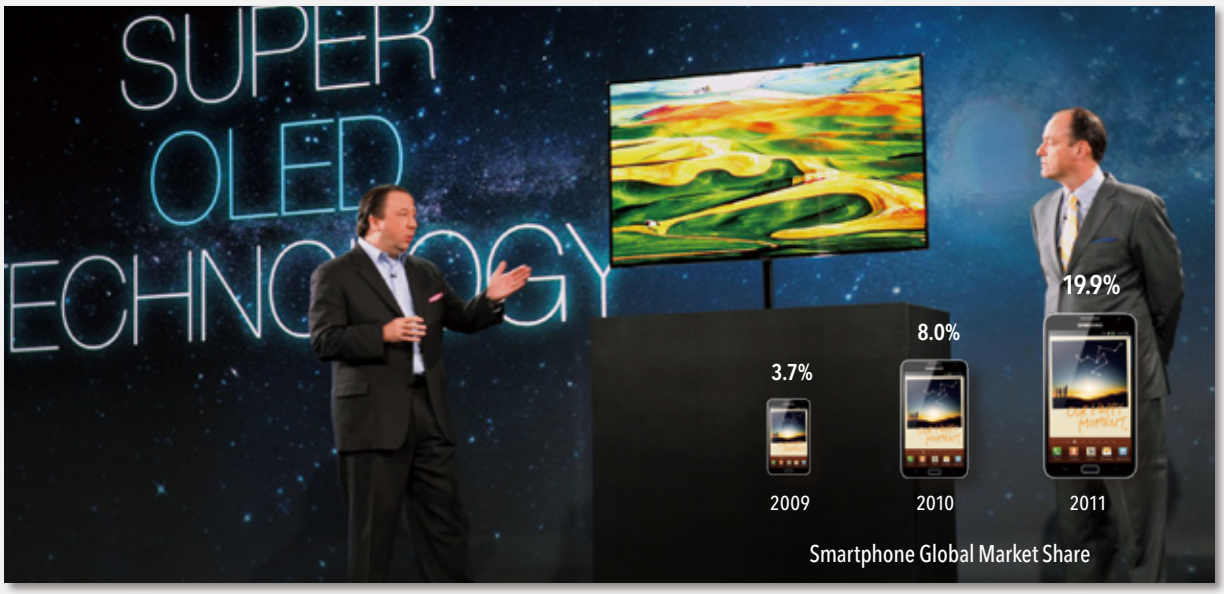
Thank you.

Oh-Hyun Kwon

Vice Chairman & CEO, Samsung Electronics

2011 Highlights

Established in Korea in 1969, Samsung Electronics celebrated its 40th anniversary in 2009. That year, it was ranked number 1 for sales among global IT companies for the first time. In 2010, Samsung was placed 22nd in the 2010 Fortune 500, a rise of ten places from the previous year and the highest ranking for a Korean company in the year. Samsung Electronics has an ambitious future vision that goes beyond the next 100 years and we continue to strive for sustainable growth. As a result, Samsung Electronics posted sales of KRW 165 trillion and operating profits of KRW 16.2 trillion in 2011, recording yet again another two-digit growth rate.



Leader in the IT Industry

The year 2011 marked a historical turning point for Samsung Electronics' semiconductor business. For twenty years, Samsung Electronics has maintained its position as the predominant manufacturer of the DRAM semiconductor. Thanks to growth in the smartphone and tablet PC markets, Samsung Electronics also experienced tremendous growth in its non-memory semiconductor business.

Samsung Electronics has also become a leader in the global smartphone market with its best-selling smartphone, Galaxy S, which was introduced in June 2010 and has since sold 22 million units. The Galaxy S2 was released in April 2011 and 20 million units have already been sold, taking sales of the Galaxy smartphone series to over 42 million units.

In recognition of its incredible success, the Samsung Galaxy S2 was selected as the 'Best Smartphone of the Year', while Samsung Electronics was awarded the 'Device Manufacturer of the Year' award at the Mobile World Congress held in Spain last February.

On top of these awards, Samsung Electronics received 30 Innovation Awards (28 Innovation Awards and two Best Innovation Awards) at the Consumer Electronics Show (CES) 2012, which is the world's largest consumer technology tradeshow. This is a reflection of Samsung Electronics' momentous efforts to create technology with great design and content, along with the fantastic competitiveness of its hardware. Samsung Electronics' products also received 44 awards at the iF Design Awards 2012, which is one of three international design awards, and was ranked as the top overall company in the iF rankings.

Social Responsibility and Value Creation

As a company, Samsung Electronics strives to generate economic profits and simultaneously tries to tackle global issues such as the polarization of society, poverty and famine in order to pass on our positive values to the society in which we operate. With about 10,000 employees since its inception in 1970s, we employ approximately 220,000 employees at Samsung Electronics worldwide in 2011.

As part of our contribution to the societies we live in, we engage in a variety of activities for local communities such as support programs for children, teen education, medical benefits for low-income families and our global social contribution initiative, the Samsung Hope for Children.

Samsung Electronics' brand value has steadily increased and in 2011 was ranked 17th, according to Interbrand which annually ranks the Top 100 Brands in the world. In 2012, the brand value was worth USD 23.43 billion, which was a 20% increase from the previous year.

Samsung Electronics has been included since in 2009 in the Dow Jones Sustainability Index (DJSI) which is one of the most authoritative sustainable management indexes. In 2011, Samsung Electronics was named no. 1 in the global "Super sector leader" in Technology. In addition, Samsung Electronics has been included in the list of the Global 100 Most Sustainable Corporations in the World at the World Economic Forum in Davos for three consecutive years, ranking 73rd in February 2012.

2011-2012 DJSI Technology Supersector Leader

2012 Global 100 Sustainable Corporations

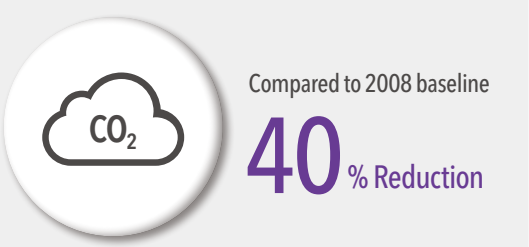
Establishment of Green Management Structure and Achievements

In order to fulfill our environmental responsibility as a global citizen, Samsung Electronics announced the "Eco-Management 2013" initiative in 2009. In accordance with the initiative, we promoted various environmental programs such as the reduction of greenhouse gas emissions and the development of eco-friendly products. As of 2011, we have reduced greenhouse gas emissions by 40% compared to 2008, and increased the number of eco-friendly products within all our product lines by 97% for Good Eco Product, and by 85% for Good Eco Device which is close to reaching our target of 100% by 2013. Moreover, we have invented a plethora of eco-friendly, high performance products with ultra low-power memory chips which greatly reduces energy consumption due to the improved energy efficiency.

In reflection of Samsung Electronics' green management, four products including the world's first solar-charging laptop, a microwave oven, a laundry machine and transparent LCDs, received Eco Design awards at the Consumer Electronics Show (CES) 2012. Samsung was also named Energy Star Partner of the Year by the U.S. Environmental Protection Agency (EPA) for two consecutive years. In addition to these awards, Samsung Electronics has received international recognition for its green management efforts and initiatives from the China Europe International Business School (CEBIS) which named Samsung Electronics as one of 100 green foreign companies in China.

Samsung Electronics created a regional Green Management Committee in order to establish an eco-friendly workplace at all of Samsung's production sites. In China, the Green Management Task Force was created with the goal of making all of our production plants compliant with international standards of environmental management and of reducing the amount of environmental pollutants which we release to within 80% of the legal limits.

2011 Reduction of Greenhouse Gas Emissions



Samsung Electronics on a Sustainable Growth

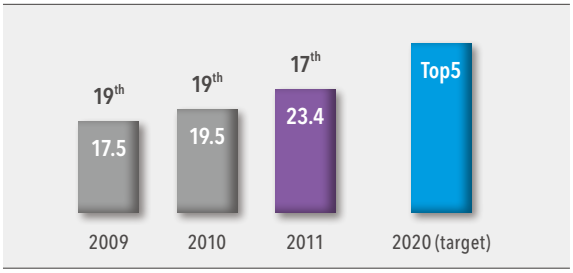
Samsung Electronics' business portfolio consists of the manufacture and sales of digital media devices (digital TVs, monitors, printers, mobile phones, communication systems, air conditioners and refrigerators) and components (memory chips, system LSIs etc). Samsung Electronics has a worldwide business network which consists of headquarters in Korea and nine subsidiaries in various parts of the world which manage production and sales in their respective regions.

The global IT industry is facing a tide of change as the economic recession continues. In addition to its excellence in hardware manufacturing, Samsung Electronics is strengthening its soft power capacity, merging with promising new businesses and proactively nurturing new businesses to become the new leader of the IT industry.

VISION 2020

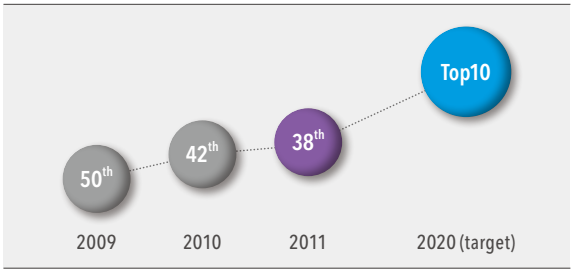
We are striving to realize our 'VISION 2020' which consists of a number of detailed targets including achieving sales of USD 400 billion, becoming one of the top five global brands and one of the ten most admired companies in the world.

Best Global Brands (USD billion)



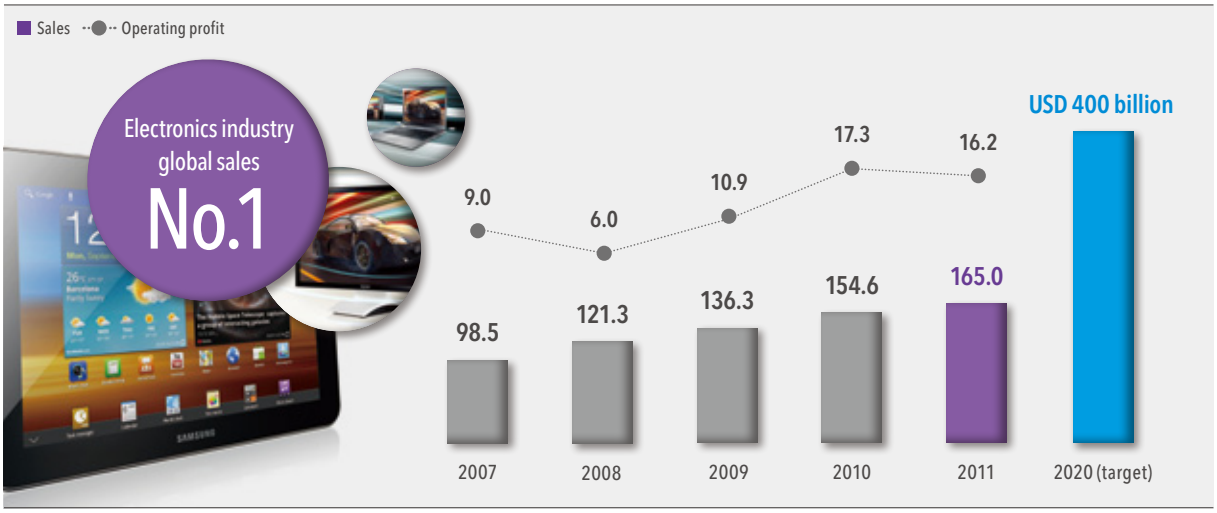
• Interbrand

Most Admired Company



• *Fortune Magazine*

Samsung Electronics Sales (KRW trillion)



Business Divisions

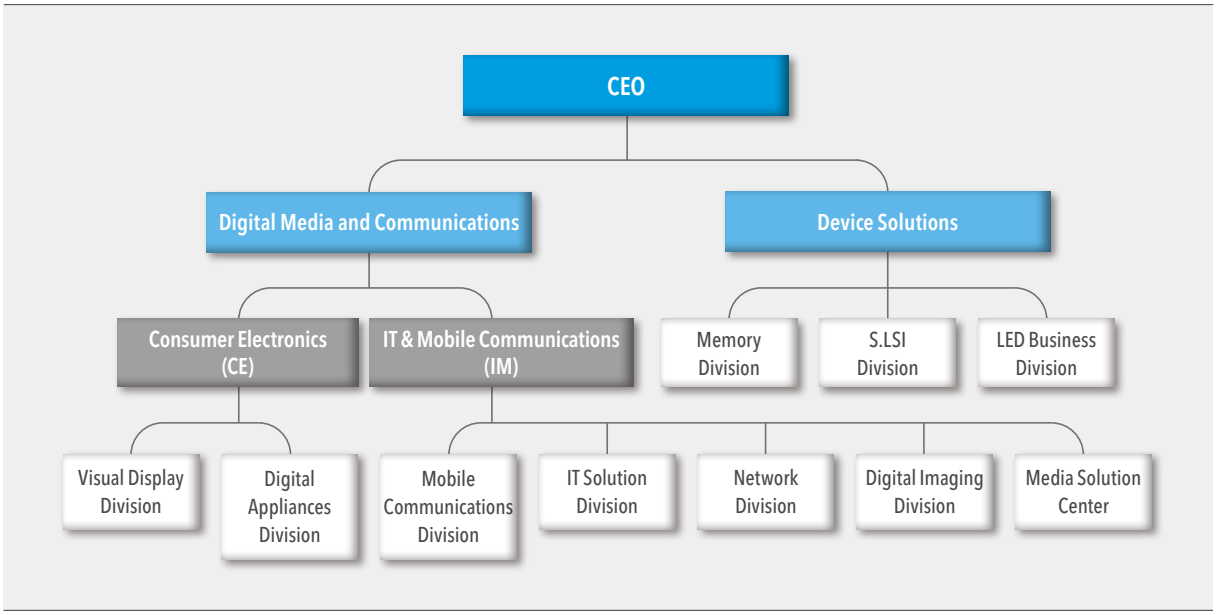
Samsung Electronics organizes its businesses according to its different characteristics in technology, markets and consumers as either Digital Media & Communications (DMC) or Device Solutions (DS) division, strengthening their independent operating structure. DMC is grouped into Consumer Electronics (CE) and IT & Mobile Communications (IM) divisions. The CE division took charge of the visual display business department and home appliances department. The IM division is in charge of managing wireless businesses, IT Solutions, Network business, digital imaging displays and the Media Solution Center.

This restructuring reflects changes which were made to the workforce with the hiring of soft power experts which has become more important than ever in the 'Smart' age. We have already announced our intention to make a paradigm shift by becoming a soft driven company and established a 'Software center' in order to increase our software capacity until it's on a par with our world renowned manufacturing.

Changes in the Device Solutions (DS) division also took place including expansion of the organizations in charge of software, controller and solution development to ensure separate teams for each. The expansion of the software related organizations was done to realize Samsung Electronics' vision of creating new values and experiences by combining Samsung's existing strength in hardware design with optimized software and an emotionally appealing user interface.

Samsung Electronics also expanded the organization in charge of bio and medical device business and expanded the Bio Lab at Samsung Technology Research Center into the Bio Research Center. We also hired bio material experts to strengthen our research in this area and increased support for biosimilar and bio medical research.

Organizational Chart



Establishment of Independent LCD Company

Samsung Electronics approved the separation of the LCD business division as an independent company through the 43rd general shareholders' meeting in April 2012. It was launched as Samsung Display Co. Ltd. with KRW 750 billion in capital.

The decision to separate the LCD business was made to strengthen the competitiveness of the LCD business. The Samsung Display Co. Ltd. will be managed as a subsidiary of Samsung Electronics.

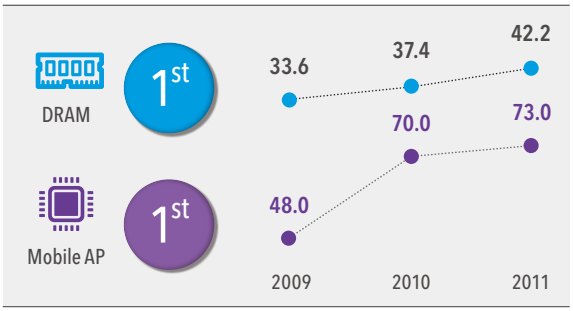
Global Market Share

Samsung Electronics is strengthening its leadership in various markets including semiconductors, visual displays and mobile phones. We have maintained a top market share in DRAM and mobile AP markets. Our market share in smart phones was only 3.7% in 2009 but has dramatically increased to 19.9%, giving Samsung Electronics the top market share. We have maintained the largest market share in the global display product markets, including sales of TVs and monitors.

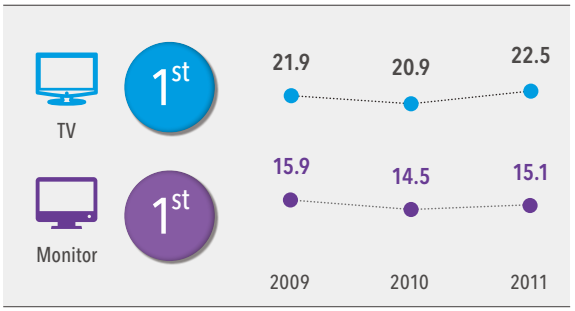
Division Market Share

(%)

Semiconductor

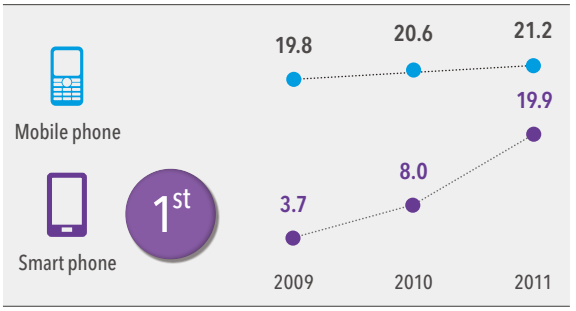


Visual Display



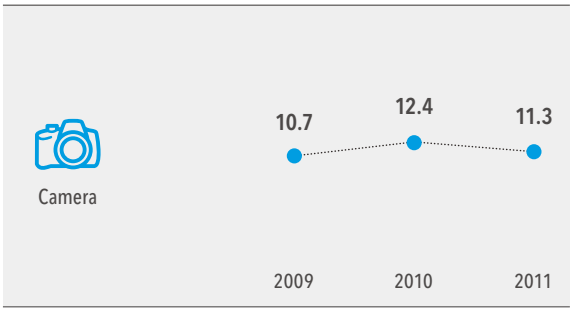
Digital Appliances

Mobile Communications



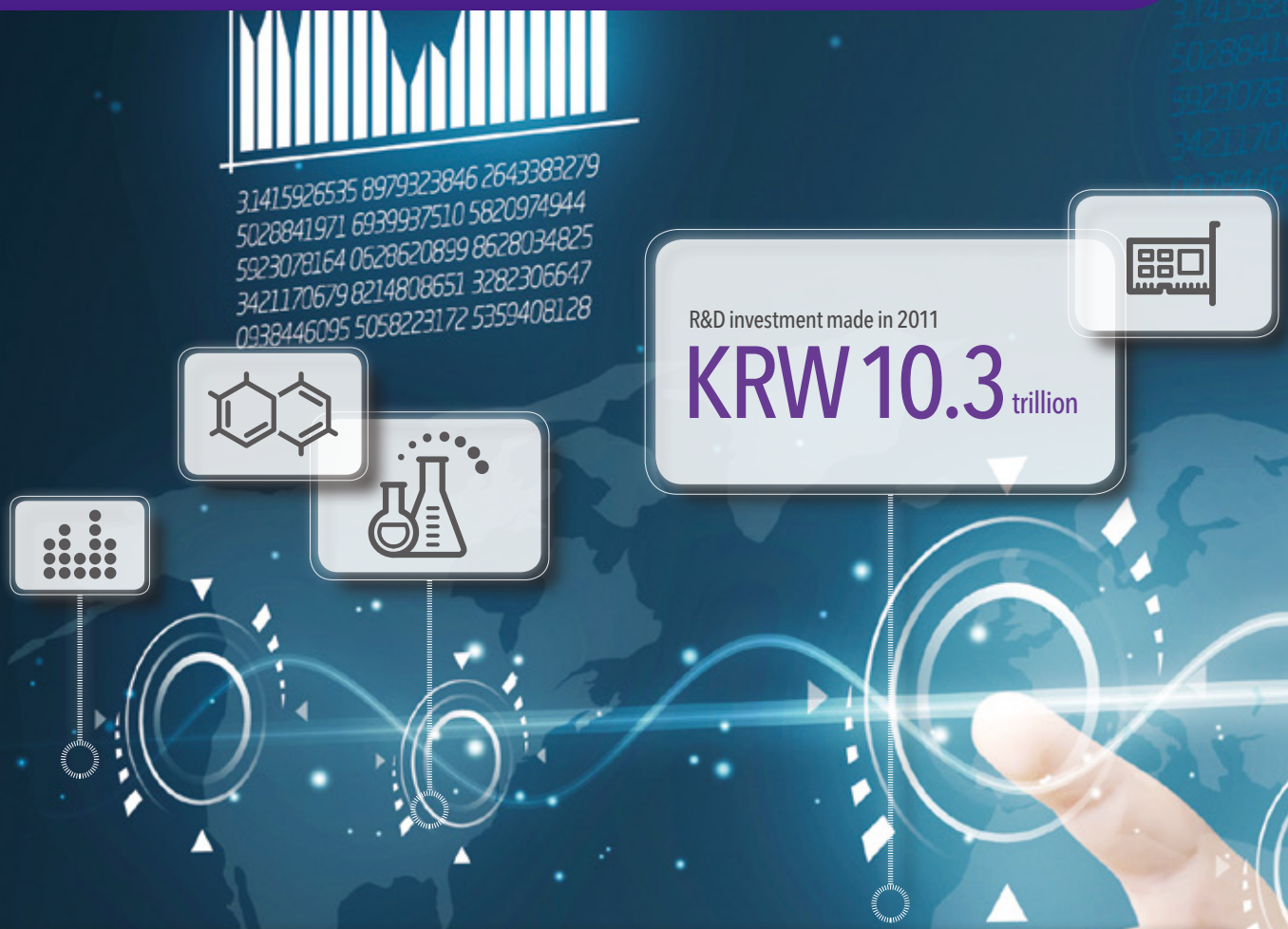
IT Solution

Digital Imaging



- Strategic Analytics (Mobile AP, Mobilephone, Smartphone), GfK/NPD (TV, Refrigerator, Washing machine), iSuppli (DRAM), IDC (Monitor, Printer), Gartner (Laptop), GfK (Camera)

Create the Future



The year 2012 is expected to become yet another year of IT industry restructuring due to continued global economic recession and the emergence of cross-sector industries. Faced with business uncertainties, Samsung Electronics plans to make the largest investment ever to strengthen the competitiveness of existing businesses and establish the foundation of new businesses with the potential to drive Samsung Electronics' growth in the future.

In 2011, we invested in facility expansion totaling KRW 13 trillion in semiconductors and KRW 6.4 trillion in display panel manufacture, which was a 10% greater investment than originally planned.

The 2011 R&D expenses were KRW 10.3 trillion which was equivalent to 6.2% of sales. It was the first time R&D expenses exceeded 10 trillion KRW. We are also building a new research center,'R5', which will host various R&D teams currently dispersed in many parts of the Samsung Digital City for increased synergy. R5 is currently under construction within the Samsung Digital City premises. With completion of R5 in May 2013, Samsung Digital City will become a landmark IT R&D center with more than 23,000 researchers on site.

We also plan to establish the world's largest comprehensive R&D center by combining more than 15 core component research centers including our semiconductor, memory, and LSI research centers. Expected to be completed by the end of 2013, the new R&D center will provide the foundation for a great synergy in our R&D activities on existing products. In addition, the new R&D center will serve as a nurturing station for non-memory semiconductors and next-generation display technologies.

Strengthening New Growth Engine

Samsung Electronics is fostering a medical and bio-business as a core business for the future. We plan to invest KRW 1.2 trillion in the medical industry by 2020 and expand it as a business with KRW 10 trillion in sales. We are also nurturing a bio-similar (bio medicine) business to expand it to KRW 2 trillion in sales.

We have already developed a digital x-ray which uses digital technologies in photo-taking and visual information processing. We also released a sonar device equipped with a 21.5 inch wide LCD panel. We acquired a number of medical device companies including Ray, a manufacturer of dedicated x-ray machine; Madison, which specializes in the manufacture of ultrasonic image analysis; and Nexus, a U.S. company which manufactures a heart disease analysis device.

Samsung Electronics, its subsidiaries and Quintiles jointly established Samsung Biologics in April 2011 and Samsung Bioepis in 2012. Samsung Bioepis will conduct international clinical testing and begin global sales of Bio-similar products in 2016. The creation of a new joint venture has given Samsung complete bio-similar business capacity including product development, clinical testing, licensing, manufacture and sales capacity.

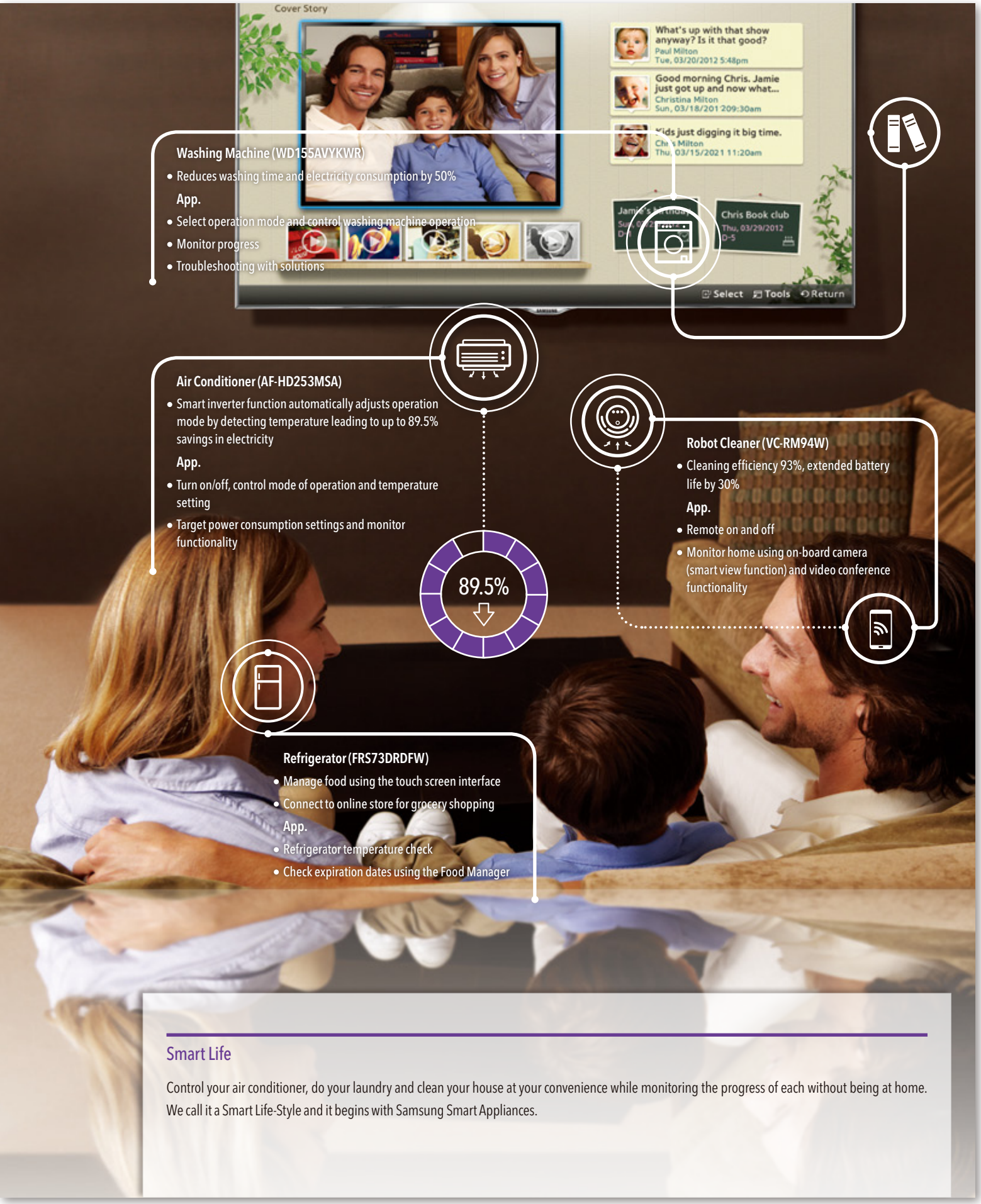
Software Development Capacity

Samsung Electronics increased the recruitment of software engineers and restructured its human resource profile in order to strengthen its software development capacity. We also began the internalization of software development to create smarter and more tailored software for Samsung devices.
First, we established a new independent Software Center under the direct management of the CEO through restructuring in 2011. We also established the Media Solution Center America, which specializes in software, in the Silicon Valley in order to build capacity on content and service development.
We are also recruiting talented software engineers and operating training programs to maximize their capacity. In August 2011, we created a new workforce group 'S' to manage core software experts in mobile apps, operating systems and smart TV software. We also created a special talent-based hiring process for software workforce who falls into the 'S' group instead of a more standardized process which was identical to R&D staff hiring.
A new 'Software Academy' was opened for short-term intensive training of our software workforce. The Academy has the capacity to provide training for more than 5,000 employees and will be responsible for fulfilling 50% of software training needs.

How to Live SMART

Smart Work

Smart Work is a new, out of office working style using the Internet and mobile devices. It is leading us to improved work productivity and to enlarge the scope of collaboration.

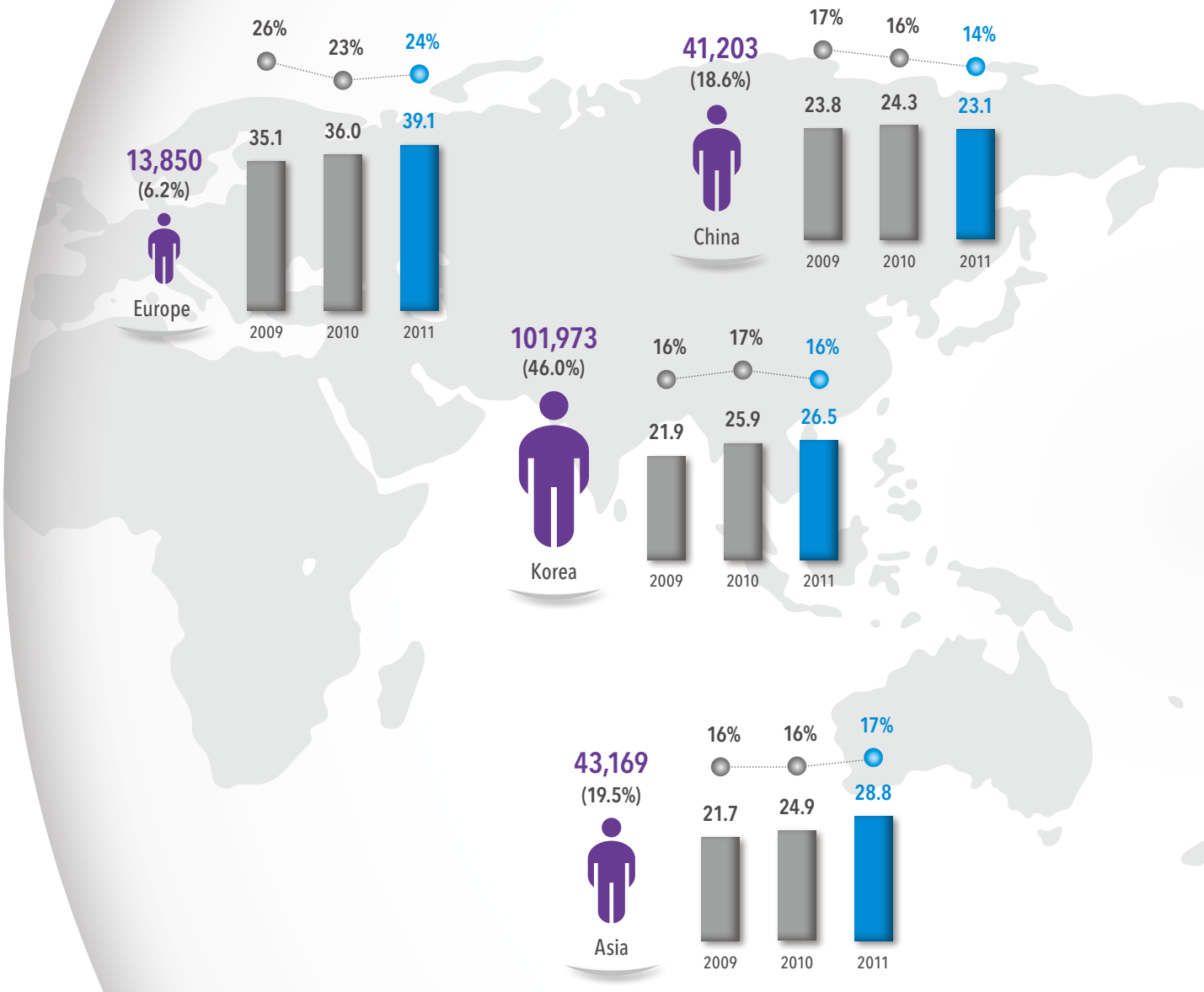


Smart Life

Control your air conditioner, do your laundry and clean your house at your convenience while monitoring the progress of each without being at home. We call it a Smart Life-Style and it begins with Samsung Smart Appliances.

Global Network

Samsung Electronics has a total of 196 subsidiaries around the world. As of the end of 2011, Samsung Electronics' total employment stood at 101,973 working in Korea and 119,753 outside of Korea, with the overseas workforce surpassing the domestic workforce for the first time in the history of Samsung Electronics.



- Numbers in parenthesis indicate proportion of each region relative to total.
- Africa sales/employee is included in Asia.
- CIS sales/employee is included in Europe.
- Central-South America sales/employee is included in America.

Size of overseas workforce
out of 221,726 total workforce

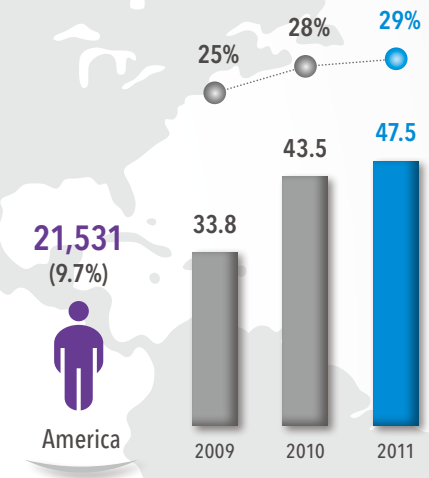
119,753 people

Proportion of overseas workforce 54%

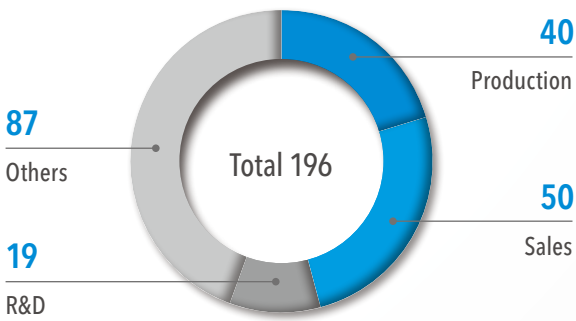
Overseas sales
out of KRW 165.0 trillion in total sales

KRW 138.5 trillion

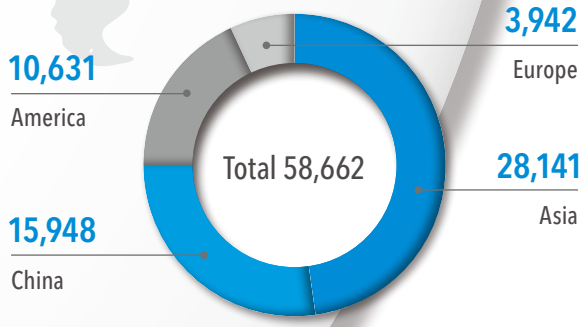
Overseas sales proportion 84%



Global Business Network



Overseas Recruiting



Corporate Governance

Samsung Electronics promotes transparency and accountability using an advanced corporate governance structure. Full support is extended to the board of directors to facilitate creative management with the ultimate goal of maximizing corporate value while every effort is made to enhance shareholder value and rights. The board of directors addresses issues as stipulated in related laws and the company's Articles of Incorporation, and is responsible for overseeing basic policies and major issues concerning the company's operations.

Board of Directors (BOD) Composition

Currently, the BOD is composed of seven members, four of whom are outside directors. The outside directors hold the majority of the BOD, thus ensuring the independence and transparency of the Board's decision-making process. Under the Articles of Incorporation, the Outside Directors Recommendation Committee first selects candidates from a pool of professionals with expertise or experience in business management, economics, accounting, law, or relevant technologies, and then submits their final candidates for the approval of the shareholders at the general shareholders' meeting. The outside directors gather at separate meetings to discuss overall management issues and work on recommendations. All directors are prohibited from engaging in business activities within the same industry without the approval of the board. This arrangement is to prevent conflicts of interest as specified in the Korean Commerce Act and the Samsung Electronics Articles of Incorporation.

BOD Member Profile

Title	Name	Gender	Position	Role
Vice Chairman & CEO	Gee-Sung Choi	M	Vice Chairman & CEO, Samsung Electronics	Chair of the board, overall corporate management
Vice Chairman	Oh-Hyun Kwon	M	Vice Chairman & Head, Device Solutions, Samsung Electronics	Overall management of Device Solutions
President & CFO	Ju-Hwa Yoon	M	Corporate Management Office,Samsung Electronics	Management support
Outside Director	Dong-Min Yoon	M	Attorney at law, Kim & Chang Law Office	Corporate management
	In-Ho Lee	M	Former President & CEO, Shinhan Bank	
	Han-Joong Kim	M	President & Chairman, CHA Strategy Committee	
	Byeong-Gi Lee	M	Professor of Electrical Engineering, Seoul National University	

- As of April 2012

BOD Roles and Responsibility

In 2011, a total of eleven BOD meetings were held to address 28 agenda items. The three-year average attendance rate (2009-2011) of the BOD stands at 94%. For swift and efficient decision-making, committees have been established under the BOD in accordance with pertinent laws. The BOD refers certain matters to the committees to be reviewed by committee members with experience and expertise in the related fields. Currently, there are five committees: the Management, Audit, Outside Director Recommendation, Internal Transaction, and Compensation Committee. The Internal Transaction Committee promotes transparency through the fair trade compliance system and carries out activities to enhance corporate governance. The Audit Committee, comprised of three outside directors, supervises and supports management through a process of checks and balances to maximize corporate value.

Q Further details including meeting agenda and subcommittee activities are available at http://dart.fss.or.kr

Committee Status

Committee	Objectives	Members
Management Committee	Deliberates and decides on matters either delegated by the BOD, or specified in the Articles of Incorporation or the Regulations of the BOD with the aim of enhancing professionalism and efficiency in decision-making	Gee-Sung Choi (chair), Oh-Hyun Kwon, Ju-Hwa Yoon
Audit Committee	Conducts auditing functions under the stipulation of governing regulations, Articles of Incorporation and of the Audit Committee Regulations	In-Ho Lee (chair), Dong-Min Yoon, Han-Joong Kim
Outside Director Recommendation Committee	Recommends candidates for outside director under the governing regulations, Articles of Incorporation and Regulations of the BOD	Han-Joong Kim (chair), Byeong-Gi Lee, Gee-Sung Choi
Internal Transaction Committee	Enhances corporate transparency and promotes fair trade through compliance program	In-Ho Lee (chair), Dong-Min Yoon, Han-Joong Kim
Compensation Committee	Enhances objectivity and transparency in the process of decision of directors' remuneration	Dong-Min Yoon (chair), In-Ho Lee, Byeong-Gi Lee

BOD Activities in 2011

Date	Agenda	Decision	Attendance Status of Outside Directors
2011. 01. 03	Two agenda items including reporting and public notice of a merger with Samsung Gwangju Electronics	Approved	4/4
2011. 01. 28	Two agenda items including approval of the financial statements and business report of the 42nd Fiscal Year	Approved	4/4
2011. 02. 22	Two agenda items including convening of the 42nd general shareholders meeting	Approved	4/4
2011. 03. 18	Three agenda items including assignment of director's duties	Approved	4/4
2011. 04. 29	Three agenda items including approval of the financial statements and the 1st quarter report of the 43rd Fiscal Year	Approved	4/4
2011. 05. 27	Three agenda items including disposal of solar battery business	Approved	4/4
2011. 07. 28	Four agenda items including approval of the financial statements, half-year report, andinterim dividend for the 43rd Fiscal year	Approved	4/4
2011. 09. 15	Contract with SMD for disposal of building property	Approved	4/4
2011. 10. 28	Five agenda items including approval of the financial statements and the 3rd quarter report of the 43rd Fiscal Year	Approved	3/4
2011. 12. 02	Contribution as donation	Approved	4/4
2011. 12. 26	Two agenda items including merger with Samsung LED.	Approved	4/4

Evaluation and Compensation

The BOD and the committees conduct self-evaluations of their annual activities and participation rates every year. Compensation for the independent directors is not linked to performance. For independence reasons, the compensation includes only basic salary and business travel expenses.

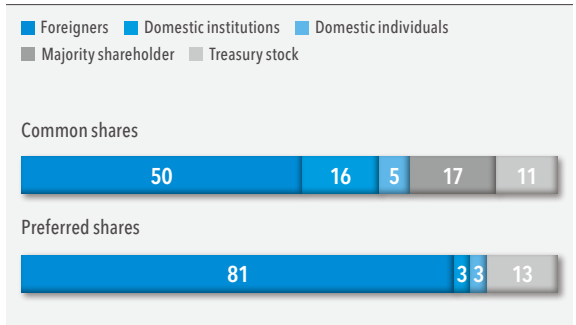
Shareholder Composition

Samsung Electronics is currently listed on the Korea Exchange (KRX). As of the end of 2010, there were 170,132,764 total shares outstanding (147,299,337 common and 22,833,427 preferred stocks). For the convenience of foreign investors, we issue Global Depository Receipts (GDR) in overseas markets. Common stock is traded on the London Stock Exchange and preferred stock is traded on the Luxembourg Stock Exchange. As of the end of 2011, the largest shareholder and related parties owned approximately 15% of the total outstanding shares including preferred stock. Treasury stock accounts for 12% while foreign shareholders own approximately 54% of the shares.

Awards

Presenting Organization	Name of Prize
Institutional Investor	1st place, Best Companies by Country, South Korea 1st place, Technology Sector (Buy-side) Best CEOs/CFOs/IR Professionals/Companies
Money Today Inc.	2011 Money Today IR Grand Award

Share Ownership (%)



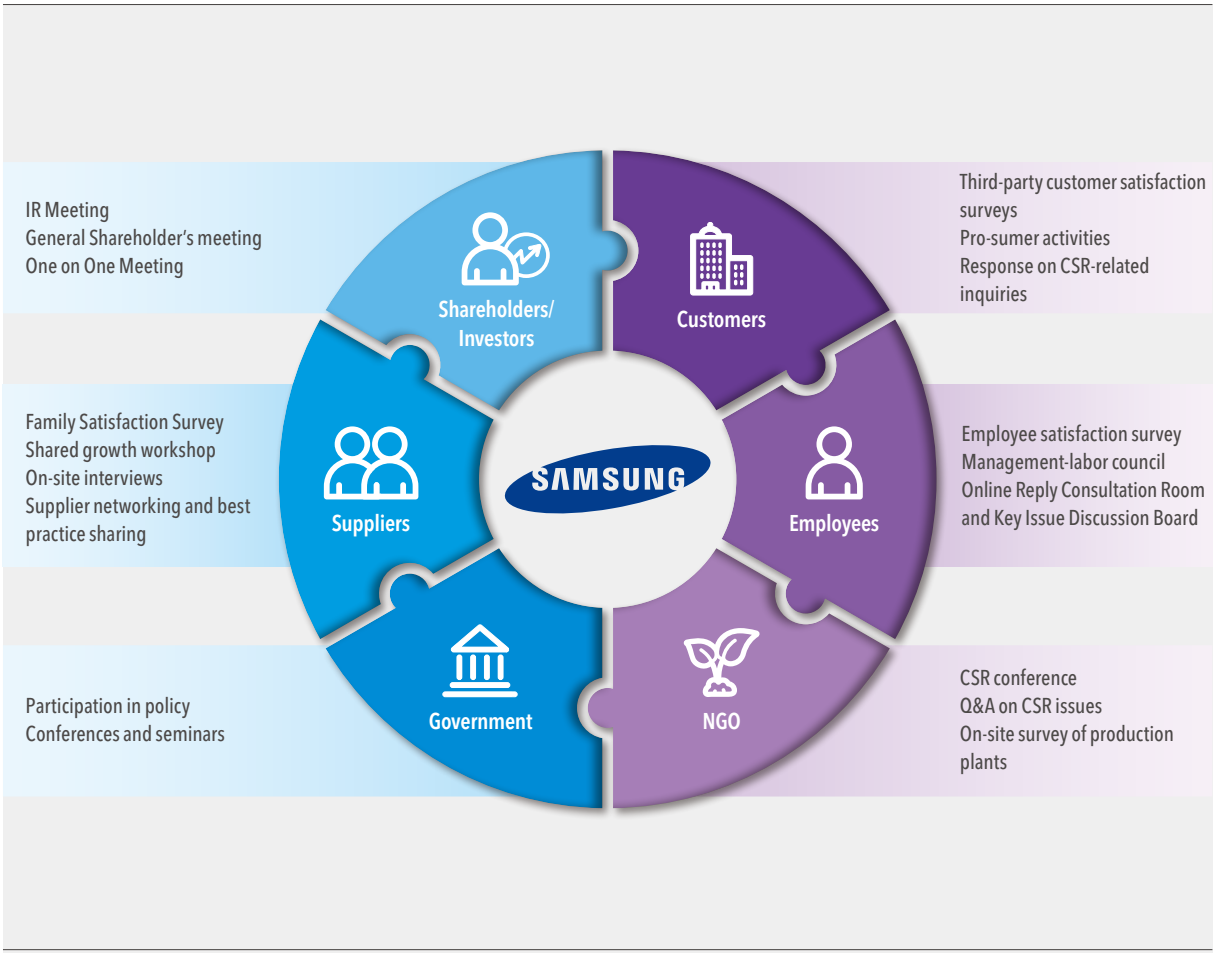
Further details are available on our IR Website

Stakeholder Engagement

Samsung Electronics has been making an effort to establish trust with stakeholder through open communication based on transparency, honesty and timeliness. We have strengthened communication with stakeholders including shareholders/investor, customer companies, suppliers, NGOs, and government through meetings, conference calls, survey and mail on both a regular and non-regular basis.
Key CSR issues raised by stakeholders are discussed during executive meetings with the executive in charge of CSR and high priority issues are then discussed at management meetings hosted by the CEO for responses. This year's sustainability report contains information on sustainable management policies and achievements with focus on CSR issues raised during the process of stakeholder communication.

Stakeholder Engagement in 2011

Shared growth is one the most discussed CSR issue today. In 2011, we held three all executive meetings on our shared growth promotion strategies and implementation status. The key issues for each stakeholder and list of communication activities conducted on each issue is as follows.



Shareholders/Investors

We actively communicated our quarterly business results with our shareholders and investors and also hosted a number of meetings to communicate our CSR policies and achievements. For example, many Socially Responsible Investment (SRI) companies visited the Samsung Electronics Headquarter in Seoul and discussed key CSR issues relevant to the electronics industry. Key issues discussed included GHG emissions, waste management, environmental management targets, and occupational safety issues including allegation on leukemia cases, as well as compliance system management methods.

Agenda	Changes Made on Management Policy
Compliance risk management	Strengthened compliance management organization Implemented signing of pledge on full compliance by all employees and training programs on awareness raising
Water resource management policy setup	Discussed water resource management as a key issue in executive meetings Established water resource management policies and reduction targets
Leukemia	Established and operated Health Research Center Disclosed result of health and safety assessment by independent assessment agency

Customers

Inquiries by customer companies on Samsung Electronics' CSR activities dramatically increased in 2011. A significant number of suppliers were subjected to site audits and improvements were immediately made on some of the issues identified. Relevant policies and plans were also established to address issues that required longer term effort.

Agenda	Changes Made on Management Policy
Reduction in work hours	Improved work shift system to reduce work hours Maintain weekly record on time spent at work in order to reduce overtime (Individual record is accessible only by relevant head of section and each individual)
Supplier CSR policies	Discussed supplier related CSR policies at working level and executive meetings on purchasing Conducted self-assessment and site audits on suppliers CSR
Ban on use of conflict minerals	Key discussion agenda for CSR Executive Meeting and Procurement Executive Meeting Compliance Letter sign-up and supplier training about conflict minerals Investigation on use of conflict minerals and smelters
Compliance with Transparency in Supply Chain Act in California U.S.	Announced Samsung Electronics' commitment on supplier policies including ban on forced labor and trafficking in all supplier companies

Employees

We created Samsung LiVE which is an online open communication platform for employees of all ranks. Many employees post memos on their person lives as well as their opinions on internal issues. The members of top management posts reply on some of the memos posted to enhance understanding between each group and facilitate rich communication amongst members.

One of the online communication channels is named 'Reply Consultation Room' and an active discussion on new products take place. Executives and senior managers take note of opinions posted and reflect those opinions in new products and management policies.

A wide variety of information on guest lectures, new product information, in-depth stories and a series of executive interviews are also offered to employees through Samsung Electronics LiVE. Real-time updates on news of its members are also offered. One of the key features of LiVE is a weekly survey named 'Opinion Barometer' which collects employee opinions on specific issues.

NGO

Many of the international NGOs are going beyond collecting information through reading published materials but by making site visits and conducting interviews with executives. In fact, some NGO representatives requested for visits to production plants in Europe and South East Asia as well as interviews and surveys in 2011, and we provided support for their work. Samsung Electronics has been responding actively to various issues raised by NGOs in the past and will sustain open communication with them.

Agenda	Changes Made on Management Policy
Employee welfare and safety	Made assessments on Samsung Electronics' wage and benefits relative to the average wage in the electronics industry in respective countries. Occupational health and safety policies
Environmental policies and key achievements	Green management vision and implementation structure Hazardous materials, waste water, waste generated GHG emission reduction goals and achievements Product energy efficiency improvement and eco-product development status

Government

Shared growth between large companies and SMEs was the policy focus of South Korean government in 2011. Samsung Electronics actively participated in a public-private dialogue, hosted by the Shared Growth Committee, in order to make active contribution in realizing shared growth objectives. Samsung Electronics made its commitment for fair trade and supplier R&D support measures to strengthen their competitiveness.

As a member of Korea Business Council for Sustainable Development, Samsung Electronics also actively communicated our opinions on climate and energy-related policies. We also raised awareness on the U.S. government's ban of use of conflict minerals, and how it can affect Korea's major industries including steel, automotive and machinery industries and held discussions to call for response on government level.

Agenda	Changes Made on Management Policy
Promotion of a culture of fair trade and shared growth	Maintained 100% case payment policy and increased payment frequency for better cash flow Expansion of free capacity building programs for CEOs of supplier companies
Greenhouse gas reduction target management	Implementation of Energy Management System 10% reduction in electricity consumption and etc.
Ban on use of conflict minerals	Held seminars with Ministry of Knowledge Economy and Korea Electronics Association to raise awareness of the importance of the ban on conflict minerals

Suppliers

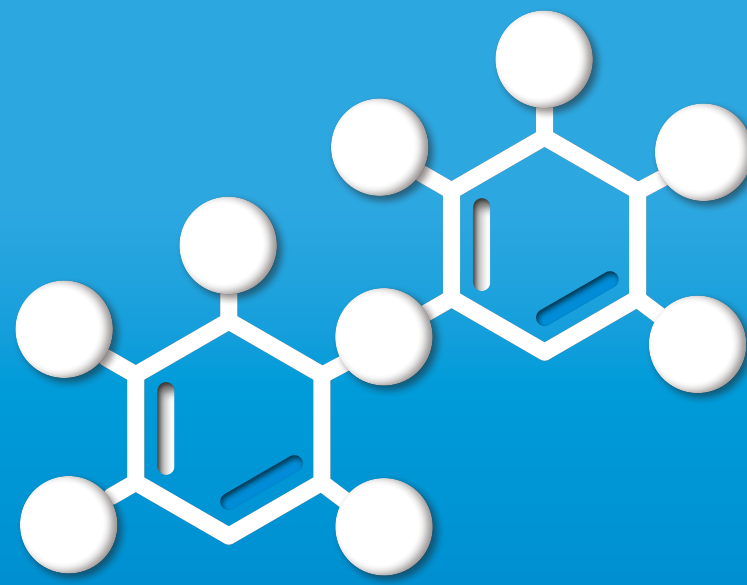
Samsung Electronics has established various communication channels for the collection honest opinions from our suppliers. We have a dedicated supplier complaint and grievance handling system through which suppliers can communicate their problems and find solutions. We are also reflecting supplier opinions collected through training sessions and seminars.

On November 2011, we held our first Shared Growth Communication Fair with 450 participants including CEOs from supplier companies, Samsung Electronics' CEO and executives. Information on various issues affecting suppliers were collected and discussed in order to find management solutions for improvement.

Agenda	Changes Made on Management Policy
Provision of information for business forecasting	Hold business plan sharing meetings twice a year/Hold Seminars on market trend and product trend
Reasonable price setting	Monitor shared growth policy implementation status and create new policies
Reduction in order volume	Share information on changes in order volume and cost-absorption plans before a formal meeting is held
Improvement on payment requirement	Increase frequency of supplier payment within legally permitted range (Between 2 to 4 times per month)

9 Material Issues

01 Creative Organizational Culture
02 Employee Health and Safety
03 Integrity Management
04 Increasing Social Contribution
05 Patent
06 Climate Change and Energy
07 Water Management
08 Mutual Growth
09 Supplier CSR



For the past three years, we have been focusing on openly sharing our sustainability performance results on six key areas including talent management, integrity management, green management, social contributions, win-win partnerships with suppliers, products and services. However, we have decided to include global issues which have the potential to affect Samsung Electronics' business activities and its overall competitiveness in order to further strengthen our communication with our stakeholders.

Nine key issues have been selected through the process. First, a list of issues, raised by external stakeholders including shareholders/investors, clients, business partners, NGOs, the government, and the press shared in meetings, conference calls, surveys and letters was compiled. Then a materiality test was conducted in collaboration with relevant departments including personnel management, compliance, environmental management, and social contributions in order to identify our nine, top-priority issues.

Detailed information on each major issue, including mid- to long-term goals, anticipated outcomes and future improvement measures based on Samsung Electronics' long term business plan and implementation direction is organized in a separate section and can be found on page 49.

Creative Organizational Culture

It has become increasingly important for employees to have vested stake in the growth potential of its company. People expect a participatory work environment where they can feel a sense of dignity, pride, and ownership of the organization's vision.
Samsung Electronics strives to build a creative organizational culture, and acknowledges that the investment we make in strengthening the core competencies of our employees will have a direct impact on our competitiveness. We actively promote a flexible organizational culture that allows employees to pursue a healthy work-life balance, in a dynamic, creative and challenging work environment that is not risk-averse. As an international company we embrace individuals with different background and abilities.

Work & Life Balance through Work Smart

Samsung Electronics has not only contributed to balancing work and life but also to improving productivity by adopting a flexible work schedule in Korea to help eliminate unnecessary overtime and to maximize work performance through effective time management. We introduced a pilot, flexible work schedule in our TV, mobile phone, and consumer electronics sectors beginning in 2009 and expanded it to all divisions in 2010.
Under this new effort, employees arrive at work between 6.00 a.m. and 1.00 p.m. and to work eight hours per day. As of March 2012, approximately 65,000 Korean employees have taken advantage of this system out of a total of 100,000 Korean employees.
We believe it is important for everyone to be able to assume personal responsibility for their time. This will continue to contribute to a working atmosphere that allows employees to focus on their job in an autonomous and creative atmosphere.

Work Smart History

Jan. 2009	2011	End of 2011	April 2012
Introduced work smart scheme	Incorporated remote working and working at home scheme	More than 60,000 employees benefitting from flexible working system	Introduced extended flexible working system as a pilot scheme

Smart Work Center Operated since May 2011

Remote Working and Working at Home Scheme

Establishing a Work Culture that Encourages Learning and Development

Samsung Electronics has established a Creative Development Research Institute System to provide employees with opportunities to pursue creative new ideas that take full advantage of their talents and professional passions in a way that encourages taking risks.

This new initiative encourages employees to be more entrepreneurial in developing creative ideas that can become new businesses. Once an employee's plan is accepted, they may concentrate on the project as a member of a task force for up to one year. During this period, they will be free from their usual responsibilities and may receive a dedicated work space, development expenses and necessary equipment as appropriate. Successful outcomes are encouraged through an incentive program, however they are not subject to penalty if they don't achieve their goals.

The first outcome of the Creative Development Institute, 'eyeCan,' was launched in February 2012. The eyeCan is a special mouse for the disabled, which allows its user to use a computer using eye movement. Unlike existing eye mouse products, which cost more than KRW 10 million, the eyeCan mouse can be manufactured for less than KRW 50,000. The software and manufacturing technique for this product that assists the disabled has also been made available for non-commercial use. Samsung Electronics will continue to support similar technology projects that our talented workforce introduces to assist those in need.

Eye Mouse for the Disabled

Creative Development Institute Employee

Eye Mouse Demonstration

Talent-Based Recruiting of Software and Design Experts

Samsung Electronics held its first 'Future Creator Challenge' - a strictly talent-based recruiting process designed to aggressively hire new employees in software engineering and design, two fields where creativity and expertise matters the most. Past recruiting efforts may have placed a heavy emphasis on university studies and growth potential. This new process was created to hire the most talented experts in the field today.

Unlike the regular recruiting process, applicants are exempt from taking a written examination. Instead, they submit applications that serve as evidence of their talents including a list of awards, professional certificates, a resume, essays and their portfolio. Selected applicants are taken through two in-depth interviews. The focus of the first interview is on capacity-testing and technical ability. During the second interview, the applicant is asked to make a presentation on detailed ideas and solutions they found on a task they were given a week prior to the interview.

Diversity Management

Samsung Electronics has developed various activities to create an atmosphere in which each employee can flourish. As Samsung has grown in to a leading, global company it has become essential for us to ensure that our workforce reflect the diversity of the global markets we serve. Every employee, regardless of gender, race, or country of origin must have a voice. The number of female employees has increased 20 fold over the past years even as the personnel structure has been globalized in line with expansion of overseas businesses. At the end of 2011, the percentage of female employees has increased by 4% since 2002, while non-Korean employees showed an 8% increase from 2009, to 54%.

Female Employees

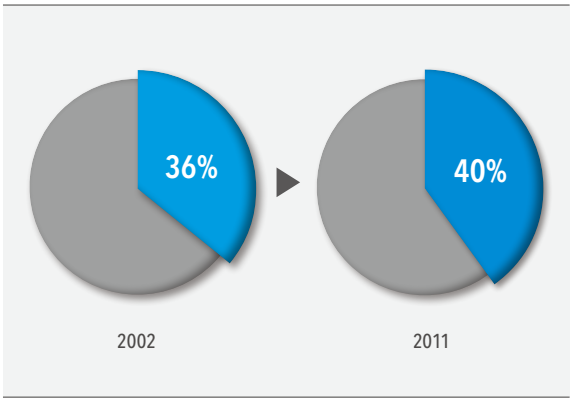
Samsung offers a variety of programs for women that prevent their career from being interrupted due to child care obligations. In addition to building a pleasant work environment so that all employees can be fully committed to both work and home, parental leave can be arranged in a flexible manner to support female employees with children under 12 in Korea. Samsung is also working to - increase in-house child care facilities.

With the goal of doubling our current capacity for accommodating children at our in-house child care facilities to 1,430, our Giheung child care center, which can accommodate 300 children, was launched in 2011. The Suwon child care center can accommodate 300 children and we are expanding its capacity to 600 by 2012. This is expected to be the largest child care center operated by a Korean company.

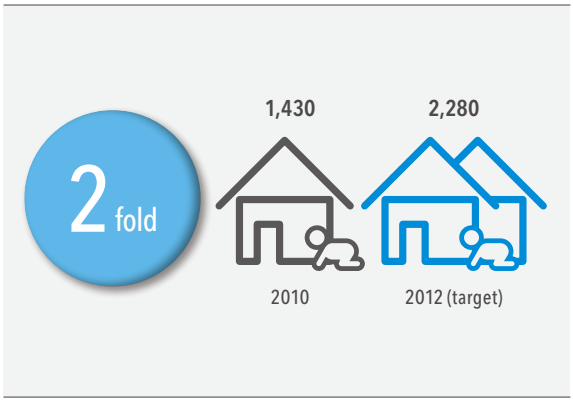
At the same time, we have introduced a flexible workplace policy where employees who have pre-school aged children can work from home or at the nearest smart-work center. Smart-work centers were built in two locations, Seoul and Bundang, in 2011. These smart-work centers offer employees who applied for the flexible workplace policy a space where they can use facilities such as teleconferencing systems, meeting rooms, nursing rooms and other amenities at a time convenient for the individual.

In addition, we have strengthened our networking and education programs. In order to achieve our target goal of raising the percentage of female executives by more than 10% within the next 10 years, we have increased hands-on training opportunities for women, and we plan to increase the proportion of female regional experts from the current rate of 20% to 25–30%. Furthermore, to encourage mentoring and an increased professional dialogue among female managers, we are supporting the development of networks for women.

Proportion of Women in Workforce



Expansion of In-house Child Care Facilities Capacity (persons)



Disabled Employees

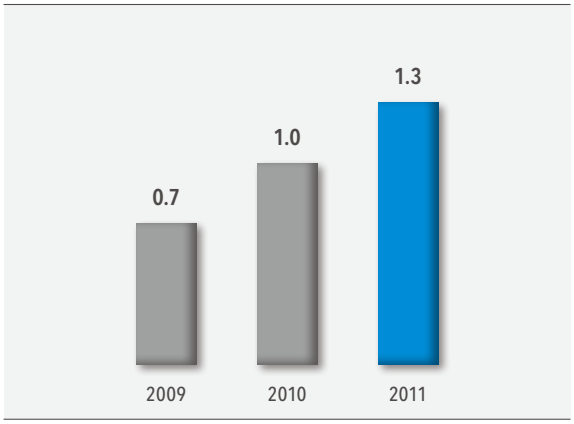
We have 1,100 disabled workers at our headquarters, and we are hiring an increased number of disabled workers to provide job opportunities and to help build their careers. In 2011, we implemented a separate open recruitment program for disabled graduates to open the doors for the students. We have recruited 280 disabled graduates through the new process, while providing them opportunities to live up to their full potential in business world and society.

Meanwhile, we also operated "Stepping Stone," a 2-month internship program for disabled college students. Internees are entitled to take employment wages and group accident insurances. In addition, those with excellent results after the internship will be favored for full-time positions during open recruitment.

We have introduced a certification scheme called "Samsung Barrier Free (SBF)" at the workplace level in order to evaluate the work environment for disabled workers and to reinforce our continuous efforts to complement the facilities. In 2011, Samsung Electronics completed the evaluation of its Korean workplaces and installed elevators, bathrooms, ground bus bars, and other facilities.

Besides improving facilities, we also carried out collective training courses that target department heads within workplaces that have disabled staff with severe illness in order to break the interpersonal barriers that exist toward disabled employees as a part of our ongoing efforts. We highlight the importance of understanding and improving the methods of communication with our disabled employees to build a culture for an ideal workplace.

Rate of Disabled Employees (Korea) (%)



Disabled Employees Support System

- Expansion of Disabled Employment by hiring experts in disabled employee recruitment
- Operating the Stepping Stone Internship Program for college students with disabilities
- Expansion of facilities via Samsung Barrier Free (SBF) certification scheme

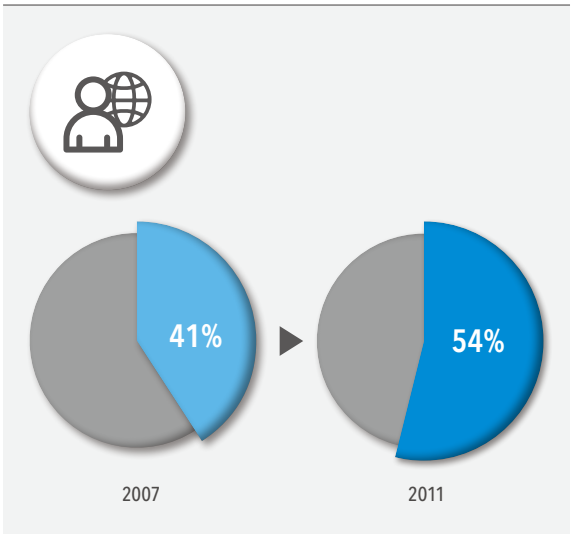
- Samsung Barrier Free?
  Samsung Electronics' internal facility certification scheme to provide physically and mentally barrier-free environment to disabled employees

Global Diversity

Samsung Electronics continues its efforts to encourage its employees toward creativity and better work performance by investing in infrastructure, embracing diversity, and raising awareness in working together.

In view of our ever-growing global workforce, we introduced a reverse deployment scheme under which foreign employees are dispatched to Korea to experience Samsung corporate culture and to alleviate cultural differences. At the same time, to enhance the efficiency in managing the global workforce, we also aligned the HR system to standardize the position evaluation system. In particular, we run a "global help desk," targeted at foreign employees in Korea who do not speak Korean, which provides necessary information and various services needed for life in Korea, starting with supporting VISA applications to everyday life in Korea. Wide varieties of activities are supported for foreign employees in Korea, such as Korean language classes and dedicated group activities; also, all the internal materials are translated into English.

Proportion of Global Work Force



Employee Health and Safety

The electronics industry is fast-changing and requires the development of new technologies, production techniques and materials. Samsung recognizes the value of accurate health impact analysis and preventive measures, and is striving to provide a safe working environment for all employees.
Despite the efforts made, health and safety of the semiconductor production line has become an issue. We commissioned a third-party expert to conduct a detailed analysis of the production line and disclosed the report to the public. We have also established a dedicated employee health research institute to further assess potential health issues and devise preventive measures.

Employee Health Management Program

Samsung Electronics provides annual health checks to help employees monitor their health. In addition, our employees have opportunities to consult with health experts including doctors and nurses.
Today, stress is one of the leading problems for employees. It is not only a risk to personal health but business management. Samsung Electronics has more than 200,000 employees working side-by-side, and we understand the importance of managing their stress not just for the benefits to Samsung, but for the benefits to our employees' families and society, in general. Currently, we are operating consultation centers, conducting yoga lessons and meditation programs, as well as volunteer activities to help employees stay productive in a supportive working environment.
In addition, we have established Musculoskeletal Disorder Prevention Center to correct the ergonomics of our employees' workplace posture and to prevent musculoskeletal disorders. We hired a team of full-time sports science experts, and they are conducting basal physical fitness analysis, vertabra check, balancing ability and others using specialized equipment, and provide the musculoskeletal correction and controlled training programs for our employees' musculoskeletal disorders prevention.

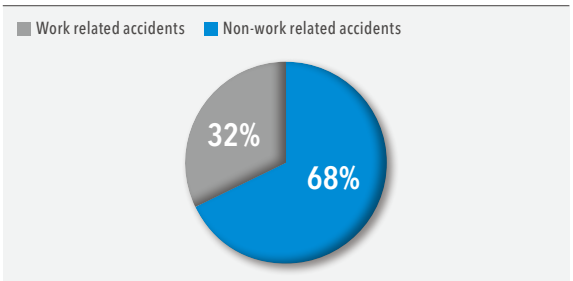
Musculoskelatal Disorder Prevention Program

Basic Checkup	In-depth Diagnosis	Exercise Treatment Program
Basic fitness condition	3D vertebra check	Musculoskeletal remedial massage
Range of motion	Comprehensive test	Tailored exercise treatment
Flexibility test	Balance ability	Rotatory exercise
	Multi-joint measurement	Special three-dimensional exercise

Industrial Accident Prevention

The industrial accident rate has increased in 2011 compared to the previous year. However, 68 percent of accidents occurred due to non-work related activities such as in-company team building activities. Samsung Electronics has published a safety guide on non-work related activities to better prevent these types of injuries from happening.
Comprehensive safety training is conducted on regular basis, covering a wide range of risks including occupational risks, employee health management tips and other risks that may affect health and safety of employees.

Industrial Accident Types (Korea)



- Non-work related: 46 cases, Work-related: 22 cases

Semiconductor Production Line Work Environment Assessment Results

Samsung Electronics made a detailed assessment of health and safety of Samsung's semiconductor production line from July 2010 to June 2011. Samsung commissioned ENVIRON, a world leading technical and scientific consultancy firm on health and safety, with the support from international health and safety experts at Harvard, Yale, Johns Hopkins University and the University of Michigan. Their findings were reported at an academic seminar held by the International Commission on Occupational Health 2012.

A simulation of the old Samsung Electronics semiconductor production line was conducted and studied using state-of-the-art methods. The simulation results indicated that the level of hazardous chemical exposure to production workers was very low and not enough to cause serious disease. The study concluded that all occupational health risk factors were managed adequately for worker safety.

The simulated assessment on the work environment of the old semiconductor production line indicated that it did not have impact on causing leukemia and lymphoma in workers, concluding that there is no link between the semiconductor production line work environment and the occurrence of occupational cancers.

Samsung Electronics has created an official blog in order to actively communicate the truth about industrial health and safety associated with semiconductor production lines in a transparent and open manner. The full report by ENVIRON can be found on the blog in addition to other facts and data on this issue.

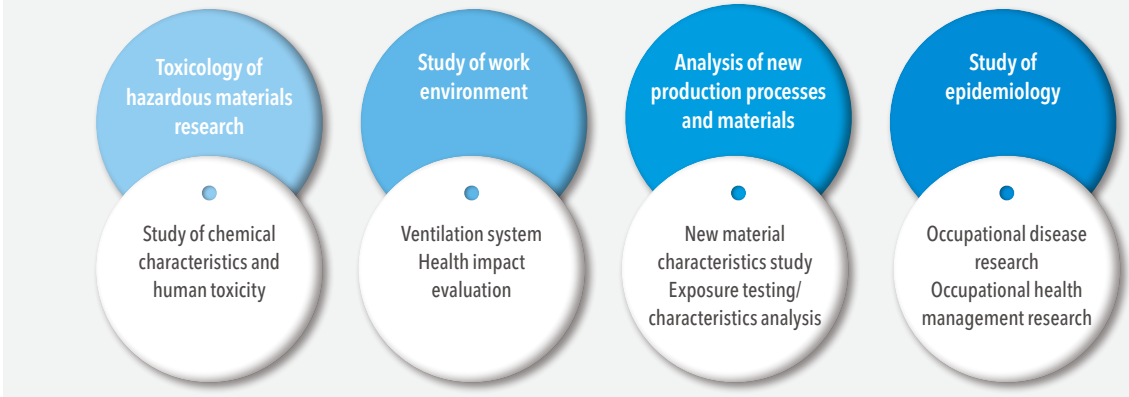
We are continuing to strengthen occupational safety by implementing an 'Occupational Health Management Improvement Plan' which consists of more than 20 safety improvement programs including improved communication about hazardous materials with internal/external stakeholders and better management of hazardous materials.

Employee Health Research Center

Samsung Electronics established a dedicated Employee Health Research Center and hired highly-qualified occupational health experts in 2010 in order to better understand potential occupational health risks. The center is focusing on four areas of research including toxicology of hazardous materials, the work environment, analysis of new production processes as well as materials and epidemiology, with a vision of becoming an 'industry-leading occupational health and environment research center.' The center initially focused on studying issues associated with semiconductor production, but it is now expanding its research scope to other business areas.

Its research work has been focused on the identification and research of potential health hazards, exposure tests, risk management and health impact studies, with 17 reports published in 2010 and 24 reports in 2011.

Role of Health Research Center



Integrity Management

Samsung Electronics is striving to strengthen ethical business management, legal compliance and integrity management to provide positive contributions to the advancement of the society in which we operate.
Samsung Electronics considers the importance of detailed corruption prevention measures in order to protect the company from undue negative business impacts caused by unethical conduct. Recognizing this, we have been striving to improve our integrity management and legal compliance through a strengthened compliance management structure, as well as employee training in business ethics to cultivate an organizational culture that stresses compliance.

Strengthening Compliance Management System

The importance of legal compliance and business ethics is increasing as Samsung Electronics is expanding its business into global markets. Samsung Electronics, therefore, established a compliance team in 2010 in order to further strengthen the compliance management structure through the implementation of programs including publication of a compliance management manual, establishment of an evaluation and compensation structure, analysis of compliance status, and identification of improvement measures.
In addition, Samsung Electronics expanded its Global Legal Affairs & Compliance Team from 200 to 270 personnel for more effective operation in 2011. Major business divisions including VD, Mobile, and DS each also set up a separate compliance team to further reinforce a compliance management culture within each division.

Internal Awareness Raising on Compliance

Samsung Electronics is well aware of the importance of establishing a strong compliance culture as a core value for all employees and top management, as well as strengthening of the compliance management organization. In order to assert our commitment to compliance, we declared a zero-tolerance principle in all cases of misconduct and unethical business conduct on "Law Day" on April 25, 2011. In addition, all employees and executives signed a pledge of compliance which commits each to abide by all Korean and foreign laws, as well as Samsung Electronics' code of conduct, in addition to agreeing to take responsibility for any violations or misconduct.

In order to raise internal awareness on compliance, Samsung Electronics developed and strengthened the training programs for new and existing employees. A total number of 262,922 employees (Compliance training for 186,391, Corruption prevention training for 76,531) participated in 27 courses in six different categories on compliance management in 2011.

Declaration of Compliance Management

We will abide by all Korean and foreign laws, as well as Samsung Electronics' code of conduct in all areas of business and will not tolerate any illegal conduct.

We will never compromise our compliance standards and will report all acts of illegal conduct to the company immediately should any misconduct occurs.

We are committed to the promotion of the compliance management practices set forth by the company and will actively contribute to building a compliance culture.

Compliance Training

Category	Course Description	No. of Participants
Changes in Compliance Management	Six courses for new recruits	54,106
Division/job-specific compliance issues	Ten courses including subcontractors and strategic materials	6,006
Specialized course for overseas work force	Five courses for elite and overseas posted employees	187
Advanced courses for senior management	Two courses including Global Strategic Council	662
Webzine	Two courses including fair trade and insider trading	40,643
e-learning	Two courses on personal information protection	84,787

Off-line education On-line education

Corruption Prevention Training

(persons)

2009	2010	2011
8,347	19,981	76,531

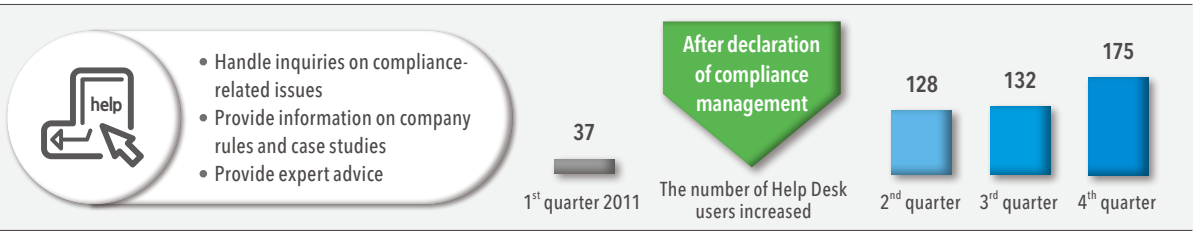
In addition to offering training programs, employees are offered a compliance self-test kit. consisting of a check list on general compliance rules and job specific compliance issues, employees can assess their level of understanding of compliance issues including bans on collusion with competitors, bans on unfair trade, protection of trade secrets, anti-corruption protections, and customer information protection available according to the self-inspection checklist.

Strengthened Policy Measures for Compliance Management

Samsung Electronics operates a Help Desk, which employees can call as a part of the Compliance Program for Management System for any inquiries and for clarification on compliance issues that are not clearly defined in the compliance manual. The number of inquiries submitted to the Help Desk has increased gradually in early 2011, and sharply increased after the Samsung Electronics' declaration on zero tolerance for non-compliance in April of that year. The increase in the number of user inquires indicates improved employee awareness of legal compliance, as well as contributions made by the help desk in its promotion.

We also have a non-compliance reporting system for early recognition of potential non-compliance cases. The system can be accessed by all employees and personal information of all informants is strictly protected in order to prevent any negative influence for reporting problems.

Expansion of Compliance Help Desk Services (cases)



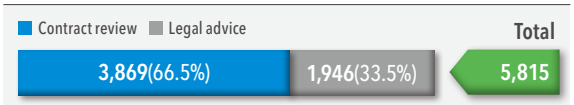
On-site Compliance Inspection and Monitoring System

We are conducting regular on-site compliance inspections of local and overseas subsidiaries, and we are using the findings to make improvements in compliance policies and employee training on compliance awareness. Actions on improvements made to the compliance management system and its benefits are monitored on a regular basis.

IT-based Legal Affairs Support Service

We established an IT-based legal affairs support service system which provides review of contracts and legal advices in order to improve our compliance management. The Contract Life Cycle Management System was recently launched for managing contract-related work.

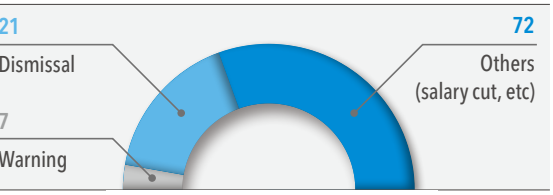
No. of Legal Affairs Support Service Used in 2011



Ethical Management Website Operation

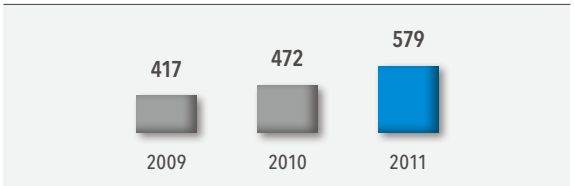
A multi-language web site on ethical business management has been established to offer information on ethical business management in 13 different languages including English, Japanese, Chinese and Polish. A dedicated unethical business conduct reporting system (http://sec-audit.com) was also created for external stakeholders to report on unethical business conduct of any Samsung Electronics employees.

No. of Corruption Reports Handled



• Scope: No. of reports filed to the Cyber Audit Team

No. of Complaints and Corruption Reported



• Scope: No. of reports filed to the Cyber Audit Team

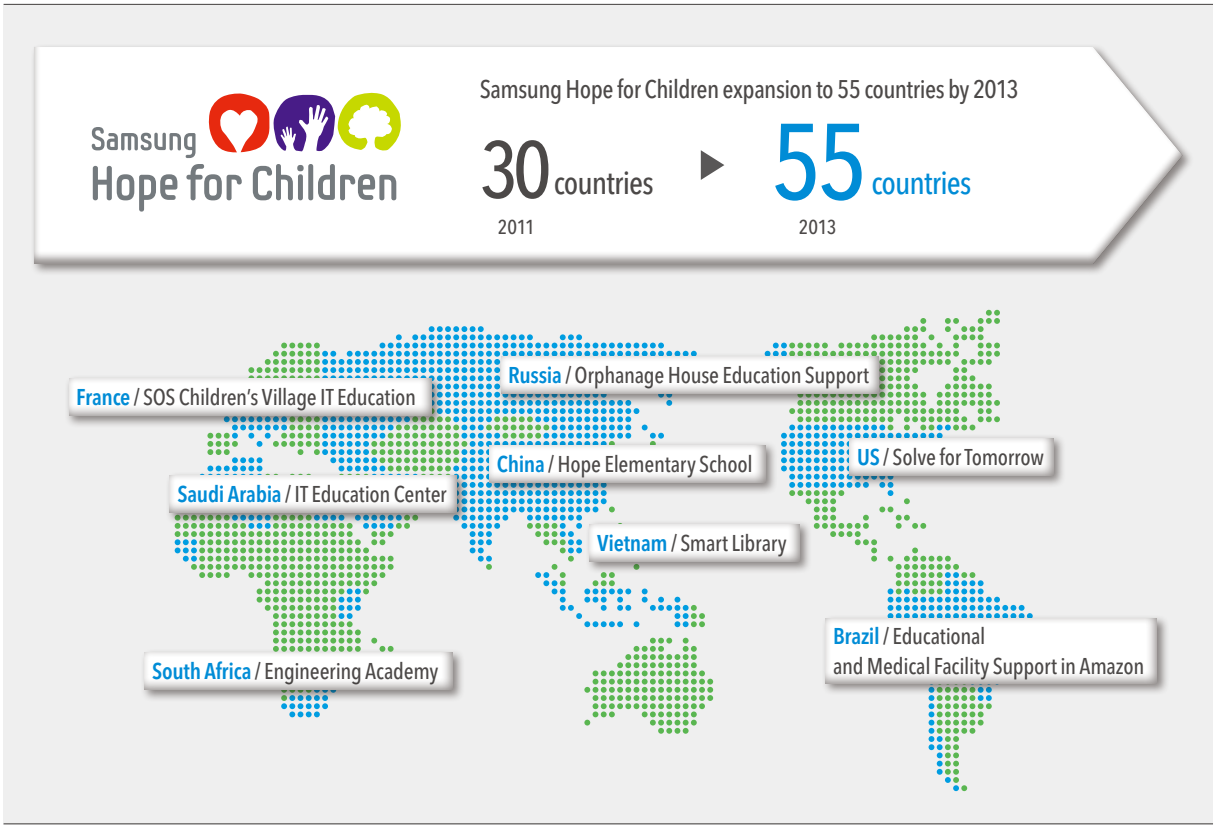
Increasing Social Contribution

The continued economic crisis and recession, the growing gap between rich and poor, as well as the growing unemployment rate, have led to a strong demand for more responsible capitalism. As a result, society is demanding not only the government but the business sector to take responsibility for problems of the capitalism system.
As a responsible corporate citizen, Samsung Electronics believes that we must play a vital role in maintaining and enhancing the sustainability of local communities in which we operate. We are seeking a fundamental solution to the problems we are facing today, in addition to increasing our traditional contribution programs in donations and volunteer activities.

Launching a Global Social Contribution Program

In 2011, Samsung integrated various social contribution activities which have been conducted in different regions into a single program titled 'Samsung Hope for Children.' Focused on supporting good health and education of children and youth, Samsung subsidiaries in different regions conducted various support programs including youth education support, low-income youth health benefits and job trainings, tailored for needs of the youth and children of respective local communities. In 2011, Samsung Hope for Children program activities were conducted in 30 countries in nine different regions. We plan to expand the program to 55 countries including Turkey, Malaysia, Canada and more.

Global Social Contribution Activities



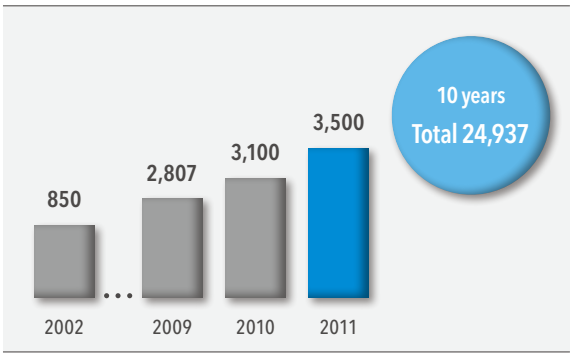
The result of 10 years in North America

In 2011, Samsung Hope for Children (formerly Four Seasons of Hope), organized by Samsung Electronics' North American Regional Headquarters, and known as one of American top charity events, ended in great success with celebrities including former President Bill Clinton, Demi Moore, and Jennifer Lopez attending the event to celebrate its 10th anniversary. The Samsung Hope for Children initiative is a fund-raising program which collects a part of the profit from sales of Samsung Electronics products in the US for donation to several charitable organizations. A total of US$1.4 million was donated in 2011.

In 2011, President Obama launched an "Educate to Innovate" campaign to improve the participation and performance of American students in science, technology, engineering, and mathematics (STEM). President Obama also announced a plan to allocate USD 100 million to support science and math teachers in 2012.

As a leading IT company, Samsung Electronics held a competition, titled "Solve for Tomorrow." Designed to support STEM education, the competition invited students to develop local environment improvement ideas. Participants apply their knowledge of STEM to solve real-world problems using donated technology products from Samsung Electronics and its partners. Approximately 1,500 schools across America entered the competition, and West Salem High School in Oregon was selected as the grand prize winner based on online voting results and reviews by experts.

Samsung Hope for Children Donation in US (USD thousand)



● Four Seasons of Hope program was renamed

Korea – Children's Learning Center

Samsung Electronics supports local children's learning centers for low-income families as part of its youth support program. The first local children's learning center in Onyang was jointly launched in collaboration between the local community center and Samsung Electronics' employees who volunteered to tutor elementary school students at the center. Because the program is only offered to current elementary school students, our volunteers launched night classes every Tuesday, Wednesday and Thursday to extend the tutoring program to students beyond elementary school.

Many students who participated in the program entered high school with merit-based scholarships in 2010 and 2011. The positive turnout at the Onyang local children's learning center led to the establishment of a similar learning center for children in Gumi in collaboration with the Gumi Regional Education Office and the Gumi Volunteer Center. The local children's learning center not only provides education, health and cultural experience programs but also focuses on improving the welfare of the children by offering dinner and other support. College students who tutor in these local children's center not only take an opportunity to make a positive contribution, but receive compensation to help them pay their tuition and expenses. We plan to open other children's learning centers in other parts of Korea in the near future.

Children's Learning Center

Africa

According to a recent report by the World Bank, Africa has entered a high economic growth phase as China did 30 years ago and India did 20 years ago. Africa, with the presence of 300 million middle class citizens with a daily consumption of more than US$20, is evolving into a land of opportunity. Samsung Electronics publicly announced its sales goal of KRW 10 billion by 2015 in Africa, and launched a range of Samsung Hope for Children programs. Samsung Hope for Children in Africa is designed to provide educational opportunities as well as other various community support programs. Thanks to the effective social contribution programs, Samsung Electronics was selected as a one of Africa's 10 Most Valued Brands in 2011.

Engineering Academy

Samsung Electronics launched the Samsung Electronics Engineering Academy in South Africa in March 2011. The Samsung Electronics Engineering Academy provides hands-on, vocational skills training for 120 Grade 10-12 students selected through recommendations. All members of the first graduating class in 2012 succeeded in finding jobs. As a part of Samsung Electronics Africa's broader goal to develop 10,000 electronics engineers across the continent by 2015, a second academy was launched in Kenya in February 2012, and a third academy will be founded in Nigeria in July 2012.

Solar LED Lanterns

Electricity coverage in Africa averages about 20% but for some countries, the coverage is less than 5%. In order to improve the level of electricity access, Samsung has teamed up with the Korea International Volunteer Organization (KVO) and donated 1,000 Solar LED lanterns in the village of Oromia, Ethiopia. Manufactured using durable Samsung Electronics' parts including LEDs, solar panels, and batteries, the LED lantern is designed to last for more than 10 years.

Solar-powered Internet School

In October 2011, Samsung unveiled its first Solar-Powered Internet School in South Africa. The solar panels, installed on the roof of a 12-meter long container house, can generate enough electricity to power and operate all the electronic equipment inside the classroom for up to nine hours. This allows students to concentrate on their studies without having to worry about electricity or Internet connectivity. Up to 21 students can use the classroom which is equipped with a 50-inch electronic display screen, Internet-enabled solar-powered notebooks, Samsung Galaxy tablets as well as Wi-Fi-enabled cameras.

2011 Employee Volunteer Programs

Employee volunteer programs in Africa commenced in 2010 and in 2011 increased the number of employee volunteers to 150. The participating employees were sent to Sudan, Zambia, Ghana, Ethiopia and the Republic of Congo. In 2011, 2,100 Samsung employees applied for the overseas volunteer program in Africa, recording a ratio of 14 applicants for each slot. Selected applicants spent their summer vacation in Africa while conducting volunteer activities. The volunteer activities included computer lessons, renovation of school buildings, and Taekwondo lessons. The volunteers also participated in cultural exchange programs such as lessons on traditional African musical instruments.

Solar-powered Internet School

Samsung Hope for Children Goal for Africa

Provide education and medical support to 5 million people in Africa by 2015

5 million people

Patent

The corporate competition paradigm is rapidly shifting from tangible assets such as price, functionality, quality, and other criteria to intangible assets such patents, designs, and the like. Now, intellectual property does not comprise just the results of R&D activities but is recognized as a business and industry. Under these circumstances, Samsung Electronics regards development of key technologies and strengthening of its intellectual property rights portfolio as having core value, and the company has made various efforts to protect its valuable intellectual property patent rights. First of all, a dedicated team for patents was reorganized. We also prepare active defensive measures against potential lawsuits through active patent applications. Moreover, we continuously strengthen our patent alliance by expanding a cross-license patent cooperation strategy with global IT companies.

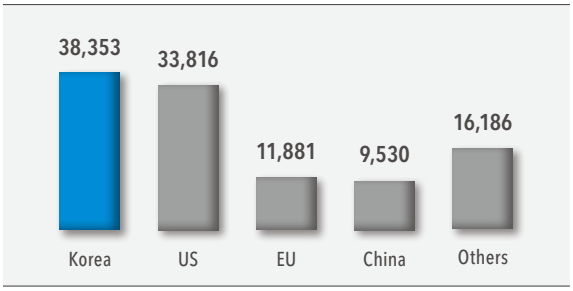
Patent-related Capacity Building

Last year, the number of patent-related disputes and litigation soared in the United States, the European Union, and in other major economies; the global hegemony of smart devices warns that the war is only going to accelerate. In fact, as the competition in technology is ever intensifying, while the convergence of different IT technologies is in trend, the patent disputes are bound to become fiercer.

In particular, it is the smart device as with a combination of communication, video, and software with rapid technology innovation cycles that has escalated patent competition. Samsung Electronics expanded the strength of its workforce significantly and reorganized the patent-related organization in order for it to protect its know-how in technology and to sustain its competitive edge in 2010. At the end of 2010, based on a rapid decision-making process, the Intellectual Property Center (IP Center), affiliated with the Samsung Advanced Institute of Technology, was brought directly under the pursue of the CEO. Meanwhile, the organization integrated scattered IP applications and related services, excluding work closely linked with R&D, under one center, and strove to strengthen the patent-related organization and secure professional manpower via recruiting outside experts.

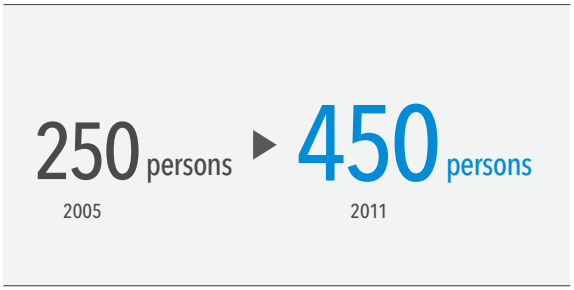
Current Patent Applications' Status, by Country

(no. of patent applications)



● As of the end of 2011

Expansion of Patent Workforce



Securing Patents through Partnerships

Samsung Electronics proved the enormous strength of its patent protection portfolio by signing cross-patent contracts which allow a broader cross-use of patents with other global IT companies. We shook hands with Qualcomm (mobile phones), Kodak (camera technology), Rambus (entire semiconductor products), and Sharp (LCD panel module) in 2010, followed by deals with IBM and Microsoft (MS) for the cross-license of technologies of the mobile phone operation system. In particular, through the partnership with MS, we obtain the various basic patent rights related to MS operating system technologies, and synergies are expected to be generated at the time of development of future mobile phone products.

Acquiring a company is also an effective means of developing patent competence as it allows the obtaining not only of the technological capacity but

also the patent rights of the company. We obtained the basic source of Electro Wetting Display technology, which is emerging as a core technology for the next-generation display, by acquiring Liquavista, a Netherlands-based display research and development company in 2010. This is part of the strategy to strengthen our position in the e-paper and large advertising field in the display market.

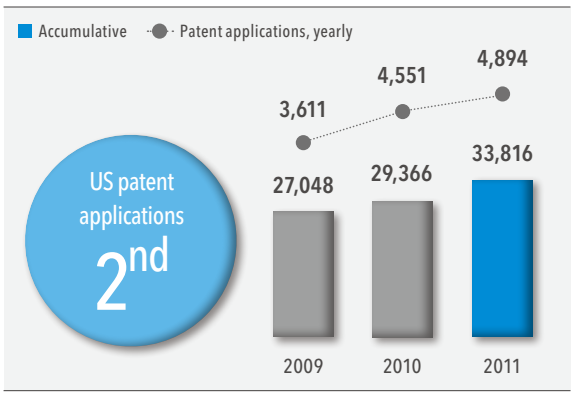
In 2011, the original technology and patent rights of STT (Spin-Transfer Torque) RAM, which is the next-generation memory semiconductor technology, was obtained through the acquisition of Grandis, a U.S.-based M RAM development company in the field of semiconductors; furthermore, other new business technology and patent rights were obtained through the acquisition of the medical device manufacturers, Medison and Prosonic.

Cross License Partnership

Second Position for Patent Applications in US

Samsung Electronics currently holds approximately 100,000 patents which are utilized for technological development in the fields of flash memory, system LSI, mobile phones and other major products. According to a patent research company IFI Claims Patent Service, patent applications of Samsung Electronics increased by 7.5%, posting a total of 4,894 patent applications compared to the figure of 4,551 in the year 2010. Based on this result, we were again ranked second in the United States for six consecutive years since 2006.

Current Status of Patent Rights Possession



- Based on the applications at the US Patent Office. Excluded are expired patents (with right period over 20 years) from the yearly accumulative patent applications.

Strengthening the Design Patent

In light of the trend shown by the industry of competitiveness shifting from hardware to software and contents, Samsung Electronics has begun paying more attention to designs that enable us to realize contents in a more efficient way. Likewise, in the field of patents, the technology-driven patent management strategy of the past has expanded to include design, design rights, and user experience (UX). Hence, we endeavor to reinforce our design patent competitiveness as well.

We place emphasis on the unique and soft design that enables the maximization of the user experience to enhance the feel of comfort, familiarity, and convenience in product development. This unique design approach by Samsung Electronics has, naturally, led to the obtaining of the design patents. In order for us to strengthen our design patents, we realized, recruiting talent is a must. We secure talented people in the design field through special recruitment and are considering pursuing a plan to empower the design center, next-generation design institutes and other research institutes related to design matters in their role and independence.

As a result of these efforts, for the past five years, 2,499 design patents by Samsung Electronics have been registered in the US Patent Office. This figure is approximately three times higher than our competitor's, and this is one of our major achievements. We invested heavily in product design and established design institutes in seven countries including Korea.

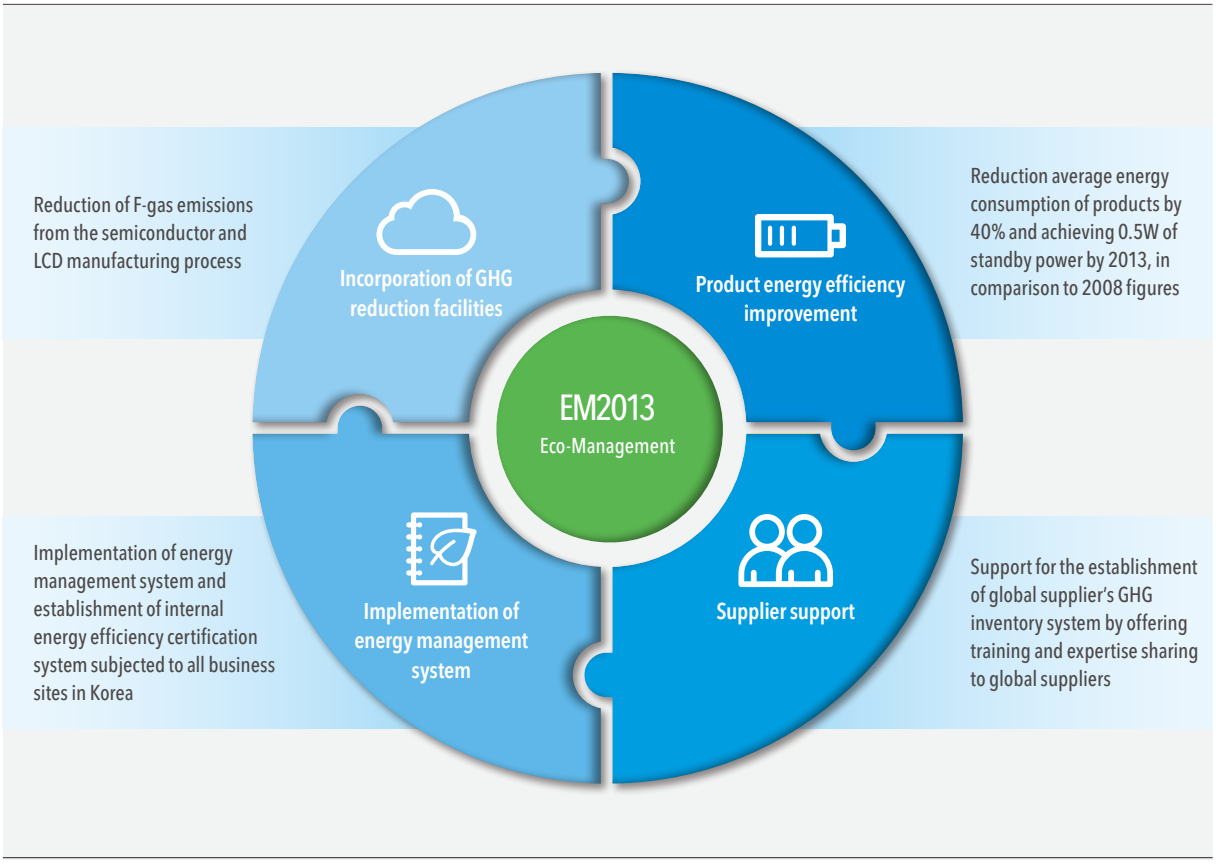
Climate Change and Energy

Since the United Nations Framework Convention on Climate Change was held in 1992, climate change has become one of the most important international issues. Climate change is already affecting many people in daily lives with unpredictable weather conditions, draughts and flooding, so greenhouse gas (GHG) management to reduce the impact on climate change has become a key challenge for the global community.
Many governments are implementing new policies to reduce its national GHG emissions by imposing limits on GHG emissions and carbon taxes. Many industries have embraced GHG reduction as an important management priority, implementing energy efficiency improvement measures and developing GHG emissions reduction technologies to make their contribution to mitigation.

Establishing Climate Change Mitigation System

Samsung Electronics established a mid-term green management objective, EM 2013, in 2009 and developed a greenhouse gas emission management system which monitors both direct and indirect emissions associated with all relevant business activities including manufacturing, product use, global partners, logistics and employee's work-related travels. Using the system, we are carefully monitoring each source of GHG emissions and achieving reductions to fulfill our corporate responsibility in mitigating climate change.

Climate Change Response Strategy



Implementation of GHG Reduction Facilities and Improvement of Energy Efficiency

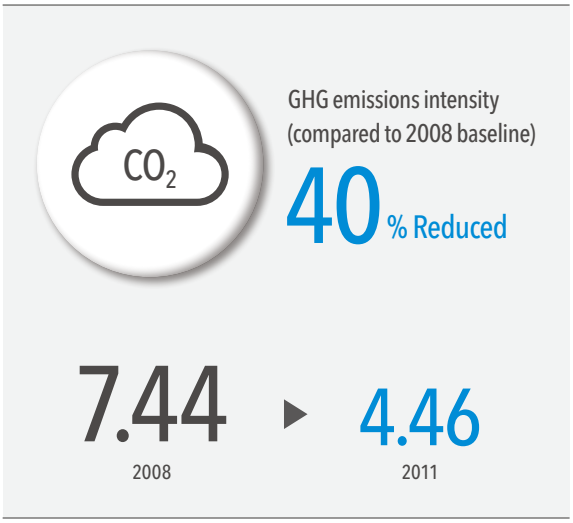
Samsung Electronics is implementing various measures to achieve its mid-term target of 50% reduction in GHG emissions intensity by 2013 when compared to 2008 levels. For instance, we installed F-gas treatment equipment to reduce SF_6 and PFCs gases from the LCD and semiconductor manufacturing process which is equivalent to a reduction one million and thirty thousand tons of CO_2.

Various energy efficiency improvement measures, including replacement with energy-efficient equipment system, installation of high efficiency transformers, and waste heat recovery facilities, were implemented which resulted in a reduction of 370 thousand tons of CO_2. As a result, we have achieved our annual reduction targets since 2009 and achieved a 40% reduction in CO_2 emissions intensity in 2011 compared to the 2008 baseline.

The GHG emissions in global productions sites have been verified by a third party agency. The Korean Foundation for Quality has recently completed verification of GHG emissions data from 2007 to 2011 for eight operation sites in Korea as well as thirty overseas subsidiaries. We plan to continue disclosing the third-party verification GHG emissions data to ensure its accuracy and credibility.

GHG Emissions Reduction Achievement

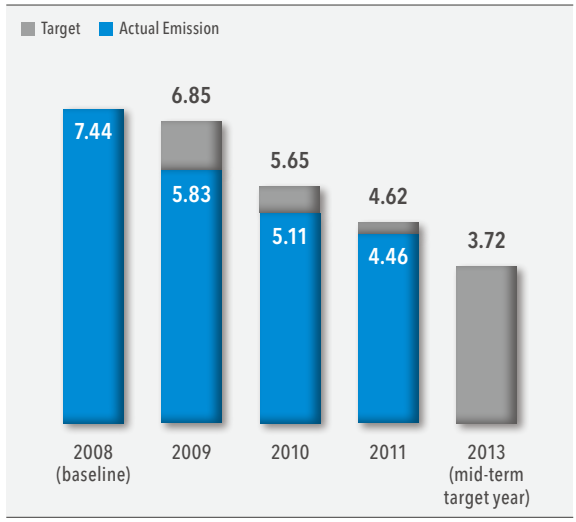
(tons CO_2/KRW 100 million)



- 1 USD=1,164.30 KRW (base year: 31st. Dec. 2011)

GHG Emissions Intensity (Korea)

(tons CO_2/KRW 100 million)



- Data scope: 8 production sites in Korea (Suwon, Gumi, Gwangju, Giheung, Hwaseong, Onyang, Tangjeong, Cheonan)

GHG Emissions Reduction Associated with Product Use

An increasing number of governments are implementing regulations on limiting electricity consumption by products. Many governments in South America and the Middle East have introduced new energy regulations and standards have become more stringent in Europe and North America. We are monitoring changes in regulations and increasing investment in developing energy efficient products to cope with the requirements and contribute to reductions in GHG emissions associated with the use of our products.

Samsung Electronics has a mid-term goal of improving energy efficiency of its products by 40% over 5 years from the baseline in 2008, which is estimated to be equivalent to about 84 million tons of accumulated CO_2 reduction over a five year period. We are especially focusing on voluntarily improving energy efficiency and standby power consumption of eight key products including refrigerators, washing machines, air conditioners, TVs, and IT devices. Thanks to the improvement made, the estimated CO_2 emission associated with use of Samsung products has reduced by 17.63 million tons of CO_2 in 2011 compared to the 2008 baseline alone, with an estimated accumulated reduction of 32.92 million tons of CO_2 over a three-year period (2009-2011).

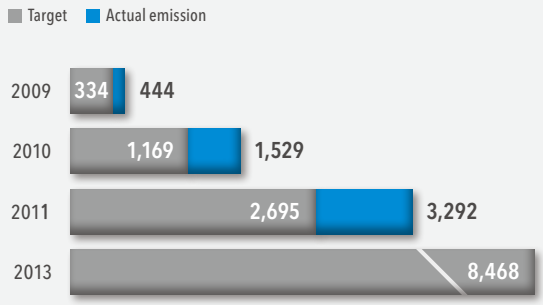
Average Power Consumption by Poduct

2013 target
(compared to 2008 baseline)

40 % Reduce

Cumulative GHG Reduction for Poduct Use Compare to 2008 Baseline

(10 thousand tons CO_2)



- Data scope: 8 key products sold globally (TV, washing machine, refrigerator, air conditioner, monitor, note PC, printer, mobile phone)

We are actively participating in a carbon footprint labelling scheme established by the Ministry of Environment in Korea as well as the carbon footprint scheme established by the Carbon Trust in the U.K., to demonstrate and verify GHG emissions in product life-cycle. Carbon footprint labeling is designed to help manufacturers reduce carbon emissions and encourage consumers to choose low carbon products by disclosing GHG emissions associated with each product through labeling.

Samsung Electronics first participated in the Korean scheme in 2009 and recently received the first carbon footprint reduction label for a LED TV, a Note PC and a memory chip product. Our Galaxy SII smartphone and Galaxy Note also became the first product in their category to receive a Carbon Footprint label issued by the Carbon Trust. Overall, our efforts in carbon footprint management and GHG reduction are increasingly recognized internationally.

Low Carbon Product Certification Winners

LED TV	13% ↓ CO_2	**Incorporated high efficiency LED and extra transparent polarizing film for CO_2 reduction compared to previous** UN55B7000WF (GHG Emission Certificate) ▶ UN55D8000YF (Low Carbon Certificate)
Note PC	33% ↓ CO_2	**Reduced standby power and implemented power saving 'Eco-mode' for CO_2 reduction** NT-R540 (GHG Emission Certificate) ▶ NT200B5B (Low Carbon Certificate)
Semiconductor	24% ↓ CO_2	**Employed advanced 35nm technology and GHG reduction facility to achieve 24% reduction in GHG emissions and 14% reduction in power consumption** 2G DDR3 46 nm (GHG Emission Certificate) ▶ 2G DDR3 35 nm (Low Carbon Certificate)

GHG & Energy Management System

We are monitoring GHG emissions associated with transport of our parts and products, supplier activities and employees' business travel. In 2011, estimated GHG emissions associated with logistics and employees' business travel were 8.5 million tons CO_2. Supplier activities were responsible for 4.5 million tons-CO_2 in 2010. We consider setting phased emissions reduction targets of suppliers after analyzing their emissions trends.

We implement international energy management systems in order to monitor and reduce our energy consumption and provide third party verified improvements. We received ISO 50001 certification in 2011 for Gumi, Giheung, Hwasung, Onyang and Tangjung plants in Korea. Additionally, we plan to have our three remaining Korean plants certified with ISO 50001 by the end of 2012. Overall, we are systematically managing energy use at each production plant and implementing energy saving measures according to the priorities.

In addition to ISO 50001 certification, we also received 'Carbon Trust Standard' certification in April 2012 for significant GHG reductions achieved by all eight Samsung Electronics production plants in Korea.

We have implemented 'Eco-Design process' to address energy efficiency and standby power of our products. Samsung will continue to reduce its energy consumption from its operations and products to respond to the climate change challenge.

Indirect GHG Emissions (1,000 tons CO_2)

	2009	2010	2011
Supplier activities	812	4,502	N/A
Logistics	5,690	7,430	8,440
Employee's business travel	61	101	113

- Supplier activities: The emission data is total emission amount of all participated suppliers for GHG inventory reporting. The proportion of participating suppliers has increased from 40% in 2009 to 63% in 2010 in terms of proportion of total purchasing amount. (Collection of 2011 data will be conducted in second half of 2012)
- Logistics: Based on international flights/maritime transport, Korean land transport
- Employee's business travel: Based on global business travel data by Korea-based employees

Water Management

Sustainable water management has become a prominent global environment issue along with climate change. Today, an increasing number of regions are experiencing severe water stress due to the variations of river flow, urbanization and climate changes. Experts predict that two thirds of world population will be without access to the fresh water by 2050. Generally, the semiconductor industry is responsible for a daily consumption of 7,500 to 15,000 tons of ultra pure water, which is equivalent to enough water to sustain a city of 50,000 residents for a day. As a leading semiconductor manufacturer, Samsung takes its responsibility to contribute to the effective management of water resources seriously and has set company-wide water management policies, reduction targets and strategies to secure and maintain sustainable water resources.

Establishing a Water Resource Management Policy

Sustainable water supply and water source preservation has become an important priority among all electronics companies including Samsung Electronics. Responding to growing industry needs, international business organizations for CSR including the EICC and WBCSD have created corporate water resource management guidelines.

Recognizing the growing importance of global water resource management, Samsung Electronics has established water policies with a focus on enhanced stakeholder communication and minimization of management risk.

Samsung Electronics Water Resource Management Policy

Basic Philosophy

Samsung Electronics recognizes the importance of water resources in the sustainability of society and business management, and contributes to its protection as a responsible corporate citizen of global community.

Code of Conduct

Strive to minimize water risk impact by our business activities.
Analyze the impacts of our products, production activities and services make on water resources and minimize risks by identifying and implementing new technologies.

Instill an awareness of the importance of water resources as a part of our corporate culture.
Integrate the importance of water resource protection and sustainability management into the corporate culture and ensure responsible water resource management by employees with the highest consideration for the impact on local communities and the environment.

Proactively cooperate with public water policies.
Proactively contribute to the establishment and implementation of water resource management policies by international institutes, the government and local authorities in line with relevant guidelines.

Disclose our policies and activities on water resource management.
Disclose company policies and activities related to water resource use to stakeholders including local communities in a transparent manner.

Maximizing Water Efficiency

Samsung Electronics set a 3% water use reduction target per production unit by 2015. We then collected water use data to identify plants with the highest water use, established a monitoring structure, identified reduction measures, and implemented the most cost effective measures to minimize business risks associated with water use and associated environmental impact.

Semiconductor production is a core business of Samsung Electronics, which is exposed to significant business risks associated with water shortages. Recognizing its risk, we have made a careful analysis of water resource risk and developed alternative water supplies as well as an emergency response system to avoid any negative impact upon business.

We also understand water resource risk as a serious global issue and are expanding our monitoring efforts to collect data from our operations and verifying the reliability of efficient water consumption.

Water Use per Production Unit (tons/KRW 100 million)

2015 per production water use reduction target

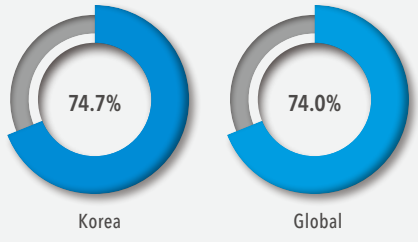
50 tons/KRW 100 million

- The 2015 target relative to sales is to keep emission at the 2009 baseline level, excluding the LCD business division. (domestic emission only)

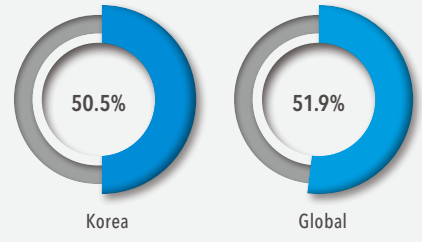
Samsung Electronics is establishing a comprehensive water management system which reduces the cost and pressure on water resources. For example, we have achieved significant reductions in water use by collecting ultra pure water used for the semiconductor and LCD production process and reusing it. The ultra pure water recycling rate at semiconductor and LCD production plants in 2011 was 51%. The recycling rate decreased compared to 2010 due to the addition of new production lines. We plan to implement additional facilities to further improve water recycling and the supply system.

We are operating on-site non-industrial waste water treatment and recycling facilities to reduce water use and sewage discharge. Treated water is used for gardening and fire safety system. The Samsung Electronics plant in India has installed a rainwater collection system and uses the collected rainwater for gardening and cleaning.

Water Recycling Rate



Ultra Pure Water Recovery Rate



Mutual Growth

In 2011, shared growth was one of the most discussed economic issues in Korea.
Corporate profits have increased steadily since the financial crisis in 2008. However, the benefit of growth was concentrated on large corporations instead of spreading out over society as a whole. The divide between companies and classes has grown deeper and became a global concern.
There is also a paradigm shift from competition of individual companies to competition among supplier groups led by large companies. In line with this change, Samsung Electronics is striving to establish a sound business ecosystem for mutual prosperity with our business partners. We firmly believe that enhanced supplier capacity including SME partners, plays a vital role in enhancing Samsung Electronics' competitiveness and will continue to strengthen our shared growth management strategies.

Shared Growth with Suppliers

Samsung Electronics expanded its support programs for outstanding first-tier suppliers to become global companies, and we began providing various support policies for second- and third-tier companies to realize shared growth. We introduced key programs to support supplier shared growth including training, technological supports, as well as provision of support funds. We also strengthened communication and more carefully listened to the voice of our suppliers through a sincere effort including visits by top management to suppliers on a regular basis.
In line with our efforts, we announced shared growth implementation policies such as financial support programs for first- and second-tier suppliers, support for second-tier supplier competitiveness building, increased trade opportunities, cultivation of global SMEs, technology innovation contest, and incentives for first-tier suppliers with good shared growth practice. We also plan to take various shared growth promotion measures including co-development of core parts for boosting the competitiveness of suppliers, free use of patented technologies, support for patent registration of new technology developed by suppliers, inclusion of shared growth performance indicators in performance assessments of our employees responsible for supplier collaboration and responsive adjustment of raw material price changes in supply contracts.
The Korea Shared Growth committee ranked Samsung Electronics as 'Excellent', which is the highest rank in its rating system, recognizing Samsung Electronics' achievement in promoting shared growth. Companies that received an 'Excellent' rating are exempted from annual surveys on supplier relations management and are given special consideration in public procurement biddings. We will continue to strengthen our shared growth initiative using the progress made so far as a basis.

Shared Growth Management Implementation Plan and Expected Benefits

Implementation Plan

- Establish a supplier support fund
- Elevated qualified 2nd and 3rd tier suppliers into 1st tier suppliers
- Cultivate global SMEs
- Implement fast-track 'Temporary Supplier Registration Policy' for SMEs with innovative ideas or new technologies
- Create a fund for Technology Innovation Contest
- Strengthen supplier communication

Expected Benefits to Suppliers

- Funding for investment in facilities and R&D
- Access to greater supplier benefits, Improved credibility in market
- Strengthened reputation as official partners of Samsung Electronics
- Increased business opportunities for companies withoutprior business relationship
- Increased sales of supplier products with funding and technical support
- More transparent and responsive communication between suppliers and Samsung

Fostering 'Globally Competitive SMEs'

Enhancing the quality of components and price competitiveness of SMEs in supplier relationships with Samsung Electronics can contribute to the enhancement of Samsung Electronics product quality and price competitiveness. We are striving to support our suppliers and share the benefits of shared growth with them.

Samsung Electronics designated 28 'Globally Competitive SMEs' and held a 'Globally Competitive SME' promotion initiative launching ceremony with the CEOs of the 28 companies in August 2011. The 'Globally Competitive SMEs' promotion initiative aims to make each into a top five company in their area of business through provision of comprehensive support measures including funding, human resources, and manufacturing technologies. Support programs include financial investment for technology development and operation, human resource support consisting of collaboration with R&D and manufacturing personnel from Samsung Electronics, and free on-site consultation.

Until now, shared growth efforts between Samsung Electronics and its suppliers tended to solve problems as they arose. However, Samsung Electronics plans to provide tailored support in a more proactive manner to the 28 companies selected in the 'Globally Competitive SMEs' initiative on areas including technology, capital and management systems based on a mid- to long-term roadmap. We plan to present certificates to these 'Globally Competitive SMEs' and select additional suppliers with global competitiveness every year to foster into globally competitive SMEs. We plan to increase the number of companies every year.

Global Competitive SMEs (no. of suppliers)

Visual Display	IT Solution	Digital Appliances	Mobile Communications	Network	Semiconductor	Total
3	2	3	4	1	15	28

Comprehensive Supplier Competitiveness Improvement Program

Samsung Electronics jointly created a 'Supplier Support Fund' of KRW 1 trillion in partnership with the Industrial Bank of Korea for suppliers including second- and third-tier companies experiencing financial difficulties. The fund program will be in operation for five years. Starting from July 2011, all Samsung first-, second- or third-tier suppliers can borrow money from the fund at a discounted interest rate of 1.4% below the commercial rate regardless of their credit rating. As of the end of 2011, KRW 560 billion was loaned to suppliers and second-tier suppliers accounted for 45% of the total.

Along with the funding program, Samsung Electronics operates a system to elevate qualified second- and third-tier suppliers with satisfactory technology and quality qualification into first-tier suppliers. Approximately 30 second-tier suppliers with technology and production capacity became Samsung Electronics suppliers after the announcement of the shared growth implementation plan.

We also expanded our payment frequency to four times a month, compared to twice a month, and maintained a 100% cash payment policy. The decision was initiated to create a healthy cash flow cycle for suppliers. In order for second-tier companies to fully enjoy our benefits, we included new criteria such as payment practice and on-site improvement support as a part of our first-tier supplier evaluation. We are also providing 45 customized training programs which include vocational, technical, management, and innovation technique courses to second-tier companies, after confirming their effectiveness for supporting first tier companies in 2011. These training programs are intended to give more practical support for capacity building than merely providing financial support or improving cash flow.

Comprehensive Supplier Competitiveness Improvement Program

	Performances
Supplier support fund	Outstanding Loans: KRW 560 billion
Shift to first tier suppliers	30 second tier suppliers upgraded to first tier suppliers - Payment method: promissory note cash
Improvement of payment schedule	Twice a month ▸ four times a month
Training support	Expanded training opportunities for second-tier suppliers
Strengthened competitiveness of second- and third-tier suppliers	Reflect payment practice and on-site support activities for second- and third-tier suppliers in first-tier supplier evaluation.

Open Innovation

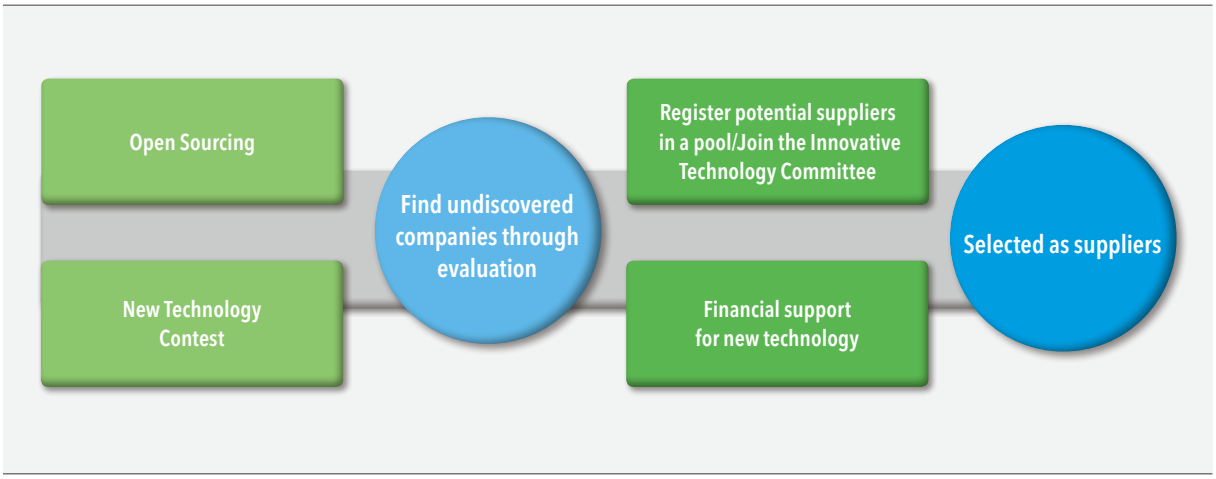
We believe in the value of 'open innovation', innovation achieved through open collaboration with external organizations and utilization of supplier technologies and ideas, in addition to internal R&D efforts. We are increasing funding, human resource support and sales channel expansion with a firm belief that the promotion of open innovation is key in realizing shared growth and global competitiveness.

Samsung Electronics' Open Innovation' initiative consists of 'Open Sourcing' program designed to increase trade opportunities for all suppliers and 'Technology Innovation Contest' program for supporting SMEs with promising technology but short of financial resource.

Incorporated in 2010, the 'Innovative Technology Committee' is successfully establishing itself as an effective support body for fostering SMEs with promising core technologies or ideas regardless of whether it currently has business links with Samsung Electronics or not.

Open Sourcing Program

Open Innovation Process



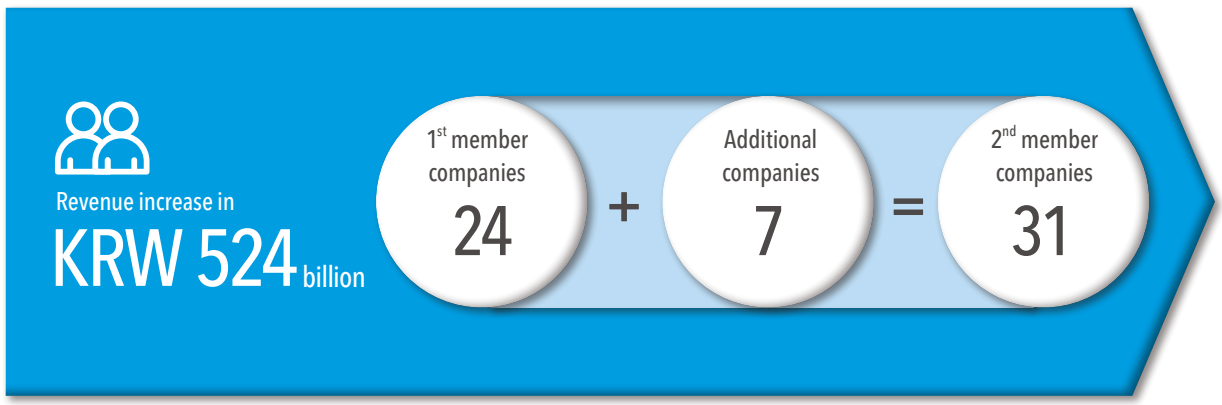
As a measure of promoting open innovation, Samsung Electronics opened the door to new suppliers with strong capacity but without a prior business relationship to register an 'open sourcing' program, which promotes joint-development of parts and equipment with collaboration between Samsung Electronics and SMEs with innovative ideas or new technologies. For 'open sourcing' registration, SMEs can visit the online site and explain the technologies the SMEs have. After a review, funding and a joint-development scheme is created for promising technologies. The 'Open Sourcing' office was launched at the Seocho building in May 2011 to allow SMEs to better present their technologies and ideas in person. Bids to start businesses with Samsung Electronics have increased since the opening of the office. In 2011, a total of 651 meetings were held with 23 bids selected through the internal review process.

Samsung Electronics provides technology development funding to SMEs which face financial difficulties but possess promising ideas and technologies. When development is successfully completed, the SME can also start business relationships leading to win-win outcomes for both. This new technology development contest program is praised as a new shared growth model.

Samsung Electronics endowed KRW 100 billion to the Large & Small Business Cooperation Foundation to establish a win-win technology development fund in August 2011, as a way of supporting SMEs develop promising technologies and for sharing technological accomplishments. The program is

designed to give direct investment support to SMEs rather than providing loans which are collected after a certain period of time.
Samsung suppliers, as well as any SMEs with specialized technologies and limited budgets are eligible to apply for this fund. Eligible areas for applications are short-term projects including localization of equipment and core components, development of new materials, which can be commercialized in short term and mid- to long-term projects including development of next-generation telecommunications, eco-friendly materials, new IT components, or other technological developments. SMEs will be selected depending on technology development capacity and the potential of new technology and selected companies can receive up to 70% of the total cost or a maximum KRW 1 billion in cash. In addition, Samsung provides expert and technical support to the selected SMEs and select them as suppliers when technology development is successfully completed.
The 'Innovative Technology Committee' is a partnership collaboration system which strives to identify SMEs with promising core technologies and ideas, and to foster SMEs as capable business partners. In short, the committee provides any SMEs with innovative technologies and ideas an opportunity to become a business partner of Samsung Electronics.
SMEs that take part in the 'Innovative Technology Committee' were provided with an opportunity to participate in joint-technology development or product development projects in addition to receiving technological support. A total of 24 SMEs have been selected by the 'Innovative Technology Committee', six of which were not suppliers to Samsung Electronics. The six SMEs which contributed significantly to product development and manufacturing innovation were appointed as first tier suppliers and their technologies were applied to new Samsung Electronics products. The sales of these six companies went up by 60% in 2010 as a result. An additional seven companies joined to bring the total to 31 companies in 2011. Members of the 'Innovative Technology Committee' and SMEs accredited through open sourcing, hold showcases to present outstanding technologies they possess on a regular basis. The showcase sessions are providing SMEs with new business opportunities and increased sales.

Innovative Technology Committee Launch in 2010



Communication by Top Executives

Samsung Electronics has been encouraging innovation of SMEs with a firm belief that collaboration between large companies and SMEs holds the key for achieving sustained growth and overcoming the global economic crisis. This belief has led us to host a Shared Growth Day program in which our executives visit supplier sites to understand their challenges and share innovation ideas. The program is led by the head of R&D, purchasing, quality management departments and the head of the Shared Growth Collaboration Center. Visits are made to supplier sites once every two months to strengthen communications. In July 2011, we also held a 'Supplier Dialogue Fair' and invited more than 500 CEOs from supplier companies to promote shared growth. In August 2011, Samsung Electronics' executives visited 736 suppliers, greatly expanding the dialogue on shared growth. In March 2012, the 2012 Shared Growth Day was hosted by Samsung Electronics to commemorate the 32nd anniversary of the Supplier Council Foundation and more than 300 CEOs and executives of 177 suppliers participated. Participants shared case studies on successful innovations of 26 companies and awards were rewarded for their excellence.

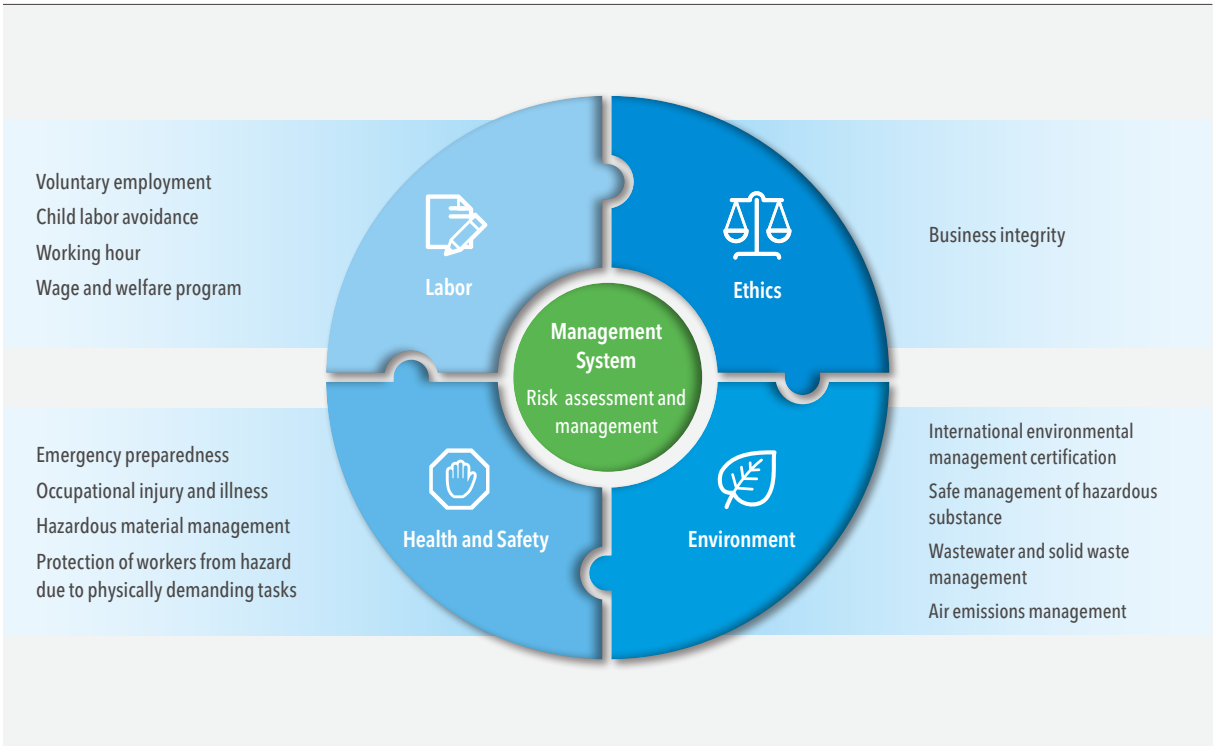
Supplier CSR

Samsung Electronics is abiding by the Electronic Industry Citizenship Coalition's (EICC) common code of conduct as a guideline for fulfilling our corporate social responsibility, and we are making an active effort to have our suppliers abide by this same code of conduct.
We have supported the establishment of a CSR management structure by supplier companies and incorporated CSR activities as a part of our supplier evaluation criteria to further incentivize their participation in CSR activities.
We also implemented a third party validation program of supplier CSR activities. We have made a statement of support for a ban on mineral products that come from conflict areas, and we are collaborating with government agencies and suppliers, in Korea and overseas, to support the ban.

Making CSR Activities a Part of Supplier Evaluation

Samsung Electronics has been conducting annual supplier evaluations using criteria including technological competitiveness and other internal criteria to identify leading suppliers. Additionally, the company has offered financial support and collaborative technology development opportunities. The evaluation results give suppliers a grade of A, B, C or D, and suppliers who receive a D evaluation two consecutive times or more are subjected to penalties including a ban on business with Samsung Electronics. Although CSR activities and achievements have been a part of the evaluation criteria in the past, we significantly increased its importance in the overall evaluation in 2011.
The CSR activity evaluation criteria consist of 20 different areas covering the EICC common code of conduct, including a ban on child labor, occupational health and safety, and environmental management.

Supplier CSR Evaluation Criteria



Improving Reliability of Supplier CSR Evaluation

Samsung Electronics has been evaluating supplier CSR activities since 2009 and inducing improvement on low-evaluated areas. In 2010, EICC decided to implement the Validated Audit Process (VAP), a third-party audit on operational sites, proactively responding to the growing demand of NGOs, and investment in rating agencies. The Valid Audit Process is a supplier CSR management program which consists of documentation review, employee/management interviews and operational site surveys by an EICC-certified third-party verification agency, results of which are evaluated by the EICC.
In 2011, we selected six major suppliers for VAP. However, VAP was postponed due to natural disasters including the tsunami in Japan and major floods in Thailand, as well as the European economic crisis. The planned VAP is well under progress, and it will be completed before the end of 2012. The scope of VAP will be expanded to a larger number of suppliers in order to improve the credibility of supplier CSR management.

Supplier CSR Activity Promotion and Achievements (no. of suppliers)

	Program	Accumulative
CSR training	Samsung Electronics CSR policy, EICC Code of Conduct, self-evaluation process	1,855
Supplier self-evaluation	EICC self-evaluation conducted through a supplier support system	2,545
Site survey	Site survey by Samsung Electronics and third party verifier appointed by EICC	1,795

- No. of companies conducted conflict mineral use survey & self assessment: 1,651

Propagation of EICC Code of Conduct Version 4.0

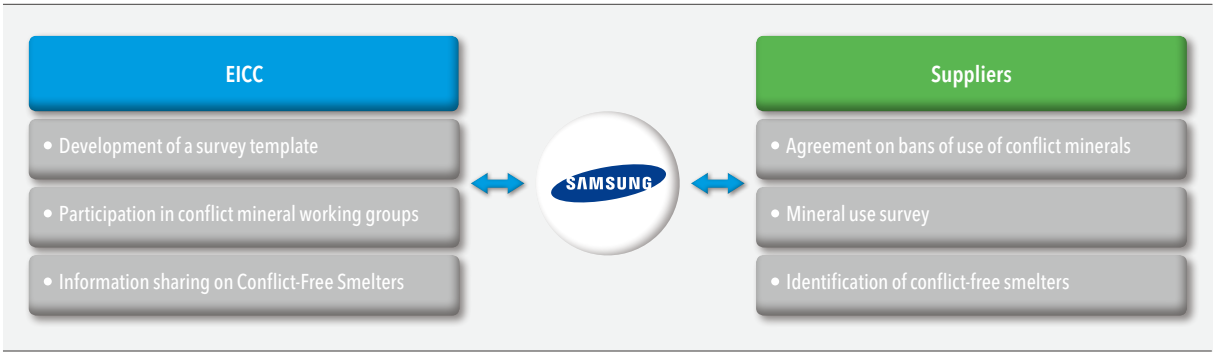
EICC recently revised its code of conduct through collaboration with stakeholders in order to strengthen member responsibility on CSR issues. The code of conduct includes a strict ban on indentured labor and trafficking in line with the California Transparency in Supply Chain Act legislated in March 2012. It also includes zero tolerance for unethical business conduct, increased disclosure of information for closer monitoring of business conduct, which reflects new legislation on improving business integrity by the US and UK governments.
The new code of conduct also includes a ban on the use of conflict minerals, compliance with privacy and information security laws. Samsung Electronics has produced a Korean language translation of the new code of conduct and has communicated it to suppliers along with a plan to conduct training to help the suppliers understand the changes to the code.

Q http://samsungtomorrow.com/2270

Ban on Use of Conflict Minerals

Child labor, sexual harassment and various human rights violations occur in the mineral extraction process in the Democratic Republic of Congo and neighboring African countries. The profits from illegally extracted minerals are then used to support armed groups. In 2010, the US government passed a law which banned the use of four 'conflict minerals' including tantalum, tin, tungsten and gold produced in the region.
The four conflict minerals are crucial raw materials for the manufacture of core components of electronics products, and therefore, all members of the electronics industry are making efforts to resolve the issue. The EICC has been leading the implementation of a ban on conflict minerals use by taking measures including development of common guidelines and assessment tools for the status of conflict mineral use, certification of conflict free smelters, and supporting public and private associations which operate in the countries of origin certification programs.
Samsung Electronics is also making active contributions in relevant EICC initiatives including the development of an assessment tool and conflict-free smelter certification. We are also making a significant effort on communicating the importance of avoiding use of conflict minerals to our suppliers as well as other members of Korean industries.

Collaboration Programs on a Ban on Conflict Mineral Use



Raising Awareness on Conflict Minerals

A close collaboration among smelters, suppliers and electronics product manufacturers is vital in realizing an effective ban of conflict minerals use. Responding to growing demands by NGOs, client companies and other stakeholders, Samsung Electronics has built a consensus for the necessity of the ban among our business partners, and we are now working toward establishing a foundation for collaboration on an effective ban of conflict materials.

In 2011, we held a seminar with the CEOs from 700 supplier companies on the importance of banning conflict minerals in our supply chain. The seminar served as an effective stepping stone in collecting their agreement for participation in the ban of conflict mineral use shortly after the seminar. The participating suppliers then conducted a conflict mineral use survey to check their status on compliance. The suppliers created lists of smelters they do business with and their status on use of conflict minerals. The suppliers then shared the list with international CSR institutes including the EICC and BSR to make the information available for other companies in the electronics business.

The supplier survey results indicated that a majority of suppliers were not using conflict minerals. However, many also did not have information on the origin of minerals used. We plan to conduct a more detailed survey on conflict minerals which complies with the U.S. Securities and Exchange Commission's enforcement ordinance on conflict minerals to be announced later in 2012. We also plan to establish a conflict mineral use monitoring system by conducting regular assessments of conflict mineral use in collaboration with suppliers. More detailed information on Samsung Electronics policies and survey results on conflict mineral can be found on our corporate website.

Number of smelters in 2011

Tantalum	Tin	Tungsten	Gold
2	24	2	8

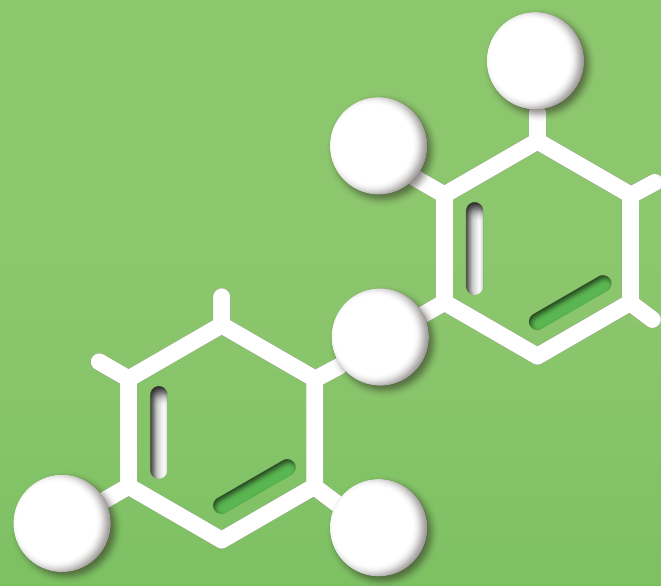
And, according to the recently revised EICC code of conduct, version 4.0, Samsung will audit our suppliers about the usage of conflict minerals and smelters in addition to Human rights, Labor, Environment and safety.

Additional information (http://www.samsung.com/us/aboutsamsung/sustainability/conflictminerals/conflictminerals.html)

Collaboration with Governments

A government level response is essential in order to implement an effective ban on use of conflict minerals. Samsung Electronics has been conducting seminars and conferences on the importance of the ban on conflict minerals in partnership with key stakeholders including the Ministry of Knowledge Economy and the Korea Electronics Association. For example, we held a seminar on conflict mineral regulation compliance for key members of the Korean electronics industry in February. Samsung Electronics also co-hosted an industry-government meeting with the Ministry of Knowledge Economy for key representatives of different industry sectors and relevant institutes to communicate the importance of the ban on conflict minerals. Samsung Electronics will continue to collaborate with all relevant stakeholders, including government ministries, to effectively respond to policies on use of conflict minerals.

Facts & Figures



For the purpose of monitoring and analyzing our efforts to ensure that all business activities are aligned with sustainable development, Samsung Electronics has identified several key performance indicators with measurable data to guide our innovation in sustainability.
The following Facts & Figures section outlines the progress we have made across those performance areas in 2011 as well as our plans for the future. To ensure credibility, the report contains third party assurance providing expert opinion on transparency and levels of disclosure to guarantee we meet internationally recognized standards of reporting. By sharing our perspective of the challenges the global community is facing, as well our progress in achieving our targets, we hope this report will serve as a communication channel with stakeholders of our progress of achieving the common goal of sustainability.

Economy

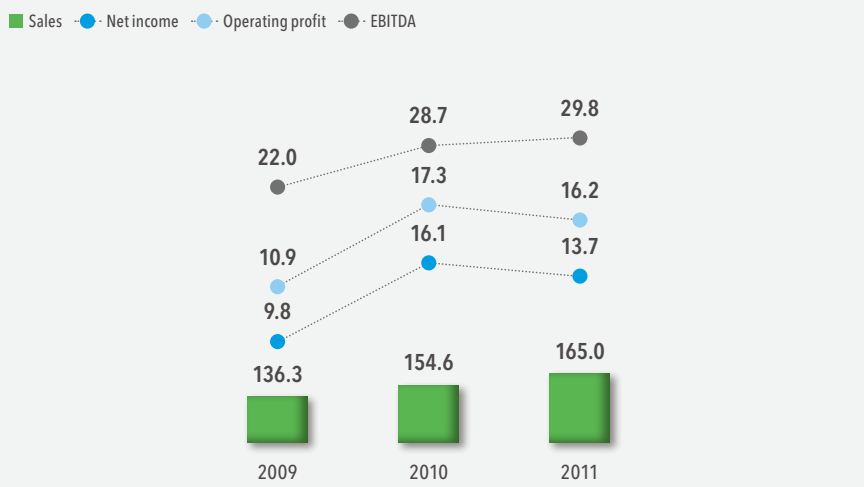
Sales
KRW 165.0 trillion

Operating Profit
KRW 16.2 trillion

Key Financial Performance

Samsung Electronics recorded sales of KRW 165.0 trillion in 2011, a 6.7% increase from KRW 154.6 trillion in 2010. In terms of income, we achieved KRW 16.2 trillion in operating profit, KRW 13.7 trillion in net income and KRW 29.8 trillion in EBIDTA, while extending our market dominance in the core businesses areas of TVs and mobile phones.

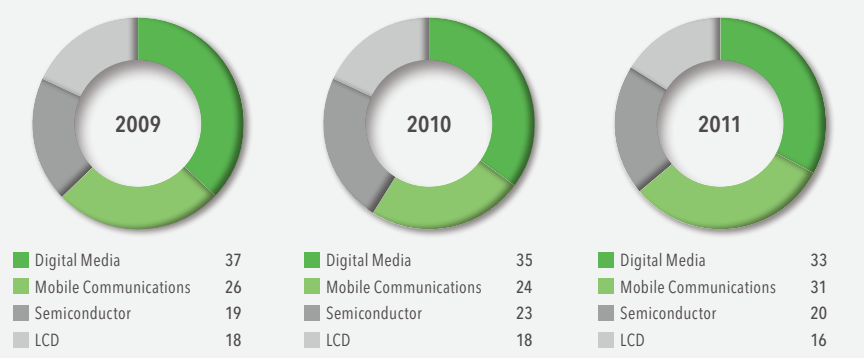
Sales and Financial Performance (KRW trillion)



Performance by Business

Samsung Electronics has a diverse business portfolio which consists of Digital Media & Communications which encompasses the business units that manufacture and sell digital TVs, monitors, computers, mobile phones, communication systems, air conditioners, refrigerators and other appliances; and Device Solutions which includes businesses that specialize in semiconductor memories, system LSI, LED and other products.

Sales Proportion by Business Division (%)



TV

No.1

Global Market Share in TVs for 6 Consecutive Years

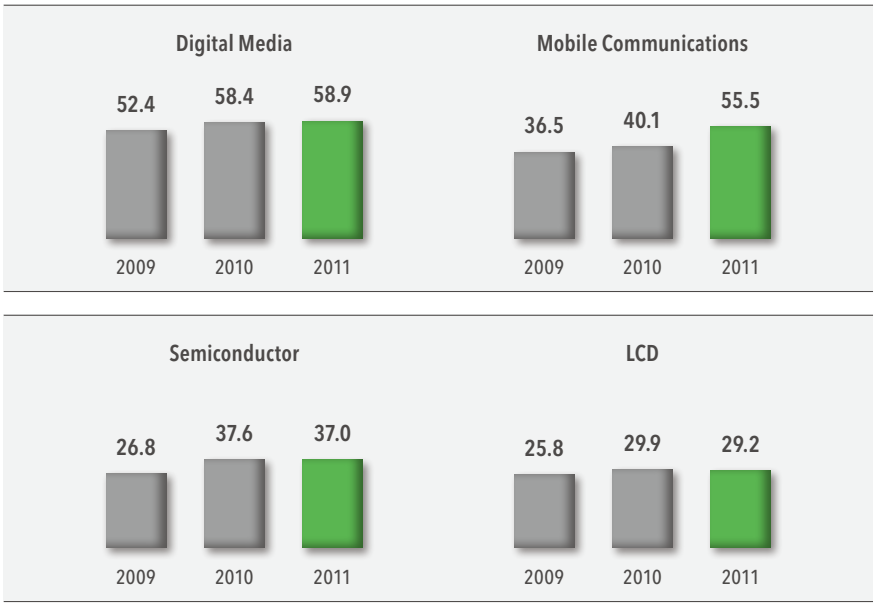
Mobile Communications

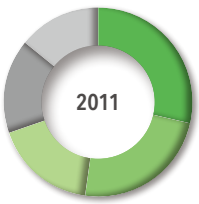
38.4%

Increase in Sales Compared to Previous Year

Thanks to market growth in high value LED TVs, the Consumer Electronics businesses under Digital Media & Communications had yet another successful year making Samsung Electronics the top selling TV brand for the sixth consecutive year. Sales from Mobile Communications, also under the Digital Media & Communications umbrella, increased sharply by KRW 15.4 trillion thanks to strong smartphone sales. On the component side, the semiconductor and LCD businesses were affected by slow market conditions from the second quarter of 2010, recording sales decreases in 2011 of KRW 0.6 trillion and KRW 0.7 trillion, respectively, compared to 2010.

Business Performance by Division (KRW trillion)





Proportion of Sales by Region

America	28.8%
Europe	23.7%
Asia	17.4%
Korea	16.1%
China	14.0%

Performance by Region

Increased sales of mobile phones and TVs in the Americas, Europe and Asia contributed greatly to the increase in total sales.

Sales by Region (KRW trillion)

	2009	2010	2011
America	33.8	43.5	47.5
Europe	35.1	36.0	39.1
Asia	21.7	24.9	28.8
Korea	21.9	25.9	26.5
China	23.8	24.3	23.1

Creating Economic Value for South Korea

Samsung Electronics' Contribution to Total Exports of South Korea

16.5%

With the company's headquarters and main production facilities located in South Korea, Samsung Electronics makes a major contribution to the country's economy. The economic value created from local operations, and the company's sales as a proportion of South Korea's GDP, is as follows.

Contribution to the South Korean Economy (KRW trillion)

	2009			2010			2011		
	South Korea	Samsung Electronics	Proportion (%)	South Korea	Samsung Electronics	Proportion (%)	South Korea	Samsung Electronics	Proportion (%)
Value added [1]	1,065.0	21.7	2.0	1,173.3	32.2	2.7	1,237.1	30.5	2.5
Total export [2]	464.0	74.8	16.1	539.1	95.0	17.6	615.2	101.7	16.5

Source: Samsung Electronics Financial Statements, The Bank of Korea Economic Statistics System (ECOS)

[1] 'Value-added' represents new economics created through production of products raw materials and resources purchased from outside. The Bank of Korea Company Management Analysis calculation method was used, which is defined as (Value-added = operating profits + provisions for bad debt –financial expenses + labor cost + financial expenses + tax + depreciation cost)

[2] Total exports for South Korea is calculated using the Bank of Korea Economic Statistics System (ECOS) data in US dollar amount and average exchange rate posted by the Korea Exchange Bank.

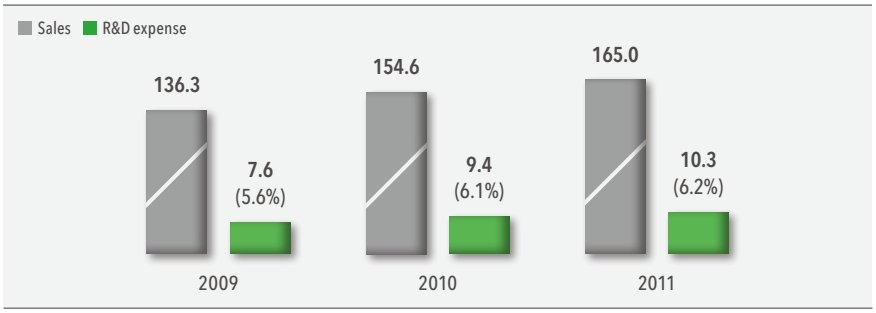
R&D Expenses and Investment in Plant and Facilities

Proportion of R&D to Total Sales

6.2%

To strengthen the competitiveness of core businesses and develop advanced new technologies, Samsung Electronics invested KRW 10.3 trillion, or 6.2 percent of consolidated sales, into R&D in 2011.

R&D Expense (KRW trillion)



As semiconductor and LCD production are capital intensive businesses which require large, time-sensitive investments in facilities to maintain competitiveness, major investment decisions are made by the Management Committee. With full authority from the Board of Directors, the Management Committee holds hearings with relevant executives and outside experts before deliberating. In 2011, Samsung Electronics invested KRW 23.2 trillion in tangible and intangible assets including semiconductor and LCD facilities.

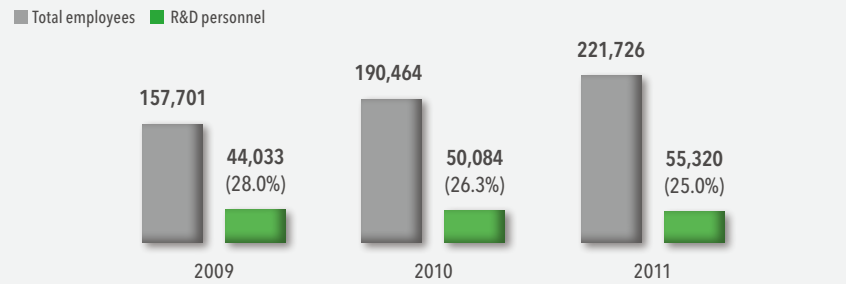
Investment in Facilities (KRW trillion)

	2009	2010	2011
Cash flow from business operations	18.5	23.8	22.9
Total investment	8.7	23.9	23.2
Proportion (%)	47	100	101

Proportion of R&D Personnel
25.0%

Samsung Electronics has been increasing investment in R&D capacity through measures such as staff recruitment in order to create new technologies. Accordingly, the size of the R&D team expanded to 55,320 members in 2011, an 10.5% increase from 2010.

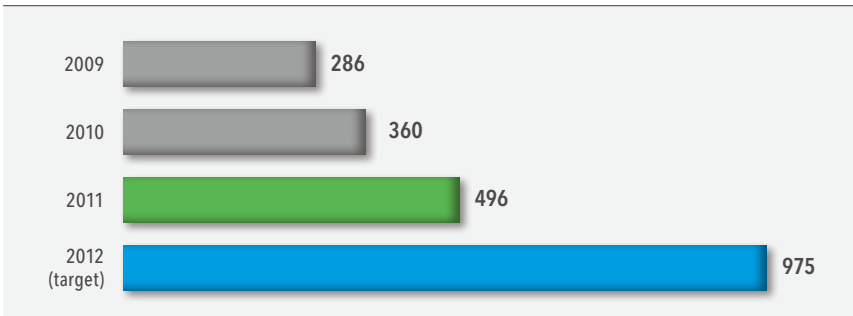
R&D Capacity (persons)



Samsung Electronics created an Industry-Academia Collaboration Center in October 2010 to promote mutually beneficial collaborations with universities in a more systematical fashion.
In 2011, we signed agreements of collaboration with 70 Korean universities and 80 overseas universities for KRW 34.4 billion and KRW 15.2 billion, respectively, with plans to expand the program budget to KRW 97.5 billion in 2012. The Samsung Talent Program (STP), which we operate to nurture promising students in technology fields, now encompasses over 20 universities with an annual budget of KRW 26 billion.
To promote science and technology education, Samsung Electronics continues to operate the Human Tech Thesis Contest. Since its establishment in 1994, the contest has now offered prizes to over 2,000 winners.

Increase in Industry-academia Collaboration Projects
38.0%

Industry-academia Support Program Fund (KRW 100 million)



Total Economic Value
Distributed to Stakeholders

KRW 153.2 trillion

Distributions of Direct Economic Value

In line with the company's belief in co-prosperity, the economic benefits of Samsung Electronics' operations directly filter through to its various stakeholders.

Economic Value Distribution (KRW billion)

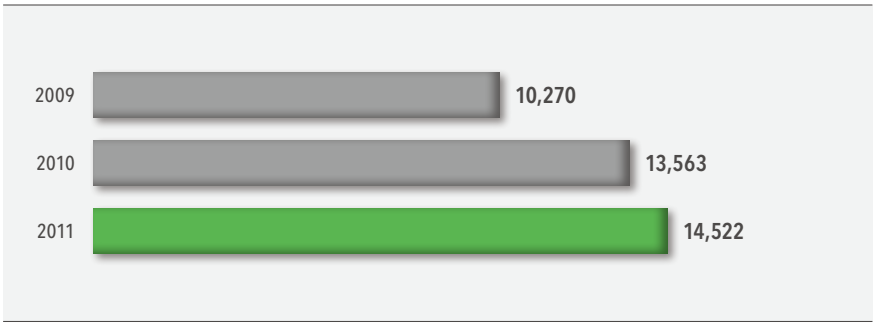
Stakeholders	Item	2009	2010	2011
Suppliers	Purchasing costs	103,458	111,737	119,786
Employees	Salaries[1]	10,270	13,563	14,522
Investors	Deferred profit	8,577	14,642	12,907
Government	Taxes & dues[2]	2,942	3,808	4,256
Shareholders	Dividends	1,185	1,497	827
Creditors	Interest expenses	535	581	644
Local communities	Social contribution expenses[3]	132	240	294
Distributed economic value		127,099	146,068	153,236

[1] Sum of salary, retirement settlement, benefits package included in cost of sales, R&D expense, general and administrative expense.
[2] Sum of consolidated corporate tax paid, other taxes and dues calculated on accrual basis.
[3] Sum of social contribution expenses paid including donations and other expense accounts 2010 data was corrected due to a change in collecting data.
- Figures differ from those in the previous report due to change in accounting standards

Employees

Economic value distributed to Samsung Electronics and subsidiary company employees consists of salaries, retirement settlement packages and employee benefit expenses. Personnel expenses have increased by 7.1% compared to the previous year.

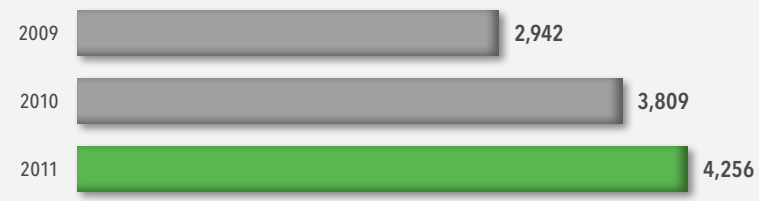
Personnel Expenses (KRW billion)



Government

Taxes and dues paid to the South Korean government and foreign governments increased by 11.7% in 2011 compared to the previous year.

Taxes & Dues Payments (KRW billion)



Local Communities

Amid global economic uncertainty, Samsung Electronics has continuously expanded its financial contributions to society. In 2011, we contributed KRW 294 billion, an increase of 22.5% from the previous year.

Annual Increase in Community Contributions
22.5%

Local Community Contribution Expenses

	2009	2010	2011
Operating profit (KRW trillion)	10.9	17.3	16.2
Social contribution expenses (KRW billion)	132	240	294
Proportion to operating profit (%)	1.2	1.3	1.8

Creditor

Interest Expenses (KRW billion)

2009	2010	2011
535	581	644

Shareholders/Investors

Shareholder dividends paid by Samsung Electronics and its subsidiaries declined compared to the previous year due to a reduction in net profit. The company did not purchase treasury stock in 2011.

Dividend Payments, Dividend Payout Ratio, Treasury Stock Purchasing (KRW billion)

	2009	2010	2011
Dividends paid	1,185	1,497	827
Dividend payout ratio (%)	12.4	9.5	6.2
Treasury stock purchasing	-	-	-
Dividend + Treasury stock purchasing	1,185	1,497	827
Total payout ratio (%)[1]	12.4	9.5	6.2

[1] Total payout ratio is the rate of total operating profits paid out to shareholders and investors in the form of dividend payout and treasury stock purchasing.

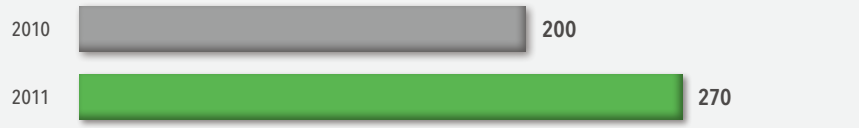
Society/Integrity Management

Strengthening of Compliance Management Organization

Rate of Increase in Compliance Workforces compared to Previous Year

35.0%

Expansion of Professional Workerforce (persons)



Employee Awareness Raising

Updated Ethics Guidelines for Employees

Samsung Electronics published an updated Ethical Management Guideline for employees to clearly articulate the company's firm position and encourage adherence to the code of conduct for business transparency and employee protection. A broad range of training programs focused on ethical business practices were also provided for employees.

Compliance Training (persons)

Category	Course Description	No. of Participants
e-learning	Personal information protection (2 courses)	84,787
Changes in Compliance Management	New recruit training (6 courses)	54,106
Webzine	Fair trade and insider trading (2 courses)	40,643
Division/job-specific compliance issues	Subcontractors and strategic materials (10 courses)	6,006
Advanced courses for senior management	Global Strategic Council (2 courses)	662
Specialized course for overseas work force	Elite and overseas-posted employees (5 courses)	187

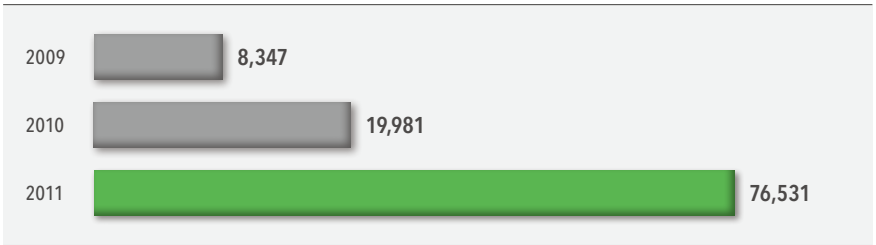
Expansion in Corruption Prevention Training

283%

Strengthened Corruption Prevention Training

Online training to safeguard against corruption in business practices is mandatory for all employees. Training programs are tailored for specific audiences, such as new recruits and newly promoted or hired executives, as well as targeted for different business fields, regions and job levels.

Corruption Prevention Training (persons)



- Collective training programs expanded since establishment of the new employee guideline

Other Unethical Conduct Prevention Activities

Ethical Management Website

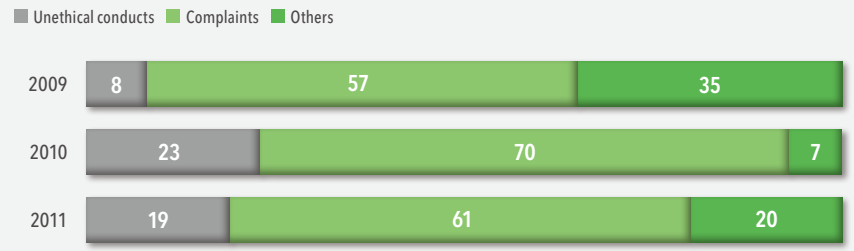
A website catering for 13 different languages was established to offer information on ethical business management and provide an external reporting mechanism. The dedicated reporting system (http://sec-audit.com) allows external stakeholders to report unethical business conduct by Samsung Electronics employees. Information submitted is reviewed and classified into different categories for action. A total of 1,468 reports have been received through the site to date.

No. of Reports on Unethical Business Conduct Submitted in the Past Three Years

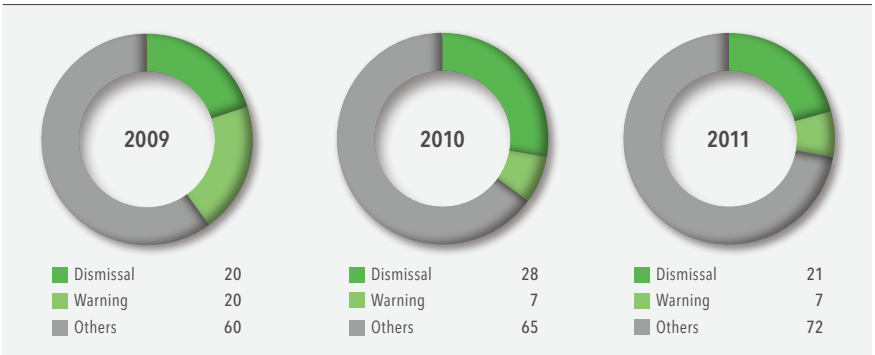
2009	2010	2011
417	472	579

Reviews were undertaken of all submissions, particularly those related to consumer complaints and corruption. No action was taken on issues unrelated to Samsung Electronics or reports that proved false or lacking substantive facts to warrant further investigation. According to analysis, 63% of the 1,468 reports made in the past three years consisted of consumer complaints and 18% were related to unethical conduct.

Reports by Type (%)



Actions Taken on Unethical Business Conduct Reported (%)

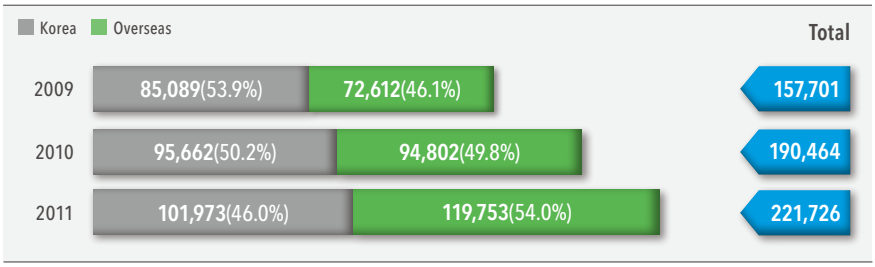


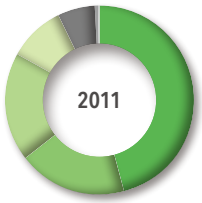
Society/Employee

Employee Status

The total number of Samsung Electronics employees is 221,726 as of end of 2011. The number of employees increased by 31,262 compared to 2010 mainly due to establishment of new production plants and expansion of existing plants in China and Southeast Asia. The proportion of overseas-based staffs increased steadily over past three years and they now account for 54% of total workforce.

Total Employees (persons)





Employee Status by Region

Korea	46.0%
Asia	18.7%
China	18.6%
America	9.7%
Europe	6.2%
Middle East	0.5%
Africa	0.3%

By Region (persons)

	2009	2010	2011
Korea	85,089	95,662	101,973
Asia	17,074	26,355	41,481
China	31,995	37,599	41,203
America	11,447	16,151	21,531
Europe	11,159	13,334	13,850
Middle East	937	969	1,154
Africa	-	394	534

By Contract Types (persons)

	2009	2010	2011
Full-time	149,865	178,732	210,070
Contract-base	7,836	11,732	11,656

By Age (persons)

	2009	2010	2011
Under 30	86,779	106,162	124,641
30~	52,961	61,989	70,531
40~	17,961	22,313	26,554

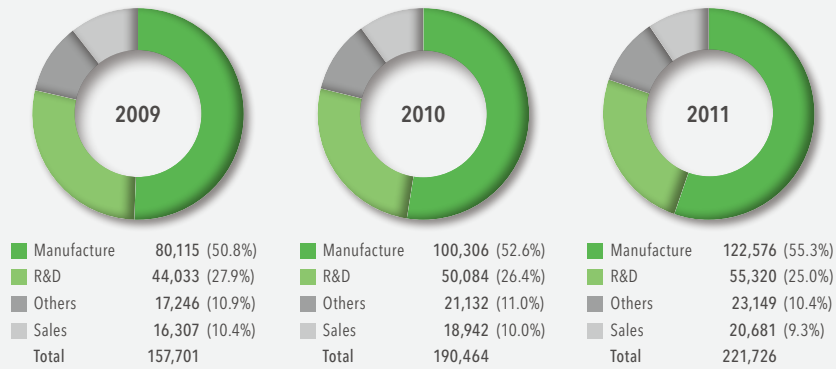
By Rank (persons)

	2009	2010	2011
Staff	126,437	155,319	181,793
Manager	30,380	34,171	38,766
Executive	884	974	1,167

Rate of Increase in R&D Staffs over Past 3 Years

55.2%

By Job Types (persons)



	2009	2010	2011
Manufacture	80,115 (50.8%)	100,306 (52.6%)	122,576 (55.3%)
R&D	44,033 (27.9%)	50,084 (26.4%)	55,320 (25.0%)
Others	17,246 (10.9%)	21,132 (11.0%)	23,149 (10.4%)
Sales	16,307 (10.4%)	18,942 (10.0%)	20,681 (9.3%)
Total	157,701	190,464	221,726

Size of Overseas Recruiting Workforce

58,662 persons

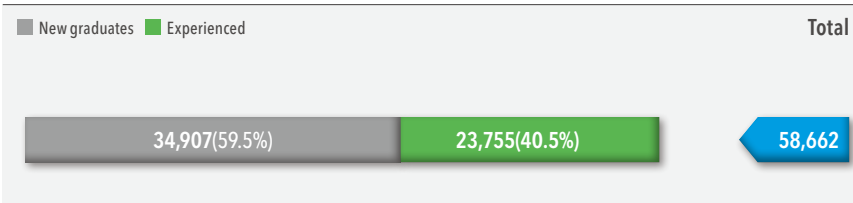
Overseas Hiring

Samsung Electronics hired 58,622 new employees overseas to strengthen R&D capacity and for increased production capacity. Many were hired for production work at plants in China and South East Asia and for strengthened software development capacity.

Overseas Employment Status (persons)

	2009	2010	2011
Southeast Asia	4,371	12,046	21,165
China	7,845	16,240	15,948
Southwest Asia	1,843	3,586	6,124
South America	2,176	3,567	5,454
North America	1,367	5,313	5,177
Europe	1,520	3,633	2,486
CIS	1,085	1,509	1,456
Middle East	320	468	407
Africa	82	215	299
Japan	76	138	146

Employee Breakdown by Types (persons)



Proportion of Female Employees

40 %

Target Ratio of Female Executives by 2020

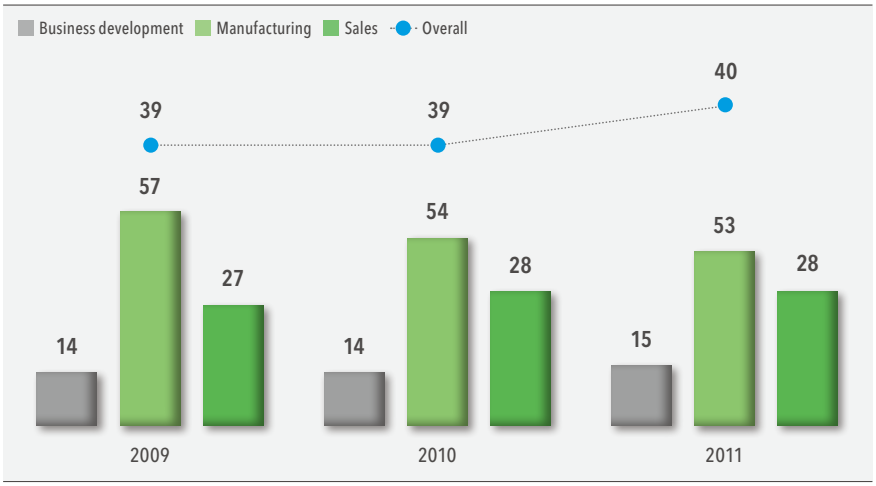
10 %

Diversity Management

Female Employees

The proportion of female employees at Samsung Electronics has steadily increased and now accounts for 40% of total employees in 2011.

Percent of Female Employees, by Job Category

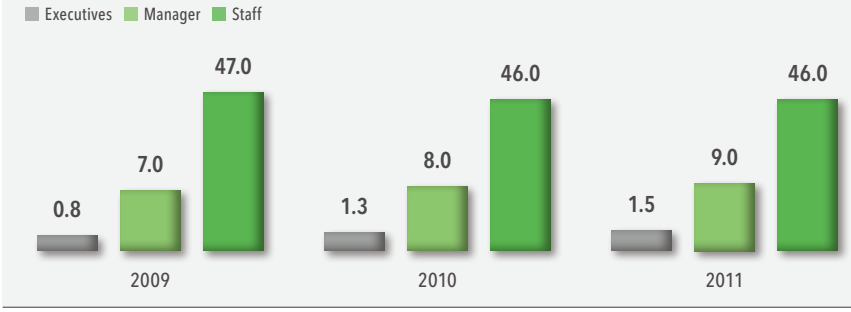


Percent of Female Employees, by Region

	2009	2010	2011
East Asia	46.5	51.5	63.9
China	59.6	57.3	55.0
South America	44.6	43.0	42.9
Europe	42.1	38.6	36.2
CIS	40.1	38.5	35.8
Africa	37.7	35.3	34.5
South Korea	33.4	33.0	31.2
North America	30.5	30.6	30.3
Middle East	18.8	23.3	24.6
Japan	16.2	15.7	15.2
South Asia	12.8	12.0	11.5

To reach our goal of raising the total percentage of female executives to more than 10% by 2020, we implemented a targeted recruitment process that identifies prospective female leaders.

Percent of Female Employees, by Job Rank



Proportion of Women among Newly Recruited University Graduates

	2009	2010	2011
University graduates (%)	19	22	27
Global (persons)	10,699	23,244	31,864

Capacity of In-House Child Care Centers: Plan in Place to Double the Size in 2012 Compared to 2010

2 fold

Female Employees

(persons)

	2009	2010	2011
Number of female employees on maternity leave	1,222	1,484	1,979
Number of female employees who resigned within a year	199	233	380
Rate at which female employees returned after maternity leave	83.7%	84.3%	80.8%
Child care center (number and capacity)	7 centers; 1,074 children	7 centers; 1,239 children	8 centers; 1,434 children

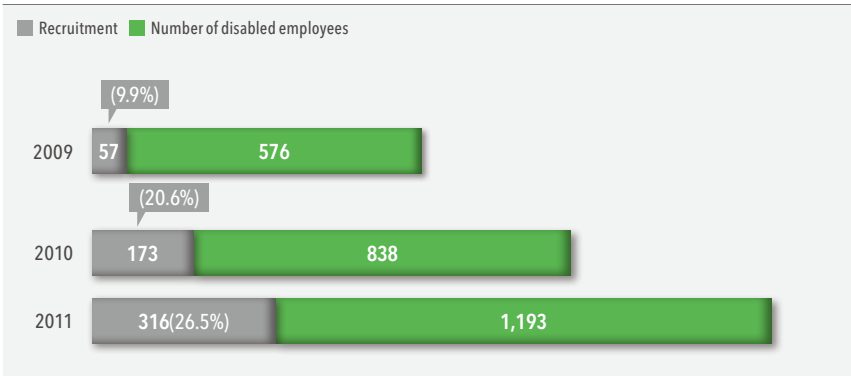
Proportion of Disabled Employees (Korea)

1.3 %

Disabled Employees

As an equal opportunity employer, Samsung Electronics has implemented the Stepping Stone internship program for employees with disabilities, consisting of creating more full-time positions and fair and open recruitment process for college students with disabilities. The current number of disabled employees stands at 1,193, or 1.3% of total korea employees.

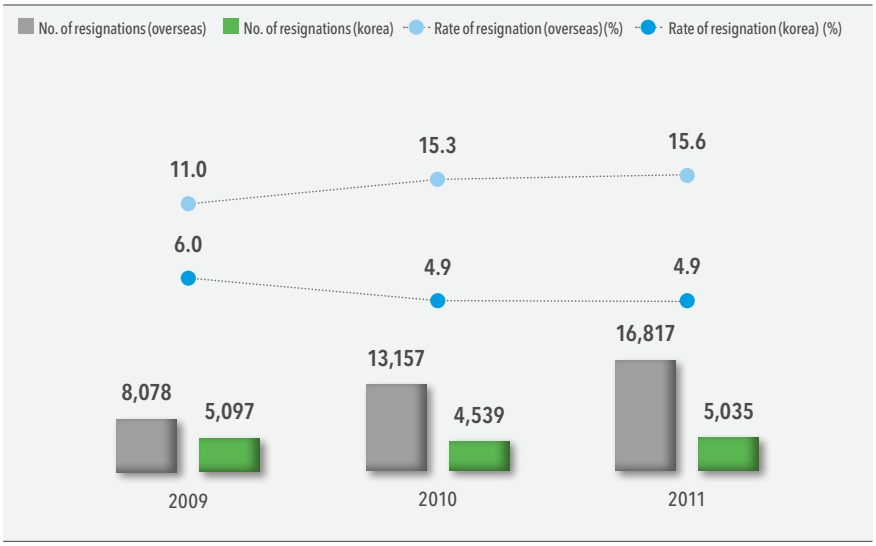
Number of Disabled Employees



Retention

The resignation rate is 5% for Korea-based employees and 15.6% for overseas employees. Samsung Electronics actively analyzes the factors behind employee turnover and reflects these findings in its HR management policies. We also operate a career development center to help retiring employees find new jobs or start new businesses.

Employee Resignation (persons)



Reasons Given for Resignations

Korea	Overseas
1. Change of occupation	1. Personal development
2. Study	2. Job Abandonment
3. Contract expiration	3. Other voluntary reason
4. Health problem	4. Other personal reasons
5. Domestic affairs	5. Hired by non-competitor

Labor and Human Rights

Samsung Electronics abides by all labor and human rights laws in each region it operates and strictly enforces a ban on child labor, forced labor and workplace discrimination, in accordance with articles 4, 6 and 16 of the company's rules of employment. In addition, we strictly abide by the 24 ILO conventions ratified by the South Korean government. Samsung Electronics believes that mutually beneficial development through collaboration should be the basis of its labor relations management. The company operates a Management-Labor Council that inspects overseas operation sites and utilizes other communication channels to monitor labor and management relations.

Average Training Budget per Employee (Korea)

KRW 1,120 thousands

Average Training Hours per Employee (Korea)

112.5 hours

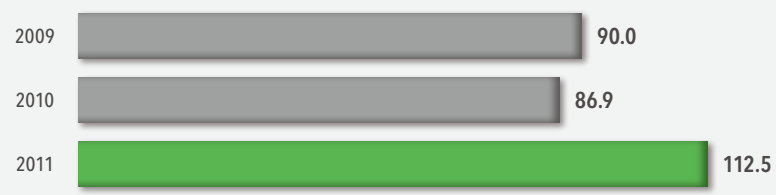
Capacity Development

Training Budget

	2009	2010	2011
Training Budget (KRW million)	83,615	104,475	114,373
Training budget per person (KRW)	957,382	1 ,099,297	1,123,595
Proportion of training budget relative to sales	0.06%	0.07%	0.07%
Proportion of training budget relative to personnel expenses	0.8%	0.8%	0.8%

Training Hours (Korea)

(training hours per employee)



Remuneration

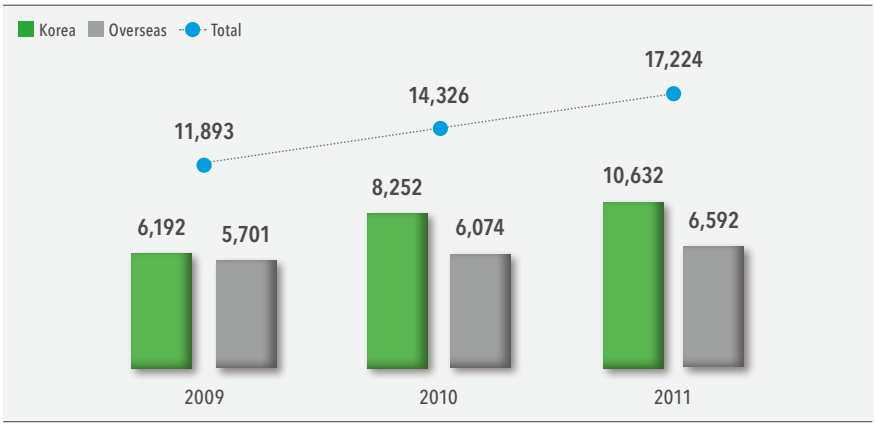
Wage by Region

Samsung Electronics is complying with minimum wage laws in all countries. It pays up to three-times the minimum salary in regions in order to help improve the welfare and quality of life of its employees.

Fringe Benefits Expense

KRW 170 billion

Fringe Benefits Expense (KRW billion)



Employee Injury Management

Although the rate of employee injuries increased in 2011 compared to 2010, 68% of injuries occurred during sports activities conducted at company social events. Samsung Electronics has since published a safety guideline and implemented a program to raise awareness of the importance of stretching and other exercises to prevent injuries in non-industrial activities.

We are also conducting regularly scheduled health and safety trainings on a wide range of issues, including industrial safety and employee health management.

Samsung Electronics
Rate of Industrial Accidents
(Korea)

0.067%

Industrial Accident Rate

		2009	2010	2011
Manufacturing		1.04	1.07	0.97
National average		0.70	0.69	0.65
Samsung Electronics	Korea	0.040	0.035	0.067
accident rate	Global	-	0.082	0.052
Samsung Electronics	Korea	0.196	0.165	0.336
frequency rate of accident	Global	-	0.393	0.262

● Non-work related: 46 cases, work-related: 22 cases

Society/Social Contribution

Financial Contribution to Society

KRW 294 billion

Increase Rate of Social Contribution

22.4%

Financial Contribution to Society

Samsung Electronics and its subsidiaries contributed KRW 293.7 billion to local communities in 2011. In Korea, the company donated KRW 30.1 billion for arts and culture, KRW 27.8 billion for personal development, and KRW 95.8 billion for social welfare programs as well as KRW 4.5 billion for other activities including it hearing dogs program for the hearing impaired. Outside of Korea, KRW 34.9 billion was given to such projects as IT education for developing regions and donations to the Amazon Environmental Foundation.

Social Contribution (KRW million)

	2010	2011
Mutual coexistence management	-	100,600
Social welfare	111,690	95,775
International cooperation	31,955	34,889
Culture, art	36,368	30,139
Academic exchange	56,947	27,812
Preservation of the environment	146	3,344
Sports	2,795	1,135
Total	239,900	293,694

Volunteers (Korea)

288,586

Average Volunteering Time per Person (Korea)

9.7 hours

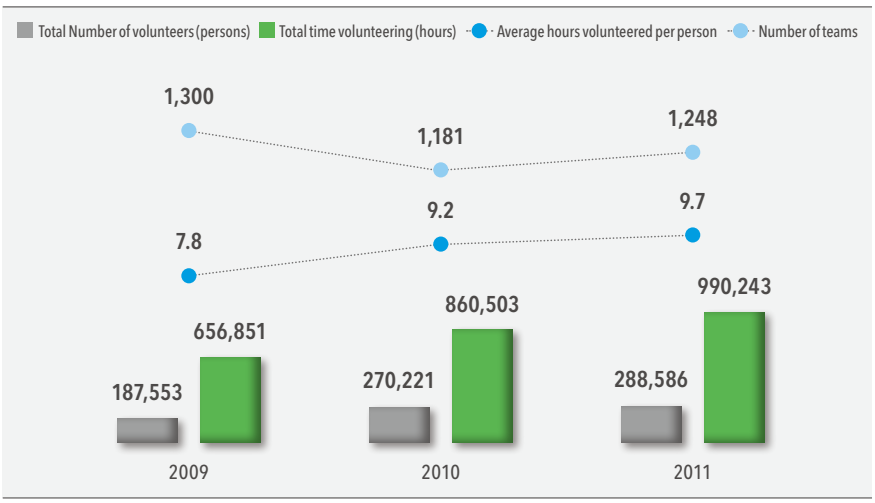
Samsung Hope for Children Program

30 countries

Employee Volunteering

Samsung Electronics fosters an enthusiastic and passionate culture for volunteering, resulting in a steady increase in both the frequency of volunteering and the number of participants. In 2011, 288,586 employees donated their time. To build greater awareness of these important activates, the company is placing stronger emphasis on the global Samsung Hope for Children initiative. In 2011, the program helped children in 30 countries and we hope to scale this up to 55 countries by 2013.

Key Figures of Social Contribution of Our Employees (Korea)



Society/Win-win Partnership with Suppliers

Number of Total Supplier Employees Educated

5,279

Future Leadership Program

184

Mutual Growth

Support for Partner Development

Samsung Electronics offers a wide range of educational programs for the employees of our partners, including on-site education, work skill training, and business management courses. In response to requests from our suppliers, general business management and on-site management training courses were expanded in 2011, while demand for the courses already studied in previous years declined.

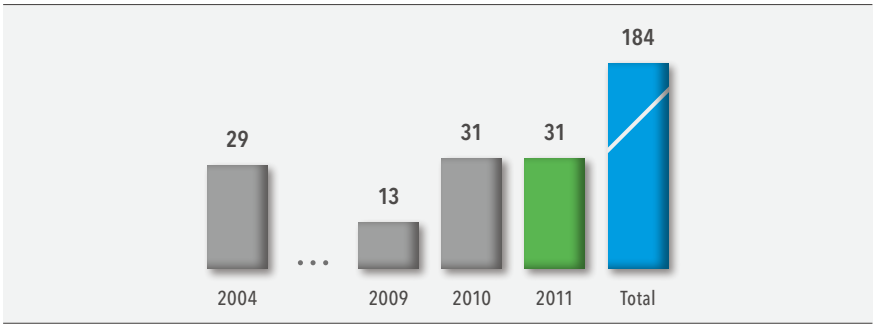
Partner Education (persons)

	ITEM	2009	2010	2011
Korea	Management	1,542	2,922	3,963
	Specialized technology	230	285	161
Overseas	On-site management	306	368	597
	Innovation techniques	1,466	847	330
	Specialized technology	1,853	935	228
Total		5,397	5,357	5,279

Future Leadership Program

Samsung Electronics has run the Future Leadership Program, benefiting the children of our business partners, since 2004. The program offers a hands-on working experience in areas such as purchasing, manufacturing, marketing, and other divisions including site visits overseas.

Future Leadership Program (persons)



Support for Partner Infrastructure

Our support in enhancing the Enterprise Resource Planning (ERP) system and work process lies in helping to raise the management capabilities of our business partners. For korean partners, our assistance is focused on maintaining and ramping up the ERP. For overseas business partners, we provide support in building the ERP system between business suppliers to eventually establish the supply chain management operation platform.

Number of Suppliers Supported for Improvement of Infrastructure

	ITEM	2009	2010	2011
Utilization of ERP	ERP management	199	190	190
	MPS/MRP advancement	13	14	21
Improvement of IT infrastructure	Establishment of SCM between partners	4	6	13
	Support in setting up information strategy	-	-	3
Support in building ERP system of overseas partners	Training of ERP establishment and process innovation	48	47	43

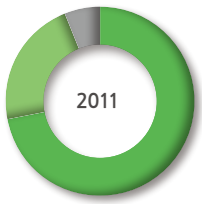
- ERP: Enterprise Resource Planning
- MPS: Master Planning Schedule
- MRP: Material Requirement Planning

Support for Cost Innovation

Samsung Electronics supports cost reduction efforts of key strategic business partners and members of Samsung Electronics Suppliers Council through specific targets. The most efficient cost reduction project from among those submitted by relevant divisions and suppliers in development and purchasing is selected after a professional consultant's evaluation.

Number of GVE Projects

95



Proportion of GVE Projects

Structural change	71.6%
Material reform	22.1%
Process improvement	6.3%

Number of GVE Projects (Korea)

	2009	2010	2011
Structural change	42	82	68
Material reform	31	23	21
Process improvement	22	-	6
Total	95	105	95

Two-Way Communication

Samsung Electronics maintains a VOC (Voice of Customer) system to collect partner companies' views and opinions. The company founded a cyber ombudsman service in 2010 to collect and respond to feedback in a systematic manner and has since expanded the service to overseas partners. We aim to solve problems and look into claims submitted by keeping a wide range of communication channels open, including email and other methods such as anonymous tip-offs.

Claims Resolved

100%

VOC Received

	2009	2010	2011
Korea	1,012	699	596
Overseas	7	3	117
Total	1,019	702	713
Resolved rate (%)	100	100	100

Types of VOC

	2009	2010	2011
IT_VOC or general inquiries	830	480	568
Operation and system improvement	76	84	37
2nd and 3rd partners	13	29	36
Providing information	9	7	25
Partner support	65	53	23
Cost, supply and warranty	23	46	19
Attitude and behavior	3	3	5

Open Innovation Program

23

Open Innovation

Samsung Electronics began the open innovation program in 2011 to help ensure fair opportunities for small– and medium-sized enterprises with new ideas and technology. The program aims to facilitate smoother cooperation by supporting selected SMEs in calling for proposals or in open-sourcing their human resources, as well as offering assistance in financing, consulting and other benefits.

Open Innovation Program

	2011
Technology consultation	651
Tasks selected	23

Innovation Technology Business Committee

	2010	2011
Components and materials	12	16
Infrastructure	7	8
Chip and software development	5	7
Total	24	31

Number of Partner Trainees

1,855

CSR Support for Suppliers

Recognizing the importance of building shared values among Samsung and our partners' employees, , Samsung Electronics has been providing training since 2008 to improve the CSR activities within our supply chain. In 2011 we initiated a new remote training model through our partner CSR support system, helping to raise awareness of our policies related to current global trends and corporate ethics, such as our prohibition of the use of conflict minerals.

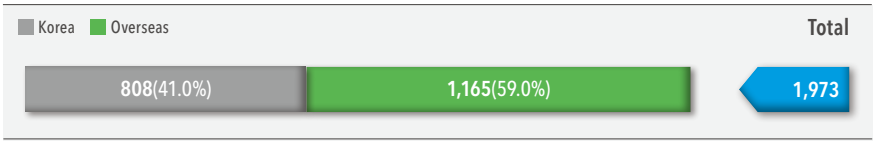
Number of Partner Beneficiaries of CSR Program

	2009	2010	2011	Total
Korea	311	47	736	1,524
Overseas	-	331	-	331
Total	311	378	736	1,855

- Employee self-edcuation for suppliers and conflict-free mineral seminar was conducted for 2011.

Number of Suppliers Signed
1,973

Number of Suppliers Signed on Conflict Minerals Compliance Letter



Samsung Electronics included performance on CSR-related issues as a part of supplier appraisal criteria to help suppliers make better assessment of their performance on CSR-related issues. In 2011, the number of supplier appraisal criteria has increased from 13 to 20 with greater emphasis on CSR-related criteria.

Number of CSR Self-assessment Participating Partners
2,547

Number of Suppliers Participating in CSR Self-assessment Program

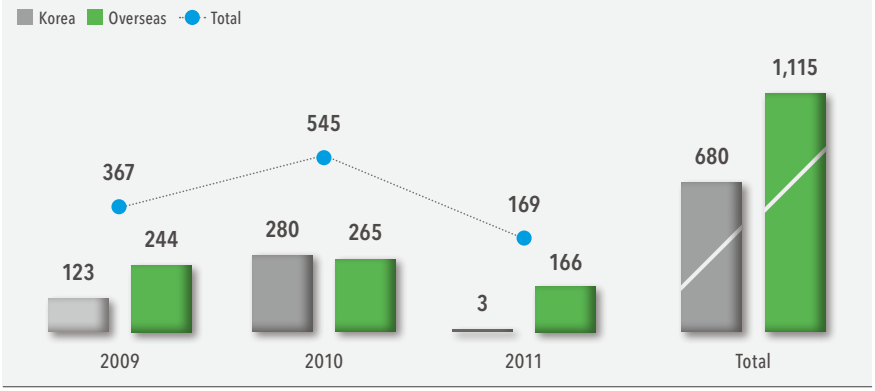
	2009	2010	2011	Total
Korea	356	28	793	1,177
Overseas	-	216	1,154	1,370
Total	356	244	1,947	2,547

In 2011, we conducted site surveys of Chinese suppliers that are not subjected to assessment with CSR-related criteria, in order to check compliance status on labor, human rights, health and safety and environmental management practices. Suppliers with less than adequate performance on any of the CSR issues were requested to implement improvement measures. We also implemented Validated Audit Process on six of our key suppliers, conducted by an EICC-certified third-party verification agency on their CSR promotion status for improved reliability and transparency.

Number of CSR Audit Participating Partners
1,795

Supplier CSR Audit

(no. of suppliers)



Society/Product Service

Korea Standard Association
Service Quality Index Research

Computer for 10 Consecutive Years

No. 1

Mobile Phone for 8 Consecutive Years

No. 1

No. of Violation Cases
on Customer Data Protection

0

Customer Satisfaction and Product Reliability Achievements

Awards on Excellence in Customer Satisfaction

Name of Awards	Achievements
Korea Standard Association 2011 Service Quality Index Research	1st place in computer after-sales service for ten consecutive years 1st place in mobile phone after-sales service for eight consecutive years
Japan Management Association (GCSI)	Samsung Electronics products take top place in all 15 product categories for two consecutive years
Middle East Excellence Awards Institute	Selected as the best performer in Electronics sector in the Customer Service Awards for two consecutive years (2011 and 2010)
ABRASA Awards of After Sales & Environmental Sustainability	Won top awards in seven categories out of nine, including best after-sales service and best customer service provider
German Service Quality Association	Won top award in 'Computer Call Center Service Study' for four consecutive years

Complaints on Products and Service

		2009	2010	2011
No. of complaints	Korea	699,000	709,000	440,000
	Overseas	158,000	210,000	205,000
No. of service centers		13,997	14,112	19,019
No. of companies implemented CCM		14	45	50
No. of violation cases on customer data protection		-	-	-
No. of violation cases on marketing		-	-	-

- Figures in number of complaints after 2009 is changed due to restructuring system

Green Management

The scope of global data in this section is all operation sites include Korea and overseas.

Mid-term Target (2009~2013)

Reduction Ratio of GHG Emissions Intensity (Production in Korea)

50%

Cumulative GHG Reduction Over Five Years (Global)

85 million tons

Greenhouse Gases Management

Samsung Electronics designated greenhouse gas emissions intensity at Korean plants which accounts for 90% of Samsung Electronics' global emissions as a key performance indicator (KPI) of its greenhouse gas management. The mid-term target is as 50% reduction in greenhouse gas emissions intensity by 2013 compared to the 2008 baseline. Samsung Electronics has been meeting the greenhouse gas emissions reductions target since 2009 and reduced 40% of the intensity in 2011 compared to the 2008 baseline and expects to achieve the 2013 target.

According to our analysis, greenhouse gas emissions associated with the use of Samsung Electronics products is greater than those of their manufacturing process. Therefore, Samsung Electronics has selected GHG reduction during the product use phase by manufacturing high energy-efficient products as our second KPI. The mid-term target of achieving about 85 million tons of accumulated greenhouse gas emission reductions from 2008 to 2013 through a 40% reduction in average electicity consumption of Samsung Electronics products compared to 2008 and Samsung Electronicshas been successful since 2009.

GHG (Greenhouse Gas) KPI and Achievements

KPI	Item	2009	2010	2011	2013
GHG emissions intensity (production in Korea, tons CO_2/KRW 100 million)	Target	6.85	5.65	4.62	3.72
	Actual	5.83	5.11	4.46	-
	Reduction Ratio (%) (compared to 2008 baseline)	22	31	40	50
Cumulative GHG emissions reductions over five years (Global, 10,000 tons)	Target	334	1,169	2,695	8,468
	Actual	444	1,529	3,292	-

- GHG emissions intensity : Total CO_2 emissions[(1)] ÷ (Sales[Korea] / price index[(2)])
  [(1)] Total GHG emissions from production plants in Korea, expressed in CO_2-equivalent
  [(2)] Producer price index in Bank of Korea public notice (Base year 2005: PPI = 1)
- 1 USD = 1,164.30 KRW (base year: 31st. Dec. 2011)

CO_2

2011 Reduction Ratio of GHG Emissions Intensity (Korea only)

13%

GHG Emissions Intensity

Korea

4.46 tons CO_2/KRW 100 million

Global

3.70 tons CO_2/KRW 100 million

Scope 1, 2 Emissions

Samsung Electronics' GHG emissions intensity in 2011 was reduced to 4.46 tons/KRW 100 million. which was 13% lower than 2010 figures. We have taken various measures including the installation of facilities for reducing GHG emissions from industrial processes, improvement in energy efficiency of production facilities, installation of high efficient facilities and will continue to implement various GHG reduction measures.

GHG Emissions Intensity

(tons CO_2/KRW 100 million)

Region	Item	2009	2010	2011
Korea	Target	6.85	5.65	4.62
	Actual	5.83	5.11	4.46
Global	Actual	4.35	4.15	3.70

- Emission calculation method
  GHG emissions were calculated using management data at each site and the national guidelines of each country as well as international standards including the IPCC Guidelines, ISO 14064 were used as reference for matters not specified in the national guidelines.

GHG Emissions

(1,000 tons CO_2)

Region	Scope	2009	2010	2011
Korea	Scope 1	3,564	4,057	3,924
	Scope 2	5,008	5,552	6,031
	Total	8,572	9,609	9,955
Global	Scope 1	3,750	4,155	4,045
	Scope 2	5,875	6,500	7,259
	Total	9,625	10,655	11,304

- Adjustment was made to Korean GHG emissions data between 2009 and 2011 as a result of third party verification in June 2011 following guideline in Korean GHG target management policy.

GHG Emissions by Type (Global)

(1,000 tons CO_2)

	2009	2010	2011
CO_2	6,340	7,012	8,378
SF_6	2,037	2,397	1,738
PFC_S	912	901	859
N_2O	170	212	220
HFC	164	131	108
CH_4	2	2	2
Total	9,625	10,655	11,304

Scope 3 Emissions Management

Samsung Electronics' Scope 3 GHG emissions include GHG emissions associated with suppliers, product use, transport of parts and products, in addition to business travel by Korean employees.

Scope 3 GHG emissions are calculated as per related international standards including ISO 14064, IPCC guidelines, WBCSD Scope 3 guidelines and carbon footprint labeling standard of Korea.

2011 Energy Efficiency Improvement Rate Over 2008 Baseline

25.6%

GHG Emissions Associated with Product Use Samsung Electronics defines 'GHG Emissions associated with product use' as the amount of GHG emissions caused by electricity consumption for use of sold products. The emissions associated with product use have decreased despite an increase in the number of products sold due to improvements made in the energy efficiency of products and achieved 17,630 thousand tons of greenhouse gas emission reductions in 2011 compared to the 2008.

Improvement Rate of Product Energy Efficiency

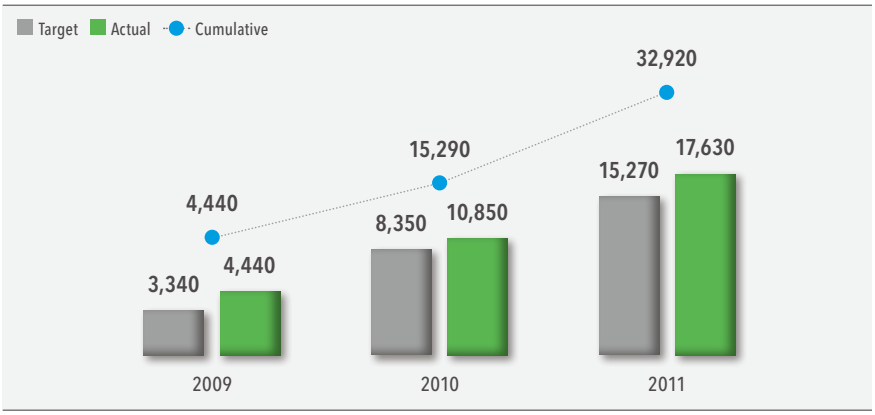
(%)

- Product energy efficiency improvement rate = (2008 average power consumption – 2011 average power consumption) / (2008 average power consumption) × 100

GHG Emission Reduction Achieved in 2011 Against 2008 BAU Scenario (Global)

17,630 1,000 tons CO_2

GHG Emissions Reduction in Product Use (1,000 tons CO_2)

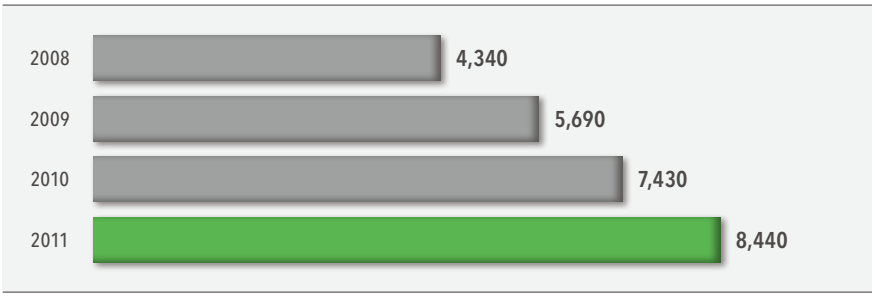


- Target is made by 10% of annual increasing in product sales volume
- Scope: All consumer products sold globally (excluding parts)

GHG Emissions Associated with Transport of Parts and Products Samsung electronics is monitoring CO_2 emissions associated with transport of materials, parts and products. The emissions have been increasing by 15% per year on average due to the establishment of new production facilities and an increase in overall production volume. Efforts are being made to reduce product weight and optimize transport routes to achieve reductions in transport emissions. A modal shift• to lower GHG emitting methods is also employed to achieve further reduction.

- Modal shift (change in means of transport): Samsung Electronics is changing air transport to maritime transport and road transport to railroad transport to achieve reductions in GHG emissions.

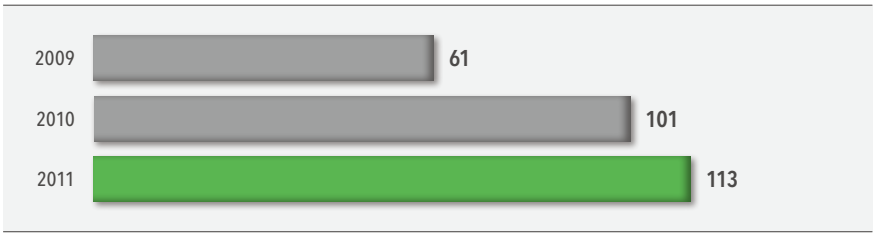
Emissions Associated with Transport of Parts and Products (Global) (1,000 tons CO_2)



- Calculation formula: Distance (Km) x Weight (Kg) x GHG emission conversion factor by emission sources (transport service paid by business partners are also included)
- Management scope: Transport of products, materials and parts
- Management method: Calculate monthly emissions data using G-EHS system based on underlying data from G-ERP logistic data

Business Travel Emission Samsung Electronics is monitoring GHG emissions associated with business travel. The emissions have increased by more than 10% due to the establishment of new overseas operation sites and an increase in number of employees. We are making an effort to reduce business travel-related emissions through measures including the encouragement of the use of mass transport and video-conferencing systems.

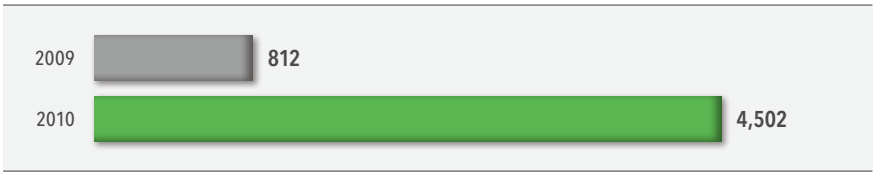
GHG Emissions Associated with Business Travel (Korea) (1,000 tons CO_2)



- Calculation formula
  Air travel: ∑[Distance(Km) x No. of employees travelled × GHG emissions conversion factor by flight]
  Land transport: ∑[No. of employees travelled × cost (KRW) per travel × distance conversion factor (km/KRW) × emissions conversion factor (ton CO_2 / employee·km)]
- Management scope: Overseas travel by Korea-based employees (air travel) and Korea travel (cars, buses, railroad and etc.)
- Management method: Emission data is automatically calculated using the G-EHS system on a monthly basis using travel data stored in the oversea business travel management system and the Korea business travel management system (G-ERP) for review.

Supplier's Emission Samsung Electronics is managing suppliers' GHG emissions data associated with business with Samsung Electronics by calculating the proportion of its sales to Samsung Electronics relative to total sales. In 2009, data on Korea suppliers' GHG emissions accountable for 40% of Samsung Electronics' total purchase was collected. The scope of data collection was expanded to global suppliers accountable for 63% worth of total purchase.

Supplier's GHG Emissions (1,000 tons CO_2)



- Compilation of 2011 supplier data has not been completed as of May 2012.
- Scope of 2009 and 2010 supplier emissions data is accountable for 40% and 63% respectively of total purchases by Samsung Electronics. Only Korean-based suppliers participated in the 2009 data collection.

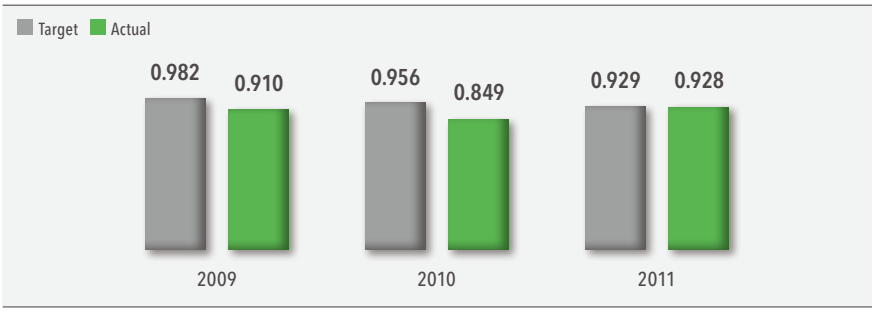
On Site Energy Management

Samsung Electronics has adopted energy cost rate(%) to assess the financial benefits of energy consumption reduction. The 2013 target is 0.878% with a goal of achieving a 2.5% reduction per year. We have optimized operation of manufacturing and utility facilities, introduced high energy efficient facilities, and waste heat recycling facilities to achieve the target. The energy cost rate has increased in 2011 when compared to 2010, due to an increase in energy consumption and energy price. However, we succeeded in achieving the 2011 target set in 2008.

2011 Energy Cost Rate (Korea)

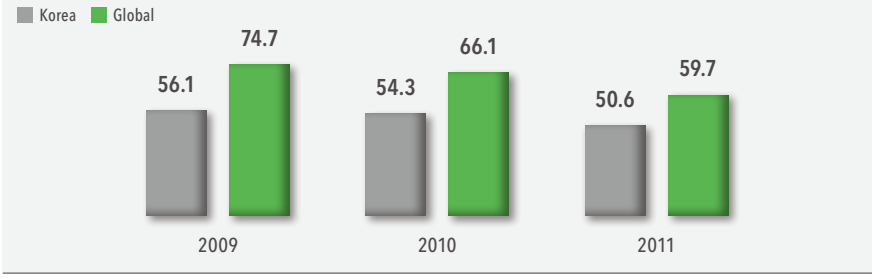
0.928%

Energy Cost Rate (Korea) (%)



- Energy cost rate (%) = energy cost in manufacturing site(Korea) / Sales(Korea) × 100

Energy Consumption Intensity (GJ/KRW 100 million)



- Data scope is 100 percent of both Korea and global emissions

2011 Energy Efficiency Improvement Rate Over 2008 Baseline

25.6%

Eco-Products

Eco-Product Development

Achieving a 100% Good Eco-Product development rate and a 40% improvement in energy efficiency rate are core performance indicators for mid-term environmental management goals (EM2013). In 2011, the Good Eco-Product and Good Eco-Device rates were increased to 97% and 85% respectively, exceeding the 2011 targets. Product energy efficiency was also improved by 25.6% in 2011 when compared to the 2008 level contributing to a reduction in GHG emissions.

Eco-Product Development (%)

	2011 Actual/Target	2012 Target	2013 Target
Good Eco-Product	97/96	97	100
Good Eco-Device	85/80	85	100

Product Energy Efficiency Improvement (%)

2011 Actual/Target	2012 Target	2013 Target
25.6/23.1	30.8	40.0

- Product energy efficiency improvement(%) is average energy efficiency improvement of eight key products over 2008 baseline.

Eco-Product Certified Models

2,630 models

Eco-Product Certification

In 2011, Samsung Electronics received total of 2,630 models for global eco-product labeling, which is the highest number in the electronics industry. It was granted from 9 certification bodies globally that promote eco-product development and green procurement.

Global Eco-Labeling (no. of models)

Korea	China	U.S.	EU	Germany	Sweden	Northern Europe	Canada		Total
854	549	395	115	68	556	48	40		2,630

- Baseline: 31st of Dec. 2011

Amount of Recycled Plastic

12,519 tons

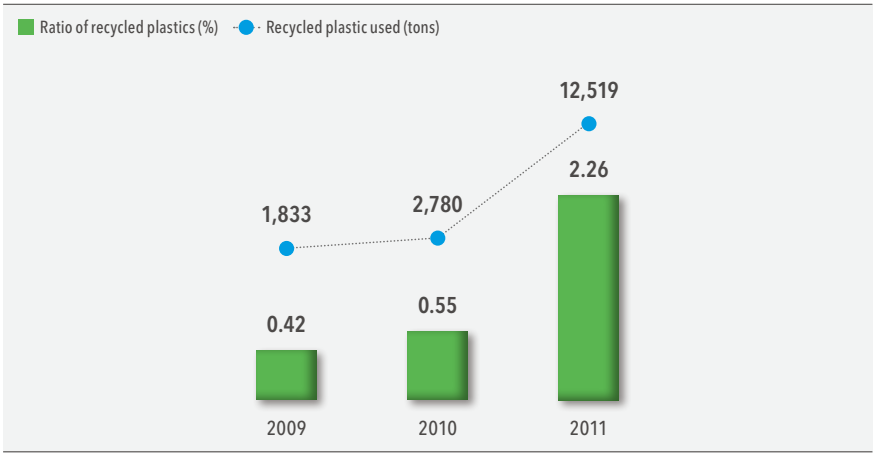
Rate of Recycled Plastic Use

2.26 %

Recycled Plastics

Samsung Electronics has a target to increase the use of recycled plastic by 2.62%. To promote its application in products, we included a criterion of recycled plastic use for Eco-product rating. In 2011, it was significantly increased to 2.26% by expanding its application into production plants in China, Thailand, India and Mexico.

Amount of Recycled Plastic Used



- Ratio of Recycled Plastics (%): Proportion of recycled plastic use compared to total plastic resin use

Elimination of Hazardous Substances and Chemical Materials in Products

Samsung Electronics phased-out six hazardous substances of concern (Hg, Pb, Cd, Cr^{6+}, PBB, PBDE) in all products to comply with RoHS (Restriction of Hazardous Substances) regulation. Also, we are committed to reduce potential substances with environmental impacts, but not regulated on the market. We phased-out Polyvinyl Chloride (PVC) and brominated flame retardants (BFRs) in all mobile phones and MP3 players sold on the market from April, 2010. For notebook PCs, we launched the first PVC-free and BFRs-free in October 2010, and eliminated PVC and BFRs in all 15 notebook PC models released in 2011.

From 2011, we also began to employ PVC-free internal wires in our TVs, monitors and home theaters.

Take Back and Recycling

Take back and Recycling Amount (Global)

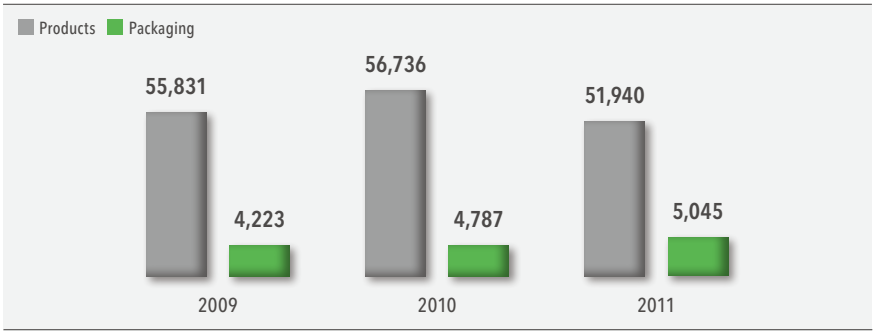
325,869 tons

Samsung Electornics is operating take back and recycling programs globally and the collection amount has been increased by our active participation and expanded operation of take back and recycling program.

Take Back and Recycling Amount (Global) (tons)

	2009	2010	2011
Europe	187,353	219,948	235,177
Asia	50,414	59,281	55,176
North America	7,024	23,288	35,516
Recycling amount	244,791	302,517	325,869

Take Back and Recycling Amount (Korea) (tons)



Recycling Amount by Product Categories (Korea) (tons)

Refrigerator	Washing Machine	Display	Others	Total
26,086	9,379	12,105	4,370	51,940

Reutilization of Resources (Korea) (tons)

Steel	Non-ferrous metal	Plastic	Glass	Others	Total
17,557	6,392	11,627	7,371	3,478	46,425

• Total amount of reutilization of resources does not include 5,515 tons of waste scrapped.

Environmental Health & Safety (EHS) Certification

ISO 14001/OHSAS18001 Certification Rate

100 %

Samsung Electronics established an EHS management structure in all operation sites and earned certifications including ISO 14001 and OHSAS 18001. We are maintaining our environmental management structure by receiving continuous assessment or re-assessment.

In 2011, five production plants in Gumi, Giheung, Hwasung, Onyang and Tangjung received international energy management certification (ISO 50001). We plan to receive ISO 50001 certification at all our operation sites by 2015 in order to establish a systematic energy management structure.

EHS Management Certification (Global)

Type	No. of Operation Sites Certified	Certification Rate	2015 Target
ISO 14001	38	100%	100%
OHSAS18001	38	100%	100%
ISO 50001	5	13%	100%

Water Resource Management

2015 Target for Reduction in Domestic Water Use per Unit Production

50 tons/KRW 100 million

Samsung Electronics is establishing a comprehensive water management system which reduces the cost and pressure on water resources by promoting effective use of water resources. A 3% water use reduction target per production unit by 2015 compared to 2011 was set. The amount of water used in Korea increased in 2011 due to facility expansion and water use per unit production has also increased in overseas operation sites as 20 plants increased their production capacity and workforce. We plan to implement measures to reduce water use and recycling over time to reduce water use per unit production. The volume of waste water increased by 14% in 2011 compared to 2010. We plan to achieve a 2% reduction in water use per year starting in 2012.

Water Source

Type		Water Use by Source (1,000 tons)				Water Use per Unit Production (ton/KRW 100 million)	2015 Target per Unit Production (ton/KRW 100 million)
		Industrial Water	Municipal Water	Underground Water	Total		
Korea	2011	103,562	5,834	205	109,601	91	
	2010	91,225	5,145	180	96,550[2]	86	50
	2009	80,413	5,381	170	85,964	96	
Global	2011	103,562	17,325	780	121,667	74	
	2010	91,225	13,457	607	105,289	68	-
	2009	80,413	14,299	444	95,156	70	

- Water use per unit production: Total water use ÷ Sales (Korea or Global)

[1] Target does not include waste use by LCD division, as it was established as an independent company in April 2012.

[2] The adjustment was made to reflect changes made in management scope with the separation of the LCD division as an independent company.

Water Reuse

Type		Water Reuse		Ultra Pure Water Recycling		
		Reused Amount (1,000 tons)	Reuse Rate (%)	Supply (1,000 tons)	Recovered Amount (1,000 tons)	Recovery Rate (%)
Korea	2011	81,863	74.7	117,321	59,289	50.5
	2010	72,832 ●	75.4	121,170	67,693 ●	55.9
	2009	72,296 ●	84.1	109,300	66,927	61.2
Global	2011	90,068	74.0	128,554	66,676	51.9
	2010	79,012	75.0	127,636	72,812	57.0
	2009	72,570	76.3	113,224	69,166	61.1

● Data was adjusted in accordance with a change in calculation method for assessing reuse.

Waste Water Discharge

	Type	2009	2010	2011
Korea	Discharge (tons)	78,745	87,639	97,370
	Discharge per unit production (tons/KRW 100 million)	88	78	81
Global	Discharge (tons)	82,866	91,183	102,906
	Discharge per unit prwoduction (tons/KRW 100 million)	61	59	62

- Waste water discharge per unit production: Total waste water discharge ÷ Sales (Korea or Global)

Rate of Water Pollutant Concentration Change by the Gwangju Plant

30%

Pollution Management

Air Pollution Management

The amount of air pollution emissions have increased due to the establishment of new production lines and an increase in production volume. However, measures are being taken to ensure all concentrations of pollutants emissions are legally compliant.

Air Pollutant Discharge (Korea)

(tons)

	2009	2010	2011
SO_X	0.024	0.059	0.006
NO_X	192	261	204
Dust	38	40	44
HF	10	12	14
NH_3	8	10	6

Water Pollutants Management

Samsung Electronics is employing new technologies and renovating facilities to minimize water pollutants discharge. We are increasing our waste water recycling rate by installing organic waste treatment and water recycling facilities to reduce discharge of water pollutants.

Waste water and water pollutants from semiconductor production facilities has been increasing steadily with the increase in production volume, but efficiency improvement made in waste water treatment facilities is keeping the concentration of water pollutants below internal management standards. We also achieved a 30% reduction in water pollutant concentrations by improving the efficiency of waste water processing facilities.

Water Pollutant[1] Discharge

(tons)

	Type	2009	2010	2011
Korea	COD	481	584	755
	BOD	100	110	210
	SS	55	56	91
	F	190	244	345
	Heavy metals	1.7	1.6	21.62
Global	COD	569	685	876
	BOD	100	110	210
	SS	136	130	184
	F	247	274	430
	Heavy metals	3.6	2.2	25.3

[1] 2011 Amount of total heavy metal release increased due to additional release of new heavy metals associated with changes made in the production process.

- Waste water processed at the Cheonan industrial park waste water treatment plant is excluded

Waste Recycling Rate

94%

Waste Generated per Unit of Production

0.43 ton/KRW 100 million

Waste Management

Achieving 100% recycling of all waste is the ultimate goal of Samsung Electronics' waste management policy. Additionally, we are working towards achieving the target by expanding the types of waste recycled. In 2011, we began recycling and utilizing of waste glass, waste plastics, and organic sludge which were incinerated or landfilled in the past. We have set a mid-term target of achieving a 95% waste recycling rate and to establish a recycling-oriented waste management system to achieve minimization in waste generation.

Waste Generated

	Type	2009	2010	2011	2015 (Target)
Korea	Total amount (tons)	466,941	520,917	524,387	-
	Per unit production	0.52	0.46	0.43	10% reduction per year
Global	Total amount (tons)	-	663,152	711,871	-
	Per unit production	-	0.43	0.43	10% reduction per year

● Waste generated per unit production: Total waste generated ÷ sales (Korea or Global)

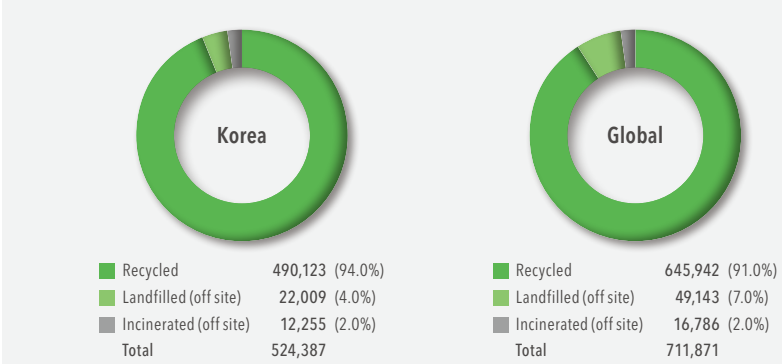
In addition to increasing our recycling rate, Samsung Electronics is striving to reduce waste generation. We have also set an annual waste reduction target per production unit of 10% each year until to 2015. In 2011, the volume of waste generated has increased by 7%. However, the volume of waste per unit of production has remained same level to previous years.

Waste Recycling Rate

	Type	2009	2010	2011	2015 (Target)
Korea	Recycled amount (tons)	427,412	489,492	490,123	-
	Reutilization rate (%)	92	94	94	95
Global	Recycled amount (tons)	-	604,266	645,942	-
	Reutilization rate (%)	-	91	91	95

Waste Type and Processing Methods

(tons)



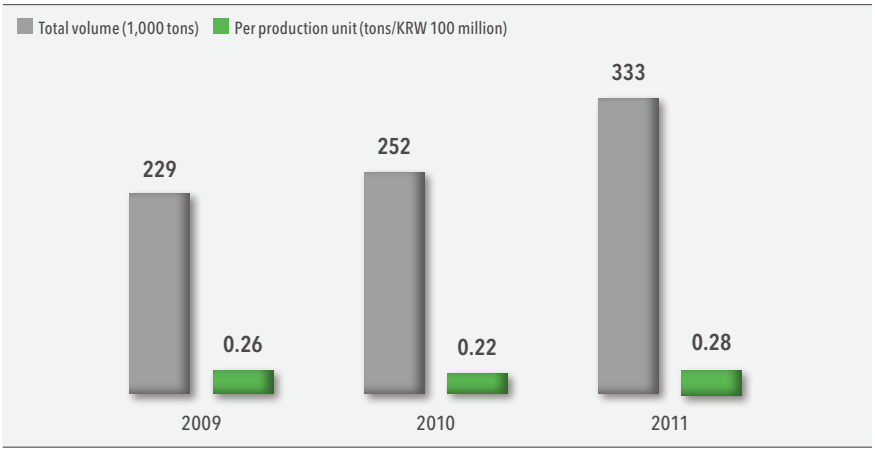
Accidental Leakage of Hazardous Chemicals

0 case

Hazardous Materials Control in the Production Plants

The volume of hazardous material used at Samsung Electronics production is increasing with expanding production volume. However, we plan to reduce the use of hazardous materials relative to sales by 1% each year. We are also conducting regular inspection of storage and facilities where the materials are used and conducting regular training for employees who handle the materials. We have not experienced any accidental leakage of hazardous materials so far.

Volume of Hazardous Materials Used at Korean Production Plants



● Hazardous materials used per production unit: Total hazardous material used ÷ sales (Korea)

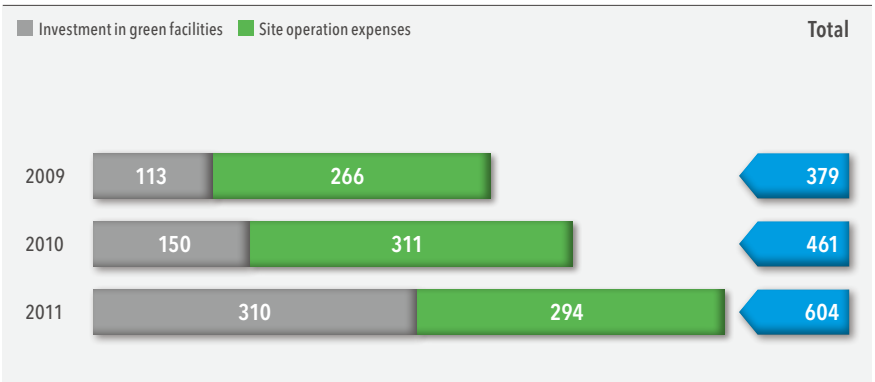
Green Investment

USD 604 million

Investment in Green Management

Samsung Electronics is making regular green management investments. Our green investment is managed in two separate categories of investment in green facilities and site operation expenses. In 2011, Samsung Electronics invested KRW 703 billion in green management which is an 86% increase from 2010.

Green Investment (USD million)

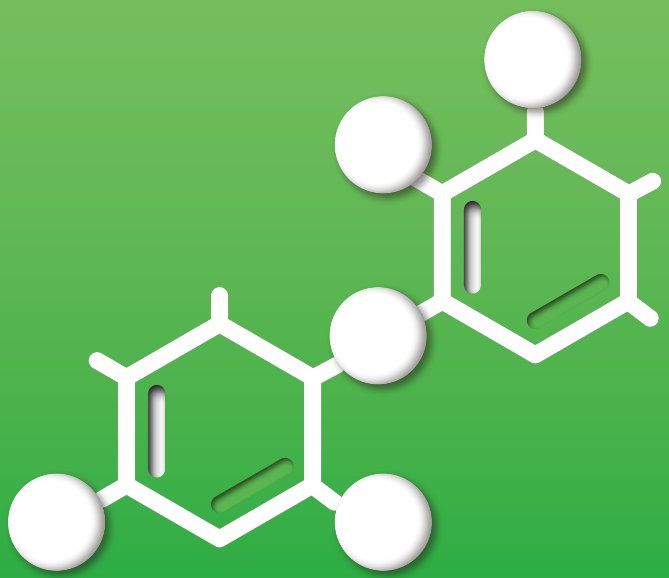


● 1 USD = 1,164.30 KRW (base year: 31st. Dec. 2011)

Green Management Activities and Performance

The scope of global data in this section is all operation sites include Korea as well as overseas.

84 Green Management Framework
90 Climate Change Response
98 Eco-Products
106 Green Operation Sites
117 Green Communication



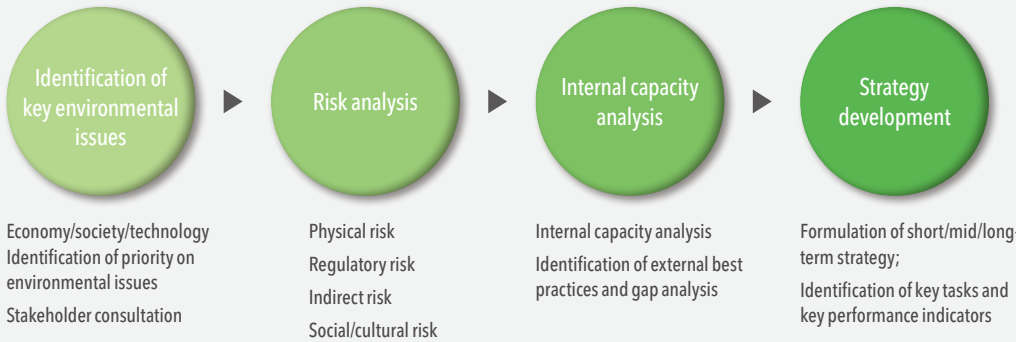
Green Management Framework

Green Management Strategy

Establishing a Green Management Strategy

Samsung Electronics is implementing green management practices for sustainable development by actively analyzing the impact we make on the environment and assessing management risks associated with those impacts. We considered a wide range of our economic, social and environmental impacts and formulated a systematic green management strategy to adapt to changes in the market environment. We conducted materiality tests to assess key risks identified while developing our green management strategy and prioritized them for more effective management. Details on our green management strategy formulation process and priority risk management activities follow.

Strategy Development Process



Key Risks and Management Activities

Type	Key Issues	Management Activities
Physical risks	Rise in price of raw materials and oil	Installation of high energy efficiency facilities Development of energy use reduction policies
	Intensified water shortage	Implementation of water resource management strategies and water-related risk management structure
Regulatory risks	Implementation of national energy/greenhouse gas reduction policies	Operation site GHG reduction activities Energy efficient product development and sales
	Strengthened product-related regulations	Regular monitoring and compliance activities of energy/hazardous materials/recycling-related regulations
Indirect risks	Change in market and industry	Development of Eco-Products and strengthening of green marketing
	Increased competition for eco-technologies	Development and utilization of eco-friendly materials Release of innovative Eco-Products
Social/cultural risks	Changes in consumer preference	Expansion of consumer green marketing Environmental communication with local community residents
	Increased stakeholder demands	Increased stakeholder communication and response to demands Responsive information disclosure

Green Management Vision and Mid-term Goals

Vision and Slogan

Our green management strategy enables us to grow sustainably and invest in the future of both humanity and nature. Samsung Electronics established its green management vision based on our underlying philosophy of helping to build a prosperous society and preserving the environment through business activities that give due respect to people and nature. Our green management activities are reinforced under our slogan of 'PlanetFirst.'

Green Management: Basic Philosophy, Vision, Slogan

Green Management Policies

Samsung Electronics is committed to leading the realization of a sustainable society. Through our green management activities, we are contributing to the prosperity of humanity and the conservation of the natural environment.

Global Green Management System
Establish a top-class global green management system, ensure full compliance of all environment safety and health regulations in all our operation sites and enforce strict internal standards.

Zero-Accident Green Operation Sites
Create recycling-centric production facilities and safe workplaces where wastes are recycled and accident prevention measures are implemented to ensure the health and safety of all employees.

Life Cycle Responsibility for Products and Services
Take full responsibility for ensuring minimum environmental impact and the highest safety in all stages of the product life cycle including purchasing of parts/raw materials, development, manufacturing, transfer, product use and end-of-life.

Preservation of the Global Environment
Take actions to tackle climate change and protect local communities as well as the global environment. Disclose green management policies and achievements to both internal and external stakeholders.

Green Manufacturing Process
Establish manufacturing processes that minimize the release of greenhouse gas emissions and pollutants by employing best-available clean manufacturing technologies that enable efficient resource and energy management.

Mid-term Target: Eco-Management 2013

Eco-Management 2013 outlines our mid-term targets announced in 2009. Lowering greenhouse gas emissions relative to sales by 50% from 2008 levels and designing 100% of Samsung Electronics products as Eco-Products are the two core objectives. To reach the stated goals, we have developed 19 specific actions under the three categories of green operations, green products, and green communication.

We are taking actions to minimize the negative impact on the environment associated with our business activities and disclosing our environmental achievements against mid-term targets to bolster our commitment to green management.

EM2013 Core KPIs and Achievements

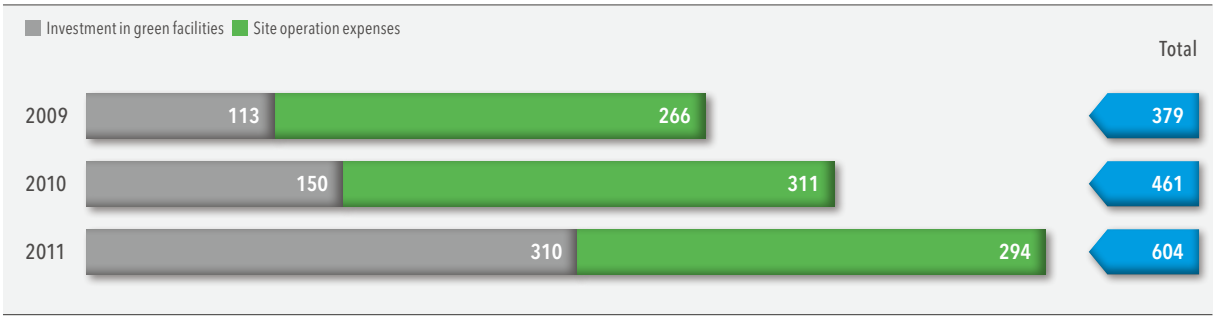
Area	Indicator	2011 Target	2011 Actual	2012 Target	2013 Target
GHG reduction (Korea)	GHG emissions relative to sales (tons CO_2/KRW 100 million)	4.62	4.46	4.21	3.72
	Proportion of Good Eco-Products (%)	96	97	97	100
Eco-Product development ratio	Proportion of Good Eco-Devices (%)	85	85	87	100

Investment in Green Management

Samsung Electronics is making regular investments in green management practicesin two separate categories of investment in green facilities and site operation expenses. In 2011, Samsung Electronics invested KRW 703 billion in green management practices, which is an 86% increase from 2010.

Green Management Investment

(USD million)



- 1 USD=1,164.30 KRW (base year: 31st. Dec. 2011)

Green Investment Detail

Indicator	Details
Investment in green facilities	Investment in air and water quality, waste management and pollution prevention facilities (Extension of air pollution control in semiconductor)
Site operation expenses	Expenses paid to operate pollution prevention and treatment facilities (Power consumption, chemical, labor, accreditation, etc)

Environmental Awards and Achievements

Samsung Electronics has received international recognition for sustainability performance. For example, Samsung Electronics was selected as a sector leader in environmental performance in the Dow Jones Sustainability Index. It was also selected for the Carbon Disclosure Leadership Index for three consecutive years by the Carbon Disclosure Project. Samsung Electronics won 22 awards including ENERGY STAR Partner of the Year by the U.S. EPA. Awards and recognition from external stakeholders indicates the strength of our environmental regulation compliance and stakeholder communication efforts.

2011 Recognition for Excellence in Environmental Management

Name of Award	Given by	Date	Details
Green company assessment	China Europe International Business School (CEBIS)	April	Selected as the greenest company among the top 100 foreign companies in China
Best Global Green Brands Ranking	Interbrand	July	Ranked 25th in the Global 50 Green Brands rankings
Environmental, Social, Governance Assessment	Korea Corporate Governance Service	August	Received A+ grade in environmental management among 800 listed companies
Sustainability Index	*Kyunghyang Daily*	August	Selected as 2nd best environmental performer among the top 100 companies in Korea
Dow Jones Sustainability Index	SAM	September	Named as the most sustainable technology company in the 2011 Dow Jones Sustainability Index Named as top environmental performer in the semiconductor sector
Carbon Disclosure Project	CDP Committee	September	Included in the Carbon Disclosure Leadership Index for three consecutive years
Green Ranking	*Newsweek*	October	Ranked 22nd among Global Top 500 companies Ranked 4th in Tech. Equipment sector
Green Ranking	*Joongang Daily*	December	Ranked 2nd among top 100 companies, Ranked 1st in IT sector

2011 Environmental Awards Received

Region	Name of Award	Given by	Date	Details
Korea	Green Star Certification Award	Korea Management Association	June	Washing machine, refrigerator, Kimchi refrigerator and air conditioner.
	Korea Green Management Award	Ministry of Knowledge Economy/ Ministry of Environment	June	IT solutions division was awarded with a medal for solar powered note PC.
	Energy Winner Award	Consumers Korea	July	10 products were awarded for high energy efficiency including the grand award for smart air conditioner.
	Korea Consumer Well-being Index certification award	Korea Standard Association	August	Samsung Anycall brand ranked 1st in mobile phones
	Green Product of the Year	Green Purchasing Network	October	Solar powered note PC (NT-NC215), low-power monitor (S23A550H)
	CDP Korea 200 Report Launch & Awards	CDP Committee	October	Included in the Carbon Management Industry Leader
	National Green Technology Award	Ministry of Knowledge Economy	November	Low-power mobile semiconductor technology
U.S.	CES Eco-Design Award	U.S. Consumer Electronics Association	January	Washing machine, electric oven, monitor, memory chip, LCD panel, HDD
	Energy Star Award	U.S. Environmental Protection Agency	April	Selected as Partner of the Year
	TreeHugger's Best of Green Awards	TreeHugger	April	Restore (SPH-M570) mobile phone
	Sustainability Leadership Award	International Electronics Recycling Conference & Expo	May	Leadership in Recycling Program
	Green Millennium Awards	Global Green USA's initiatives	June	SPH-M580 Replenish mobile phone
	Outstanding Achievement Award	Buyers Laboratory Inst.	August	Eco-Product award for printers with eco-driver technology
	BGCA Partnership Award	Boys & Girls Clubs of America	September	Recognition for donation of high energy efficiency products
	Mercury Reduction Award	U.S. Environmental Protection Agency	October	Recognition for contribution made in reducing mercury in LED display
	State Electronics Challenge Award for Sustainability	Northeast Recycling Council	October	Recognition for support made in Recycling Association activities
Germany	iF Material Award	International Forum Design Hannover	March	Eco-friendly materials used in note PC (NT-NC10)
UK	*Which* Energy Saver Award	*Which magazine*	September	Energy Efficient LED TV (55D8000)
	Green Apple Award	Green Organization	November	Eco-friendly product award for Eco Bubble Washing Machine
	International Green Award	Green Business Enterprises	November	Eco-friendly innovative product award for Eco Bubble Washing Machine
China	Energy Saving Contribution Award	China Energy Saving Association	May	Received awards for two consecutive years
India	Golden Peacock Award	WEF, IOD	June	Eco Innovation award for eco-friendly note PC 900X3A

Green Management Implementation Structure

Organizational Structure

Samsung Electronics has a structured organization in place for effective implementation of green management. The CS Environmental Center, which reports directly to the CEO, is in charge of mid-term target setting and monitors green management KPIs. It is also responsible for the development of climate change responses, life cycle GHG emissions management and the provision of supplier support. The CS Environment Center is also responsible for overall green management issues including Eco-Design, eliminating hazardous materials in products, and energy efficiency standards regulations.

The Environment, Health and Safety Center is responsible for ensuring the green operations of all production plants through close collaboration with the Environment Health and Safety (EHS) team at each production plant. The center is responsible for analyzing environment and safety risks monitoring changes in global environmental regulations and national policies, and improving Samsung Electronics' EHS practices. Each plant also has an environmental affairs manager and a team of experts to ensure compliance with environmental regulations and the implementation of green management improvement measures.

Corporate Green Management Committee

We are aware of the environmental impact associated with our business activities and the strategic importance of implementing green management practices. This understanding led to the establishment of the Green Management Committee which meets twice a year to confirm green management policies, assess performance and make decisions on the establishment of improvement measures.

Samsung Electronics also has a Climate Change Response Committee in charge of supporting GHG emissions and energy management, as well as an Eco Council in charge of supporting Eco-Product development and green operations at facilities. We also hold regular EHS strategy meetings for reviewing changes to EHS regulations and formulating responses.

Corporate Green Management Consultation Group

Name	Frequency	Details
Green Management Committee	Half-yearly	Headed by CEO. Makes decisions on global green management policies and plans
Eco-Product Council	Half-yearly	Composed of product development team in business divisions. Consults on Eco-Product development strategy
GHG/Energy Executive Council	Half-yearly	Consults on company-wide GHG and energy management strategy
EHS Strategy Council	Quarterly	Consults on corporate EHS strategy

Employee Training

Samsung Electronics offers 32 green management training courses in four categories: basic, legal, job function and overseas. The basic course is designed for all employees and provides an introduction to Samsung's green management policies. The legal courses are designed for EHS affairs managers at production plants and are focused on the prevention of accidents and risk management as required in relevant laws and regulations.

The courses in the job function category are designed for EHS managers at product and plant management levels to enhance their in-depth understanding of EHS affairs. The overseas classes provide staff at overseas plants with information on EHS requirements that must be observed.

Environmental Achievement Management

Achievement Management and Rewards

Samsung Electronics developed a Global EHS System (G-EHS) for integrated management of EHS data. The system played a pivotal role in boosting our green management capacity into a top-tier program in energy and GHG reduction, product environmental regulation compliance, workplace accident reduction goals and achievement monitoring.

We created reward schemes, including the Samsung Green Management Award and the Samsung Electronics Annual Award, to internally promote green management practices. The Samsung Green Management Award is given by the Samsung Corporation to recognize exemplary production plants and suppliers with excellent green management practices. The Samsung Electronics Annual Award is a cash bonus and an extra point in annual reviews given to organizations and employees that made key contributions in green management areas.

Global-EHS System

Environmental Expense Management

Samsung Electronics is managing environmental expenses in an integrated and cost effective manner using the G-EHS. The investment in environmental safeguards at facilities and the operation costs of each production plant is managed by environmental managers at each site. The cost data is then collected by the Environmental Strategy team of the CS center annually for calculation of total expenses spent on environmental management. We are following the Ministry of Environment's guidelines on environmental data collection and report the data to relevant stakeholders, including the Bank of Korea. Environmental costs are budgeted during an annual corporate business planning process and spent accordingly.

Environmental Audit

Samsung Electronics is participating in environmental audits conducted by internal and external experts in order to identify areas of improvement and take appropriate actions. For example, we have been conducting internal audits on all production plants in regards to hazardous materials and energy management. We have implemented an eco-partner policy which mandates regular assessments on the status of suppliers' environmental management and implementation of improvement measures.

We also have an internal mandate on the installation and testing of environmental management equipment at facilities, ISO14001 environmental management certification, and an OHSAS18001 safety and health management system for all existing plants and new plants to be constructed. All plants are subjected to regular audits by third party certification agencies.

Information Disclosure

Samsung Electronics publishes annual sustainability management reports to share information on our environmental management including targets, strategies, GHG emissions data, Eco-Product information, green production plants, and stakeholder communication programs. The information on our green management practices is disclosed on our global web site for easy access by stakeholders.
(http://www.samsung.com/us/aboutsamsung/sustainability/environment/environment.html)

We are actively participating in the Carbon Disclosure Project to share our detailed activities and achievement in our carbon management practices.

Climate Change Response

Climate Change Response Strategy

Risks and Opportunities

Risks and Opportunities Analysis Process Samsung Electronics determines materiality and priority of issues by using five criteria, as listed below, when determining climate change related risks and opportunities.

Criteria of Risk and Opportunity Analysis

Criteria	Details
Significance to stakeholders	Concerns of stakeholders such as customers, evaluators and NGOs.
Industry (competitor) benchmarking	Peers and competitors' reaction to the issue
Significance to the company	Impacts to the company wide policy, strategy, goal and others, as well as direct financial impacts (short/medium/long-term financial impacts)
Readiness	Having reasonable control over the issue or not, and degree of readiness in capital (HR & asset) to deal with related issues
Likelihood	Probability of events and amount of time left (before potential regulation enforcement)

Risk Management Samsung Electronics identified the following climate change risks and response activities for their management.

Risk Management Activities

Category	Type of Risks	Risk Management Activities
Regulatory risks	Emission trading scheme	Developing CDM project within semiconductor manufacturing process
	Emission reporting obligations	Improving transparency on GHG emissions data through third party verification
	Product efficiency regulations and standards	Increasing R&D on energy efficiency improvement on products and receiving energy marks
	Product labeling regulations and standards	Increasing number of eco-label certified products
	Uncertainty on new regulations	Monitoring on global environmental regulations
Physical risks	Change in precipitation and drought	Identification of risks and response manuals on site facilities through regular/special review and 3rd party audit
Other risks	Reputation	Strategic response to Eco-Product exhibition and evaluations
	change in consumer behavior	Developing products using insight from consumer research

Capitalizing on Opportunities Opportunities associated with climate change and its impacts on Samsung's operation as follows.

Opportunity Creation Activities

Category	Opportunities	Opportunity Creation Activities
Regulatory risks	GHG Emissions trading scheme	Development of CDM projects using reductions made at semiconductor production plants and products
	Product efficiency regulations and standards	Introduction of energy mark certified products
	Voluntary agreements	Voluntarily participating in GHG reduction activities
Physical risks	Extreme weather events	Strengthening system air conditioner business
	Air and water pollution	Developing/upgrading of indoor air purifiers, development of water purification technologies
Other risks	Increased consumer demand on low carbon products	Increased number of Eco-Products and related R&D
	Increase of brand value as a low carbon and energy efficient product provider	Strategic participation in Eco-Product exhibitions and climate change related evaluations
	Reduction in operation cost by improving energy efficiency of equipments	Corporate energy cost management

Management Targets and Strategies

Based on the environmental mid-term strategy 'Eco-Management (EM) 2013,' Samsung Electronics manages its climate change mitigation activities through two management systems. Our Eco-Design System (EDS)evaluates GHG emissions from a product's life cycle (from designing to disposal of a product) and our G-EHS manages corporate GHG reduction activities from all facilities around the world. We also have gathered GHG emissions data, including GHG data from employee business travels, logistics, and suppliers, in order to manage Scope 3 GHG emissions.

Climate Change Response Strategy We have created GHG management strategies for all relevant divisions in order to achieve GHG reduction targets in production facilities, product development, and its suppliers.

Climate Change Response Strategy

Category	Details
Incorporation of GHG reduction facilities	Reduction of F-gas emissions from the semiconductor and LCD manufacturing process
Product Energy Efficiency Improvement	Reduction average energy consumption of products by 40% and achieving 0.5W of standby power by 2013, in comparison to 2008 figures.
Implementation of Energy Management System	Implementation of energy management system and establishment of internal energy efficiency certification system subjected to all business sites in Korea
Supplier support	Support for the establishment of global supplier's GHG inventory system by offering training and expertise sharing to global suppliers

International Initiative Membership Status

Initiative
World Semiconductor Council (WSC)
World Business Council for Sustainable Development (WBCSD)
Korea Business Council for Sustainable Development (KBCSD)
Electronic Industry Citizenship Coalition (EICC)

KPI on GHG Emissions Reduction and Achievements

Samsung Electronics designated GHG emissions intensity at Korean plants as its KPI for GHG management, a figure that accounts for 90% of Samsung Electronics' global emissions. The mid-term target is a 50% reduction in GHG emissions intensity by 2013 compared to the 2008 baseline. Samsung Electronics has been meeting annual GHG emissions reductions targets since 2009. We reduced intensity by 40% in 2011 compared to the 2008 baseline and expect to achieve the 2013 target. We have selected GHG reduction during the product use phase as our second KPI to be achieved by manufacturing energy-efficient products. The 2013 mid-term target is to reduce GHG emissions by 85 million tons (accumulated) from 2008 levels. We aim to achieve this through a 40% reduction in average electricity consumption of Samsung Electronics products compared to a 2008 baseline. We are currently on track to achieve this goal, meeting annual targets since 2009.

GHG KPI and Achievements

KPI	Indicator	2009	2010	2011	2013
GHG emissions intensity (production in Korea, tons CO_2/KRW 100 million)	Target	6.85	5.65	4.62	3.72
	Actual	5.83	5.11	4.46	-
	Reduction Ratio (%, 2008 baseline)	22	31	40	50
Cumulative GHG emissions reductions over five years (Global, 10,000 tons)	Target	334	1,169	2,695	8,468
	Actual	444	1,529	3,292	-

- GHG emissions intensity: Total CO_2 emissions[1] ÷ (Sales[Korea] / price index[2])

[1] Total GHG emissions from production plants in Korea, expressed in CO_2-equivalent

[2] Producer price index in Bank of Korea public notice (Base year 2005: PPI=1)

Management Structure

Samsung Electronics' GHG emission management structure is as follows.

GHG Management Committee

Name	Detail	Host	Frequency
Green Management Committee	Discuss and make decisions on corporate-level strategic decisions on climate change response	CEO	Twice a year
Eco-Product Council	Set development goals and implementation strategies on high energy efficiency and low power-consumption products	Head of CS Environmental Center	Twice a year
GHG/Energy Executive Committee	Establishment and implementation of production plant GHG reduction strategy	Head of CS Environmental Center	Twice a year
GHG/Energy Committee	Climate change risks analysis and monitoring	Head of Environmental Strategy team	Five times a year

Scope 1, 2 Emissions Management

Scope 1, 2 Emissions Management Process

Emission Management Structure The operation sites included in the GHG emission management scope are production plants and buildings under direct operational control of Samsung Electronics. Monthly GHG emission data from eight Korean plants and buildings, 30 overseas production plants, and 76 non-production subsidiaries (sales, logistics, and R&D centers) are collected through the environmental management system, G-EHS. The emission data from each site are checked against targets and improvement measures are formulated. The GHG emissions data and reduction achievements against targets are reported to environmental managers at each site, in addition to the corporate environmental affairs management team and top management.

Emission Calculation Method GHG emissions were calculated with management data at each site and the national guidelines of each country as well as international standards including the IPCC Guidelines, ISO 14064 were used as reference for matters not specified in the national guidelines.

GHG Emissions (Scope 1, 2) Samsung Electronics' GHG emissions intensity in 2011 was reduced to 4.46 tons/KRW 100 million. which was 13% lower than 2010 figures. We have taken various measures including the installation of facilities for reducing GHG emissions from indutrial processes, improvement in energy efficiency of production facilities, installation of high efficient facilities and will continue to implement various GHG reduction measures.

GHG Emissions Intensity (tons CO_2/KRW 100 million)

Category	Indicator	2009	2010	2011
Korea	Target	6.85	5.65	4.62
	Actual	5.83	5.11	4.46
Global	Actual	4.35	4.15	3.70

- GHG emission intensity: Total CO_2 emissions[1] ÷ (Sales[Korea] / price index[2])
  - [1] Total GHG emissions from production plants in Korea, expressed in CO_2-equivalent
  - [2] Producer price index in Bank of Korea public notice (Base year 2005: PPI = 1)
- Calculation Method (Global): Global total CO_2 emissions / Global Sales

GHG Emissions

(1,000 tons CO_2)

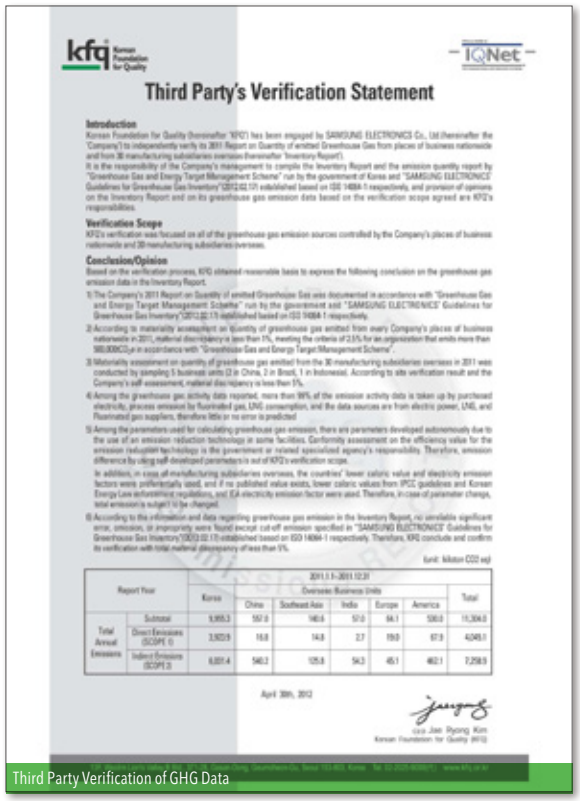
Region	Scope	2009	2010	2011
Korea	Scope 1	3,564	4,057	3,924
	Scope 2	5,008	5,552	6,031
	Total	8,572	9,609	9,955
Global	Scope 1	3,750	4,155	4,045
	Scope 2	5,875	6,500	7,259
	Total	9,625	10,655	11,304

- Adjustment was made to Korean GHG emissions data between 2009 and 2011 as a result of third party verification in June 2011 following guideline in national GHG target management policy.
- Data scope is 100 percent of both Korea and global emissions by Samsung Electronics

GHG Emissions by Type (Global)

(1,000 tons CO_2)

	2009	2010	2011
CO_2	6,340	7,012	8,378
SF_6	2,037	2,397	1,738
PFC_S	912	901	859
N_2O	170	212	220
HFC	164	131	108
CH_4	2	2	2
Total	9,625	10,655	11,304



kfq Korean Foundation for Quality

IQNet

Third Party's Verification Statement

Introduction

Verification Scope

Conclusion/Opinion

Third Party Verification of GHG Data

Third Party Verification of GHG Data

Our GHG reduction has been verified by a third party agency in compliance with relevant Korean government policy. The Korean Foundation for Quality has recently completed verification of GHG emissions data between 2007 and 2011 of eight operation sites in Korea. We also voluntarily received GHG emission data verification for overseas production plants.

GHG Reduction Activities

Samsung Electronics succeeded in reducing 1.4 million tons of CO_2 in 2011. The reduction of 1.03 million tons was achieved with the installation of PFC, SF_6 emissions reduction facilities. The introduction of high energy-efficiency facilities and the optimization of utilities contributed to a reduction of 28,000 and 188,000 tons of CO_2 respectively. Implementation of a waste heat recovery system resulted in 24,000 tons of CO_2 emissions reduction. A collection of improvement measures also contributed to a reduction of 130,000 tons of CO_2 emissions.

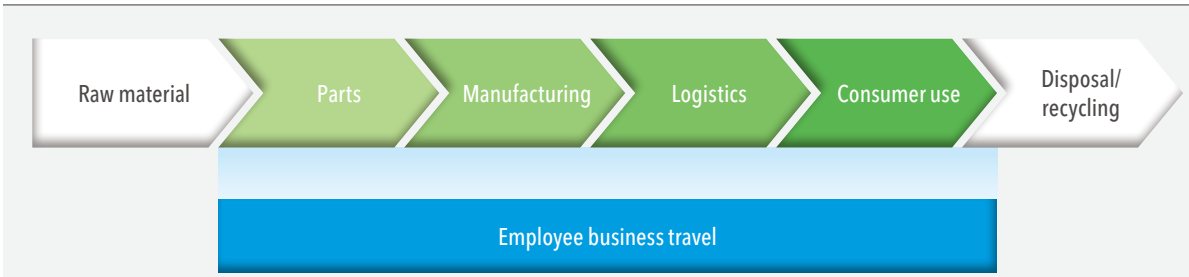
Scope 3 Emissions Management

Scope 3 Emissions Management Process

Samsung Electronics' Scope 3 GHG emissions include GHG emissions associated with suppliers, product use, transport of parts and products and business travel by Korean employees.

Supplier GHG emissions are calculated using the activity data submitted by suppliers. Emissions associated with logistics and business travel are automatically calculated by the G-EHS. GHG emissions associated with product use are estimated using energy consumption information and typical use scenarios for each product. The GHG emissions of product use are correlated to the energy efficiency of products. The GHG emissions data of each scope can be managed by environmental managers in each division, the corporate environmental affairs management team, and top management.

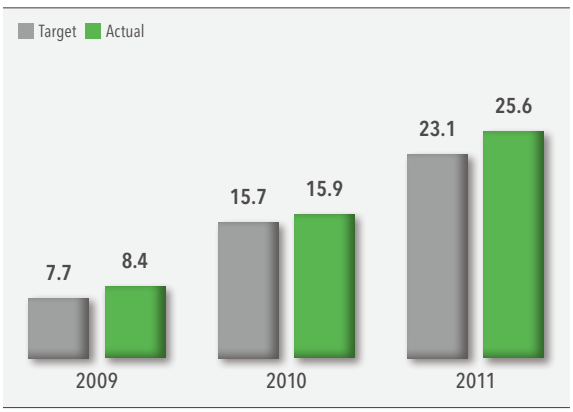
Boundary of Scope 3 Management



Scope 3 GHG emissions are calculated as per related international standards including ISO 14064, IPCC guidelines, WBCSD Scope 3 guidelines and carbon footprint labeling standard of Korea.

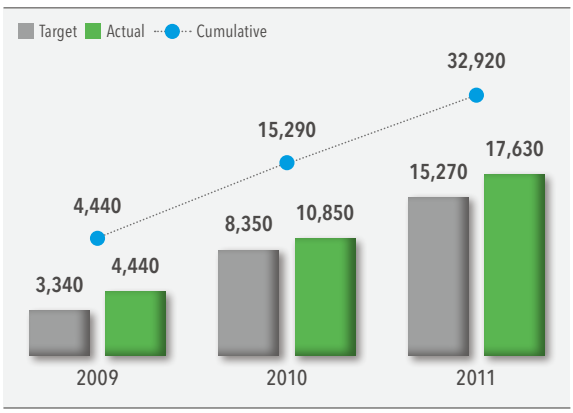
GHG Emissions in Product Use Samsung Electronics defines "GHG Emissions associated with product use" as the amount of GHG emissions caused by electricity consumption of Samsung Electronics products. The emissions associated with product use have not increased despite an increase in the number of products sold due to the increased energy efficiency of newer products. We achieved 17,630 thousand tons of GHG emission reductions in 2011 compared to the 2008 levels.

Improvement Rate of Product Energy Efficiency (%)



- Product Energy efficiency improvement rate = (2008 average power consumption–2011 average power consumption) / (2008 average power consumption) × 100

GHG Emissions Reduction in Product Use (1,000 tons CO_2)



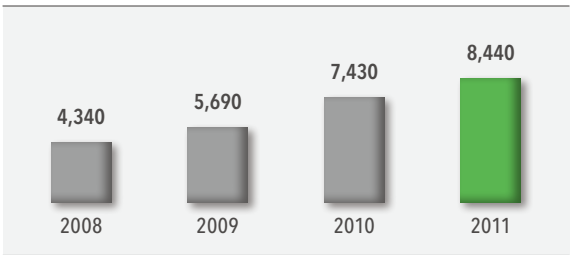
- Target is made by 10% of annual increasing in product sales volume
- Scope: All consumer products sold globally (excluding parts)

GHG Emissions associated with transport of parts and products
Samsung Electronics is monitoring CO_2 emissions associated with transport of materials, parts and products. The emissions have been increasing by 15% per year on average due to the establishment of new overseas production facilities and an increase in overseas production volume. Efforts are being made to reduce product weight and optimize transport routes to achieve reductions in emissions related to transport. A modal shift to lower GHG emissions is also employed to achieve further reduction.

- Modal shift (Change in means of transport): Samsung Electronics is changing air transport to maritime transport and road transport to railroad transport to achieve reductions in GHG emissions.

Emissions Associated with Transport of Parts and Products

(1,000 tons CO_2)

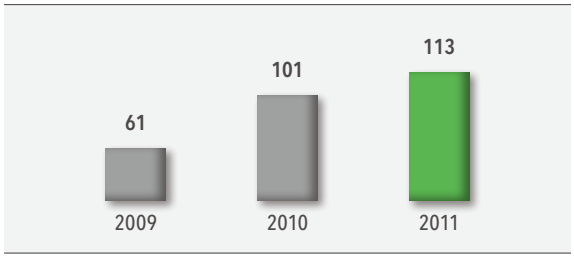


- Calculation formula: Distance (Km) × Weight (Kg) × GHG emission conversion factor by emission sources
- Management scope: transport of products, materials and parts (transport service paid by business partners are also included)
- Management method: Monthly emissions are calculated based on logistic data
- Data scope is 100 percent of global emissions by Samsung Electronics

Business Travel Emissions Samsung Electronics is monitoring GHG emissions associated with business travel. The emissions have increased by more than 10% due to the establishment of new overseas operation sites and an increase in the number of employees. We are making an effort to reduce business travel-related emissions through measures including the encouragement of the use of mass transportation and video-conferencing systems.

GHG Emissions Associated with Business Travel (Korea)

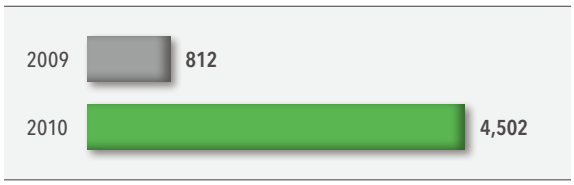
(1,000 tons CO_2)



- Calculation formula
  - Air travel: ∑[Distance(Km) × No. of employees travelled × GHG emissions conversion factor by class]
  - Land transport: ∑[No. of employees travelled × cost (KRW) per travel × distance conversion factor (km/KRW) × emissions conversion factor (ton CO_2/employee·km)]
- Management scope: Based on global business travel data by Korea-based employees
- Management method: Emission data is automatically calculated using the G-EHS system on a monthly basis and G-ERP

Suppliers' GHG Emissions Samsung Electronics manages suppliers' GHG emissions data associated with Samsung Electronics' business; total GHG emissions of a supplier multiplied by the ratio of sales to Samsung Electronics.
Samsung Electronics began monitoring and analysis of GHG emissions from its supplier companies since 2009. We provided training courses to help the suppliers report their GHG emissions.

Supplier GHG Emissions (1,000 tons CO_2)



- Compilation of 2011 supplier data has not been completed as of May 2012.
- Scope of 2009 and 2010 supplier emissions data is accountable for 40% and 63% respectively of total purchases by Samsung Electronics. Only Korea-based suppliers participated in the 2009 data collection.

Corporate GHG Emissions Break-down

2011 GHG Emissions Break-down (1,000 tons CO_2)

On-site Energy Management

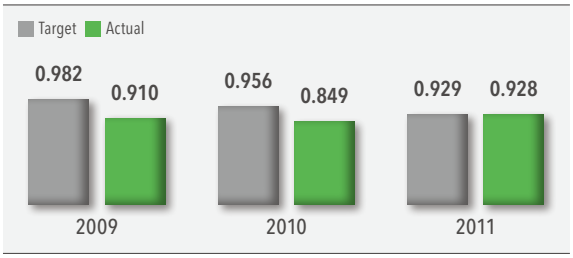
Energy Management Structure in Operation Sites

The CS Environmental Center at Samsung Electronics created climate stratrgy part to manage energy use at operation sites by conducting tasks including the collection of monthly data and the analysis of the cause of changes in emissions. Bi-monthly GHG and energy working group meetings are also held to share success stories and news on energy saving activities.

Energy KPI and Achievements

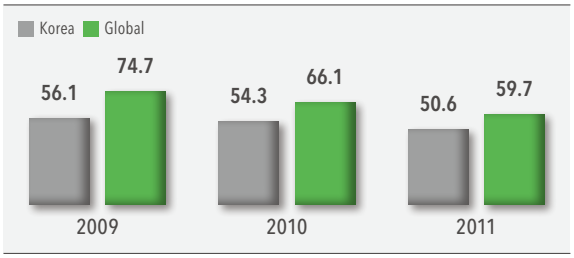
Samsung Electronics has adopted an energy cost rate (%) to assess the financial benefits of energy consumption reduction. The 2013 target is 0.878% with a goal of achieving a 2.5% reduction per year. We have optimized the operations of manufacturing and utility equipment, introduced energy efficient equipment and waste heat recycling facilities to achieve the target. The energy cost rate increased in 2011 compared to 2010, due to an increase in energy consumption and energy price. However, we succeeded in achieving the 2011 target set in 2008.

Energy Cost Rate (Korea) (%)



- Energy cost rate (%) = energy cost in manufacturing site (Korea) / Sales (Korea) × 100

Energy Consumption Intensity (tons CO_2/KRW 100 million)



- Data scope is 100 percent of both Korea and global emissions

Electricity and LNG Consumption

Category	Indicator	2009	2010	2011
Korea	Electricity (Gwh)	10,729	11,894	12,925
	LNG (Mil. Nm^3)	148	170	197
Global	Electricity (Gwh)	12,180	13,435	15,047
	LNG (Mil. Nm^3)	174	197	237

- Data scope is 100 percent of both Korean and global emissions by Samsung Electronics

Energy Saving Activities and Ahievements

Samsung Electronics achieved energy use reductions by 171,000 TOE through optimization of manufacturing and utility equipment, installation of high energy efficiency equipment, and waste heat recovery. It is equivalent to savings of KRW 70 billion in energy cost and reduction of 370,000 tons CO_2.

Need for systematic energy management is increasing with the introduction of new policies such as the GHG/Energy target management system enforced by Korea government in 2011. Responding to the change, we implemented the Energy Management System (EnMS) for analysis of energy use status, management of reduction targets, and promotion of energy saving activities in systematic manner. Implementation of the EnMS and other energy management initiatives enabled five production plants in Gumi, Giheung, Hwasung, Onyang and Tangjung to receive international energy management certification (ISO 50001) in 2011.

We also implemented 'Pre-certification of Energy Efficiency' for all energy using devices, equipment, and raw materials to induce energy efficiency improvement by equipments suppliers and to contribute to energy savings at operation sites. Our ultimate goal is to achieve of GHG emissions reduction and cost reduction at the same time.

Renewable Energy

Renewable Energy Expansion Plan and Activities

Samsung Electronics is developing 1MW of hydro power plant and 1.4MW scale of solar power system in Korea. we are also expanding the investment on solar cell, smart grids and geothermal heating system.

We are investing in the development of photovoltaic cells, smart grid technology, and geothermal heating/cooling systems as a sustainable growth opportunity. For example, we have been participating in the Korean-government led smart grid pilot project on Jeju Island as a smart grids ready home appliance developer.

Renewable Energy Status

Samsung Electronics' QA Lab America and the Austin Semiconductor Production plant are participating in the 'Green Power Partnership' program created by the U.S. Environmental Protection Agency for promotion of renewable energy industry. For example, QA Labs America has replaced 73.7% of it's total electricity consumption with a roof-top photovoltaic system. The Austin semiconductor plant purchased 25.5 GWh of renewable energy electricity as well.

Green Buildings

The Samsung Electronics LED business division formed a partnership with the Samsung Construction Company for the development of an 'Intelligent Green Building Solution'. The objective is to create an energy saving solution which can reduce the energy consumption of a building by 30% with minimal investment. Successful development will significantly contribute to greening of buildings.

Eco-Products

Eco-Product Strategy

Strategy and Targets

Energy efficiency regulations on electronics products are spreading and becoming stricter due to the need to combat climate change. Environmental regulations on electronic products, including chemical and recycling regulations, are spreading from Europe to other regions including Asia as well as America. Market demand for energy efficient Eco-Products is increasing as well.

Samsung Electronics is responding to such demands by governments and consumers by developing Eco-Products in accordance with global environmental labeling requirements and improving the energy efficiency of products. More specifically, we developed an environmental assessment system using criteria including the eco-friendliness of products with the restriction of hazardous materials, energy efficiency, the use of environmentally preferable materials and technologies, in addition to setting annual targets for improvement and an overall Eco-Product development ratio. We are also increasing the number of products certified with global environmental labeling in response to the increasing demand for Eco-Products by consumers and public procurement policies.

We are making a strong effort to improve the energy efficiency of our products by introducing innovative technology, such as a solar-powered note PC. We are also expanding the number of products with carbon footprint and carbon footprint reduction labels in Korea, and Carbon Trust certification in UK.

Eco-Product KPI and Achievements

Achieving a 100% Good Eco-Product development and a 40% improvement in energy efficiency are core performance indicators for Samsung Electronics' mid-term environmental management goals (EM2013). In 2011, the Good Eco-Product and Good Eco-Device rates increased to 97% and 85% respectively, exceeding the 2011 targets. Product energy efficiency was also improved by 25.6% in 2011 when compared to the 2008 level, contributing to a reduction in GHG emissions.

Eco-Product Development (%)

Category	2011 Actual/Target	2012 Target	2013 Target
Good Eco-Product	97/96	97	100
Good Eco-Device	85/80	85	100

Product Energy Efficiency Improvement (%)

2011 Actual/Target	2012 Target	2013 Target
25.6/23.1	30.8	40.0

- Product energy efficiency improvement (%) is the average energy efficiency improvement of eight key products over 2008 baseline.

Eco-Design Process

Life Cycle Assessment and Eco-Design Process

Samsung Electronics first introduced Life Cycle Assessment (LCA) methods in 1995. We are now considering life cycle thinking on the products developed to minimize environmental impact. In 2004, we implemented the 'Eco-Design Assessment Process' and made an environmental impact assessment at the product development stage mandatory. In 2008, we created the 'Eco-Design System (EDS)', which enabled the implementation of an 'Eco-Product Rating Program' for assessing the green attributes of each development project.

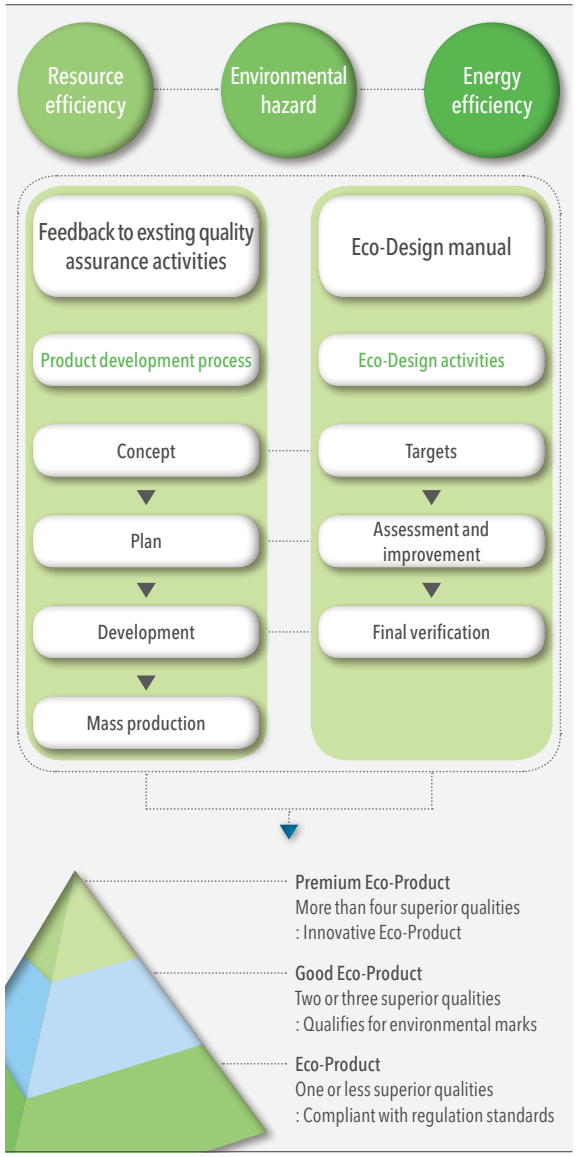
We are also conducting activities to increase the longevity of products to decrease the environmental impact associated with product disposal. For example, the Evolution Kit in our Smart TV enables the installation of new functionalities without changing any hardware. We also made our PCs easily upgradable to lengthen the useful life. We are also increasing the use of recycled materials to improve resource efficiency.

Eco-Product Rating Program

All of our product development projects are subjected to an eco-friendliness evaluation with three ratings including 'Premium Eco', 'Good Eco' and 'Eco' defined in the Eco-Product rating.

The criteria for the Eco-Design assessment consists of more than 40 detailed criteria which fall into three categories of resource efficiency, energy efficiency and environmental impact. We aim to increase the ratio of 'Good Eco-Products' that meet the strict standards required for global environmental labeling.

Eco-Design and Eco-Product Rating Process



Product Energy Efficiency

Compliance with Energy Regulations

Regulations on energy efficiency and standby power consumption are being adopted by an increasing number of governments. New regulations were introduced in South America and Middle East nations while Europe and North America are strengthening existing standards. We are monitoring changes in energy-related regulations in order to devise preemptive responses to cope with the changes.

Product Energy Efficiency Policy and Activities

Samsung Electronics is making an effort to develop products with vastly improved energy efficiency and ultra-low standby power consumption in order to go beyond meeting new energy efficiency regulations. Our mid-term goal is to reduce annual energy consumption of our products by 40% and achieve an accumulated reduction of 84 million tons of CO_2 over a five-year period.

For example, we achieved further reductions in our flagship Eco-Product, LED TVs, by reducing the number of backlight LED lamps by 38% in the 55-inch model and improving power consumption by 20%. One of our refrigerators also won an A+++ rating, the highest energy efficiency rating given in Europe, by employing vacuumed insulators and high-efficiency compressors.

We are also making a sustained effort to reduce standby power consumption. In 2011, we managed to increase the ratio of products with lower than 0.5w standby power consumption to 84% of products. Thanks to the number of improvements made, we were able to reduce annual power consumption associated with product use by 25.6% when compared to the 2008 baseline, which is equivalent to 17.63 million tons of CO_2.

Eco-Product Development Performance

Eco-Product Development and Launch

All business divisions have Eco-Product development and release plans in order to launch products with improved energy and resource efficiency, less hazardous materials, and innovative green technologies. The Eco-Products released in 2011 are as follows.

Eco-Products in 2011

Product	Product Type/ Model No.	Key Environmental Characteristics
	LED TV (UN46D7000)	Power consumption down to 12% Auto off function Mercury-free Edge LED
	Monitor (S23A550)	Eco-motion sensor (auto off) Mercury-free LED 32% improved resource efficiency
	Blu-ray player (BD-D5500)	Power consumption down to 16% Resource efficiency up to 8% Mercury-free LED
	Home theater (HT-D5500)	Power consumption down to 32% Resource efficiency up to 20%
	Printer (ML-5015ND)	Power consumption down to 30% Resource efficiency up to 15% One-touch Eco-button for eco-printing
	Printer (ML-2950ND)	Power consumption down to 28% Low noise (lower than 51dB) Resource efficiency up to 25%

Product	Product Type/ Model No.	Key Environmental Characteristics
	Mobile phone (Rant3)	Solar charging capability Rate of recycled resin 70% Free of BFR/PVC/beryllium/phthalate UL Environment certified
	Washing machine (WR-HH139CQ)	Power consumption down to 26% Washing time reduced to 50% Eco 'Bubble washing' technology
	Refrigerator (RL60GQERS1)	A+++ energy efficiency rating (1st in Europe) Eco refrigerant (R-600a) Use of recycled plastic
	Air conditioner (AF-HD202TSA)	Power consumption down to 32% Size of heat exchanger reduced to 50% Eco refrigerant (R-410A) Resource efficiency up to 33%
	Hoover (VCC88L0H31)	Energy efficiency improved to 4% Environmental HEPA filter
	Memory (DDR3 4Gb)	Power consumption down to 67% (memory product) Power consumption down to 15% (server product) Made without use of Halogen materials Won 2011 CES Eco-innovation award

CES Eco-Design Innovations Award

Samsung Electronics received the CES (Consumer Electronics Show) Eco-Design Innovations Awards in four different product categories in January 2012 which are the most among companies awarded. In CES 2011, the company received for six different product categories and it was the most as well.

Awarded Products and Model

Solar Note PC
NC215

Washing Machine
WF457

Microwave
SMH2117S

Transparent LCD
LTI460AP01

Chemicals Management in Products

Management Policies for Chemicals in Products

Samsung Electronics is strictly managing the use of chemicals in its chain in order to ensure compliance with RoHS and REACH regulations and to enforce the voluntary management of potential chemicals with environmental impacts based on precautionary principles.

We list and manage the chemicals under legal or voluntary management in Standards for Control of Substances concerning Product Environment (0QA-2049). Based on this standard, we conduct regular audits and inspections to prevent the use of restricted chemicals in all the parts and final products for absolute compliance.

Eco-Partner certified suppliers are eligible to do business with Samsung. We are also providing active support for suppliers including regular training on chemical management and updates on relevant regulations to ensure our suppliers stay in compliance with relevant regulations and voluntary bans.

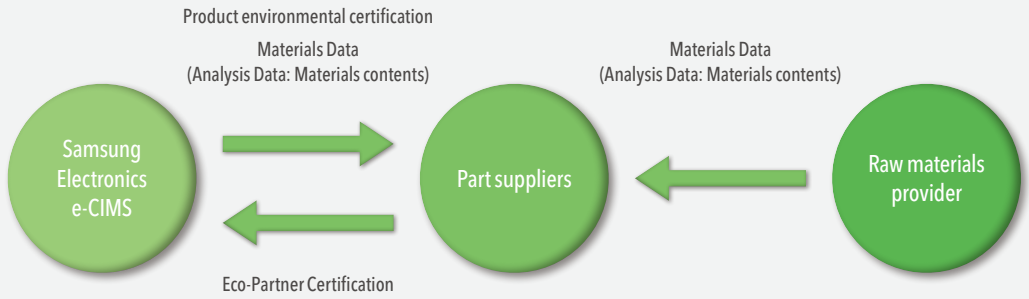
Product Chemical Management in Supply Chain

For effective management of chemicals, we operate Eco-Partner Certification program that qualifies suppliers for chemical management practice. To become an Eco-Partner certified company, suppliers must fulfill two main criteria; (i) compliance with the Samsung Electronics Standards for Control of Substances concerning Product Environment; (ii) demonstration of an adequate environmental management system.

Eco-Partner can renew certification by site audits or self-assessment based on potential risks of their supplied parts and materials. We are also providing active support for suppliers including regular training on chemical management and updates on relevant regulations to ensure our suppliers stay in compliance with relevant regulations and voluntary restrictions.

We established the Environment Chemicals Integrated Management System (e-CIMS) in 2009 for the effective operation of the Eco-Partner Certification program. We are able to assess material composition and chemical contents of final products using materials data and chemical information submitted by suppliers.

Chemical Management Process in Supply Chain



Achievement of Chemical Management in Products

Samsung Electronics phased-out six hazardous substances of concern (Hg, Pb, Cd, Cr^{6+}, PBB, PBDE) in all products to comply with RoHS regulation. We also completed a survey on the use of 73 Substances of Very High Concern (SVHC) by EU REACH, which are list of SVHC announced in December 2011 in EU. We are disclosing information on products using SVHC materials of more than 0.1% of the product mass.

We phased-out Polyvinyl Chloride (PVC) and brominated flame retardants (BFRs) in all mobile phones and MP3 players sold on the market beginning in April, 2010. For note PC, we launched the first PVC-free and BFRs-free in October 2010, and eliminated PVC and BFRs in all 15 note PC models released in 2011. From 2011 we also began to employ PVC-free internal wires in our TVs, monitors and home theater.

We have been managing a world-class environmental analysis lab which is capable of analyzing hazardous materials and volatile organic compounds (VOC). The laboratory received international analysis lab certification from UL, KOLAS, and BAM Germany, while improving credibility of its analysis results. The analysis lab standardized the analysis process for phthalates and 10 types of VOCs. Overall, it has analysis methods for 70 types of chemicals.

Take Back and Recycling

Policy on Take Back and Recycling

Samsung Electronics is committed to reducing electronic waste generated throughout product life cycles and promoting the take back and recycling of electronic products as part of its commitment of product stewardship in accordance with individual producer responsibility (IPR).

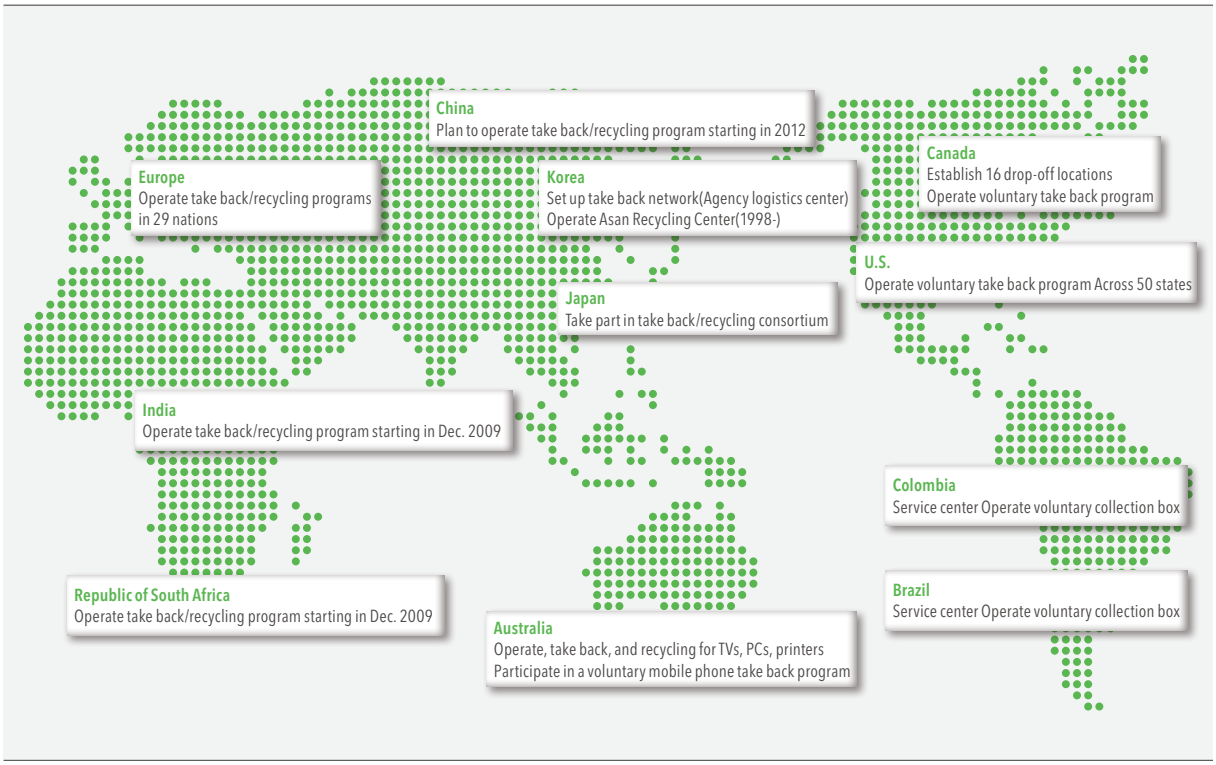
In 1998, Samsung Electronics began the establishment of Korea's first electronics product recycling structure with the Asan Recycling Center. We now have eight recycling centers in Korea with 1,500 sales centers and 21 regional logistics centers serving as collection agencies to transport end-of-life electronics products to recycling facilities for the reuse of resources.

We were the first electronics manufacturers to become an e-Stewards Enterprise within the Basel Action Network (BAN). BAN is a U.S.-based non-profit organization specializing in environmental preservation and human rights protection that developed a responsible recycling certification program named e-Steward. Working with BAN, Samsung is striving to prevent the export and landfill of electronics waste into developing countries.

Global Take Back and Recycling Program

Samsung Electronics is operating take back and recycling programs in 60 countries including the U.S., Canada, Europe, and India.. In North America, we expanded the Samsung Recycling Direct (SRD) drop-off to 1,151 locations in 50 states. We have also set up a voluntary recycling program in India with 235 fixed drop-off locations for small mobile devices and 291 locations for larger consumer electronic products as well as offering recycling information to consumers online. We have established 16 drop-off locations in Canada and plan to set up a recycling system in Australia for the collection and recycling of mobile phones, TV, PCs and printers in May 2012.

Global Take Back and Recycling Performance



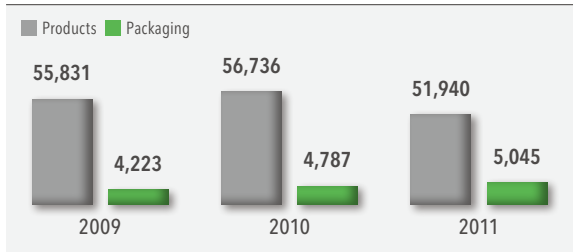
Global Take Back and Recycling Performance

Samsung Electronics is operating take back and recycling programs globally and the collection amount has steadily increased year on year.

Recycling Amount (Global) (tons)

Category	2009	2010	2011
Asia	50,414	59,281	55,176
North America	7,024	23,288	35,516
Europe	187,353	219,948	235,177
Total	244,791	302,517	325,869

Recycling Amount (Korea) (tons)



Recycling Amount by Product Categories (Korea) (tons)

Refrigerator	Washing Machine	Display Products	Others	Total
26,086	9,379	12,105	4,370	51,940

Reutilization of Resources (Korea) (tons)

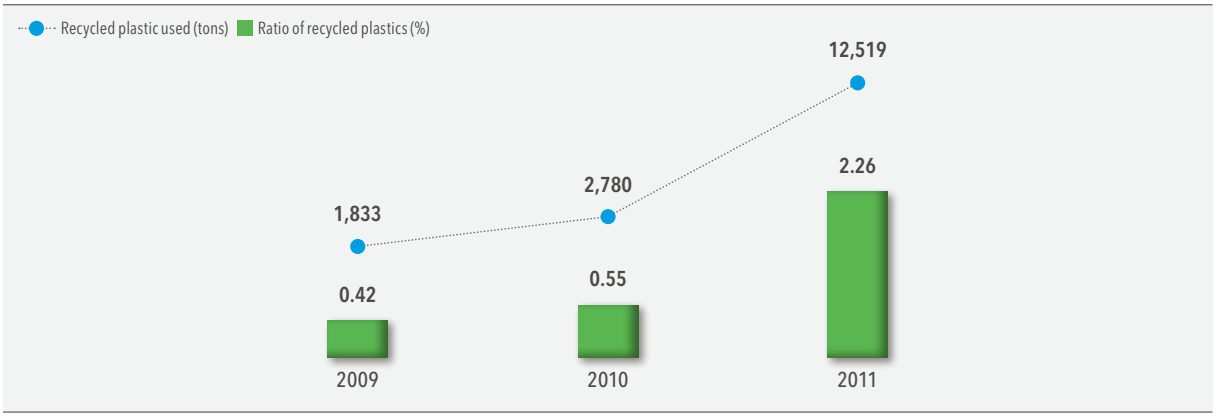
Steel	Non-ferrous Metal	Plastic	Glass	Others	Total
17,557	6,392	11,627	7,371	3,478	46,425

- Total amount of reutilization of resources does not include waste scrapped.

Recycled Plastics

Samsung Electronics has a target to increase the use of recycled plastic by 2.62%. To promote its application in products, we included a criterion of recycled plastic use for Eco-Product rating. In 2011, it was significantly increased to 2.26% by expanding its application into production plants in China, Thailand, India and Mexico.

Amount of Recycled Plastics



- Ratio of Recycled Plastics (%): Proportion of recycled plastic use compared to total plastic resin use

Eco-Product Labeling and Certification

Global Environmental Labeling and Certification

In 2011, Samsung Electronics received total of 2,630 product models for global Eco-Product labeling, which is the highest number in the electronics industry. It was granted from 9 certification bodies globally that promote Eco-Product development and green procurement.

Global Eco-Labeling (no. of models certified)

South Korea	China	U.S.	EU	Germany	Sweden	Northern Europe	Canada		Total
854	549	395	115	68	556	48	40		2,630

- Baseline: 31st of Dec. 2011

Carbon Footprint Labeling

Samsung Electronics has been actively participating in the Korean carbon footprint labeling scheme which was launched in 2009 to encourage voluntary GHG emission reduction by product manufacturers.

We are disclosing information on GHG emissions associated with the lifecycle of our products by participating in a carbon footprint labeling scheme. In 2012, Samsung had 32 models certified with labels, which is was the largest number among electronics manufacturers.

In February 2012, we received Korea's first carbon footprint reduction label for an LED TV, a laptop PC and a memory chip product. The carbon footprint reduction label is only given to products that achieved exceptional carbon reductions including meeting a standard set by the Ministry of Environment, or achieving a more than 4.24% reduction against a baseline model.

Our smartphones, the Galaxy SII and Galaxy Note, received Carbon Footprint labels from the U.K. Carbon Trust in March 2012, making them the first mobile phones in the world to be carbon footprint labeled. The carbon footprint is calculated through a detailed assessment on GHG emissions associated with the full lifecycle of the product from manufacturing through use and end-of-life.

The UL SPC Certification

Eight mobile phones received 'Platinum' ratings for Sustainable Product Certification by the U.S.-based and renowned safety testing and certification organization, the Underwriters Laboratories. The UL SPC certification is only given to products that meet high standards on lifecycle criteria including energy efficiency, convenience of extending useful life of products, corporate environmental achievement and more.

The Green Certification (Korea)

Green Certification was operated and managed by KIAT (Korea Institute for Advancement of Technology), an organization affiliated with the Korean Ministry of Knowledge Economy. The certification is given to eco-friendly technologies or projects with energy resource conservation and reductions in GHG emissions. Samsung Electronics received 21 Green Certifications for 20 green technologies and one green project, the highest in the electronics sector.

Green Operation Sites

Operation-Site Environmental Management Structure

Policies and Strategies

Samsung Electronics is conducting a lifecycle environmental impact assessment on our business activities in order to contribute to global ecosystem protection through measures from reductions in GHG emissions to recycling of waste water. We have implemented various systems including a life-cycle pollution control system, environmental risk elimination, and preventive measures in order to minimize environmental impacts and to prevent environmental accidents.

Targets and Assessment of Achievements

The EHS Strategy council is held on a regular basis to make policies on prevention of EHS accidents and the environment and safety risk assessment. The council reviews and analyzes global environmental guidelines, national policies, and makes decisions on relevant corporate policies. It reviews achievements on green management of operation sites and shares the best practices to bring sustained improvement in Samsung Electronics EHS standards. Each operation site has an EHS committee which consists of the top executive in charge of operations and EHS experts for the implementation of decisions made by the council and to resolve related issues. All decisions made by the committee are openly disclosed to all employees. Samsung Electronics holds a "Global EHS/Utility Conference" with EHS and utility management and staffs on a regular basis. The participants share EHS strategies, regulation changes, stakeholder demands, new technologies and best practices to contribute to the overall EHS management at Samsung Electronics.

KPI Target and Performances

Item	Management System Certification Received (%)[1]			Waste (Korea)		Water Resource (Korea)
	ISO 14001	OHSAS18001	ISO 50001	Re-utilization rate (%)	Emissions relative to sales (tons/KRW 100 million)	Water use relative to sales (tons/KRW 100 million)
Achievement in 2011	100	100	13	94	0.43	91
2015 targets	100	100	100	95	10% reduction over previous year[2]	50 tons/KRW 100 million maintain 2009 level[2]
Implementation strategies	Standardize Management System Acquire ISO 14001 certification for new business sites within one year of establishment			Establish resource recycling-based system Reduce amount of waste generated		Secure stable water supply Increase water recycling

[1] Scope: 38 production plants (Korea: 9, Global: 29)

[2] Excluding LCD business division which has become a subsidiary company as of April 2012

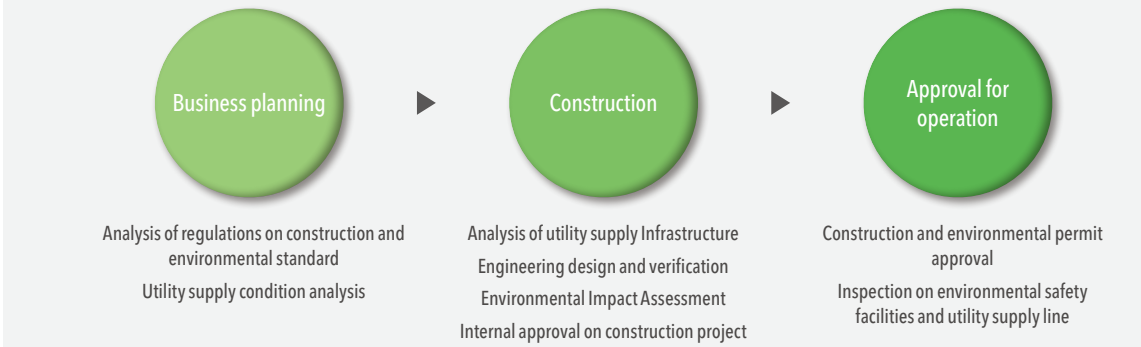
Environment and Safety Risk Assessment

International organizations and NGOs are introducing guidelines on human rights and environmental protection. Countries where Samsung Electronics has production plants are strengthening policies on environmental protection and occupational safety. We are monitoring changes in international policies and regulations to proactively respond. Moreover, we are increasing our efforts to eliminate environmental risks at the source.

Risk Analysis and Response Process

Information Collection	Impact Analysis	Response Activities	Monitoring
Changes in policies & market Changes in internal conditions	Analysis of financial and nonfinancial risks and opportunities	Establishment/implementation of response plan	Performance check and data collection Establishment of rules and processes

Environment and Safety Risk Analysis and Response for Plant Expansion



Environmental Safety Accident Response Structure

Samsung Electronics has an emergency response program which consists of emergency response scenarios and regular training to assess the effectiveness of the emergency response scenarios. For different types of production plants, different emergency response scenarios are prepared including accidental release of pollutants and hazardous chemicals, fires and explosions, in addition to natural disasters.

We are maintaining high-preparedness to respond to any environmental safety accident with corresponding emergency scenarios. We also have emergency response members in place who are prepared to respond in a timely manner to handle the crisis and to ensure a fast recovery. We also have a crisis review process to analyze the cause of an accident and to conduct prevention exercises to ensure that the accident is never repeated. Meanwhile, we are conducting emergency response training on a regular basis with participation of all departments to check the effectiveness of the crisis management structure and to maintain preparedness.

We also conduct monthly fire drills which consist of fire-fighting and rescue exercises as well as an emergency evacuation to ensure the safe evacuation of all employees during emergency situations.

Emergency Preparedness

Environmental Safety Management System Certification

Samsung Electronics established an EHS management structure in all operation sites and earned certifications including ISO 14001 and OHSAS18001. We are maintaining our environmental management structure by receiving continuous assessment or re-assessment. All new production facilities at Samsung Electronics are required to receive ISO 14001 and OHSAS18001 certification.

In 2011, five production plants in Gumi, Giheung, Hwasung, Onyang and Tangjung received international energy management certification (ISO 50001). We plan to receive ISO 50001 certification atall our operation sites by 2015 in order to establish a systematic energy management structure.

EHS Management Certification (Global)

Type	No. of Operation Sites Certified	Certification Rate	2015 (Target)
ISO 14001	38	100%	100%
OHSAS18001	38	100%	100%
ISO 50001	5	13%	100%

Korea

Type	Suwon	Gumi	Gwangju	Giheung	Hwasung	Onyang	Tangjung	Cheonan	Giheung LCD
ISO 14001	1996.10.	1996.11.	1996.10.	1994.11.	2001.11.	1996.09.	2006.12.	1996.09.	1994.11.
	UL	UL	UL	BV	BV	BV	BV	BV	BV
OHSAS18001	2000.11.	2001.10.	2002.10.	1999.12.	2001.11.	1999.12.	2006.11.	2000.05.	1999.12.
	UL	UL	UL	BV	BV	BV	BV	BV	BV
ISO 50001	2012 (expected)	2011.07.	2012 (expected)	2011.11.	2011.11.	2011.11.	2011.12.	2012 (expected)	2012 (expected)
		UL		UL	UL	UL	Energy Management Corporation		
Green company certification	1996.04.	1996.01.	1996.01.	1995.08.	2002.08.	1995.11.	2008.01.	2000.09.	1995.08.

- Correction on certification approval date – Giheung plant received BS 7700 in Nov. 1994 and ISO 14001 in Sep. 1996
- Green Company: A company designated by the Minister of Environment of Korea which has made a great contribution to improving the environment

ISO 50001 Certification of Samsung Electronics Gumi Plant The Gumi plant received ISO 50001 energy management certification in July 2012. The Gumi plant implemented a systematized management structure on energy purchasing, supply, use and reduction which resulted in optimal energy and cost management. The energy management system was integrated into overall plant management along with the existing ISO 14001 environmental management and OHSAS 18001 occupational safety management systems for comprehensive environmental safety management.

CERTIFICATE

DQS GmbH

SAMSUNG ELECTRONICS CO., LTD.

ISO 50001 : 2011

Energy Management System Certification

Global

Name of Subsidiary	ISO 14001	OHSAS18001	Certification Agency
SAMEX	2000.12.	2003.12.	UL
SAS	2001.01.	2007.10.	BSI-QA
SEM-P	2004.11.	2006.06.	UL
SEDA(C)	2009.11.	2009.11.	UL
SEDA-P(M)	2001.02.	2006.03.	BV
SERK	2009.04.	2009.04.	UL
SEH-P	2005.05.	2005.11.	BV
SESK	2003.09.	2003.09.	UL
SELSK	2010.10.	2010.10.	BV
SEPM	2010.12.	2010.12.	UL
SEIN-P	2003.04.	2003.10.	SUCOFINDO
SAVINA-P	2001.12.	2002.12.	UL
SDMA-P	1999.08.	2002.08.	DNV, RvA
SEV	2009.09.	2009.09.	BSI
TSE-P	2001.12.	2003.11.	UL
SEMA	2005.12.	2005.12.	DNV
SEPHIL	2002.09.	2003.10.	SGS
SIEL-P(C)	2008.09.	2008.09.	BV
SIEL-P(N)	2000.06.	2003.08.	AFAQ-EAQA
TSEC	2000.02.	2004.10.	UL
TSOE	2008.02.	2010.02.	CQC
SEHZ	2005.05.	2006.03.	CQC
TSTC	2005.05.	2005.05.	UL
SSKMT	2005.04.	2005.04.	SSCC
SSDP	2004.09.	2004.11.	UL
SESC	2004.02.	2004.02.	CQC
SESL	2004.11.	2004.11.	BV
SESS	2004.05.	2004.05.	BV
SSEC	2003.11.	2005.06.	CQC

Green Purchasing

Samsung Electronics signed up to the voluntary agreement on green purchasing with the Korean Ministry of Environment in 2005 in order to promote purchasing of eco-friendly products and for a sustainable consumer culture. In 2007, we implemented internal Eco-Product priority purchasing policies, environmental manuals and green purchasing rules to further promote the purchase of green products.

The Eco-Product priority purchasing policies require the purchasing department to choose products that are better for the environment including products that received environmental labels, recycled products and highly energy efficient products when purchasing office supplies and raw materials.

Environment Operation Control

Water Resource Management

Water resource management has become a prominent global environment issue along with climate change. Today, an increasing number of regions are suffering from permanent water shortages due to various causes including rapid industrialization, development and climate change. In fact, many experts predict that more than two thirds of humans in countries including China, Australia and India will begin to experience water shortages by 2050.

Generally, the semiconductor industry is responsible for a daily consumption of 7,500 to 15,000 tons of ultra pure water, which is equivalent to enough water to sustain a city of 50,000 residents for a day. As a leading semiconductor manufacturer, Samsung takes its responsibility to contribute to the effective management of water resources seriously and has set company-wide water management policies, reduction targets and strategies to secure and maintain sustainable water resources.

Establishing a Water Resource Management Policy

Sustainable water supply and water source preservation has become an important priority among all electronics companies including Samsung Electronics. Responding to growing industry needs, international business organizations for CSR including the EICC and WBCSD have created corporate water resource management guidelines.

Recognizing the growing importance of global water resource management, Samsung Electronics has established water policies with a focus on enhanced stakeholder communication and minimization of management risk.

Samsung Electronics Water Resource Management Policy

Minimizing Water Management Risk

Samsung Electronics set a 3% water use reduction target per production unit by 2015. We then collected water use data to identify plants with the highest water use, established a monitoring structure, identified reduction measures, and implemented cost effective measures to minimize business risks associated with water use and environmental impact.

Semiconductor production is a core business of Samsung Electronics, which is exposed to significant business risks associated with water shortages. Recognizing its risk, we have analyzed water risk and developed redundant water supplies as well as an emergency response system to avoid any negative impact upon business. We also understand water risk as a serious global issue and are expanding monitoring efforts to collect data from our operations and verifying the reliability of efficient water consumption.

Samsung Electronics is establishing a comprehensive water management system which reduces the cost and pressure on water resources by promot-

ing effective use of water. The amount of water used in Korea increased in 2011 due to facility expansion and water use per unit production has also increased in overseas operation sites as 20 plants increased their production capacity and workforce. We plan to implement measures to reduce water use and increase reuse to reduce water use per unit production. The volume of waste water increased by 14% in 2011 compared to 2010. We plan to achieve a 2% reduction in water use per year starting in 2012. For example, we have achieved significant reductions in water use by collecting ultra pure water used for the semiconductor and LCD production process and reusing it. The ultra pure water recycling rate at semiconductor and LCD production plants in 2011 was 51%. The recycling rate decreased compared to 2010 due to the addition of new production lines. We plan to implement additional facilities to further improve water recycling and the supply system.

We are operating on-site sewage treatment and recycling facilities to reduce water use and discharge. Treated water is used for gardening and fire system. The Samsung Electronics plant in India has installed a rainwater collection system and uses the collected rainwater for gardening and cleaning.

Water Withdrawals for Operation Use

Type		Water Withdrawal by Sources (1,000 tons)				Water Use Per Unit Production	2015 Target Per Unit Production
		Industrial Water	Municipal Water	Underground Water	Total	(ton/KRW 100 million)	(ton/KRW 100 million)[1]
Korea	2011	103,562	5,834	205	109,601	91	50
	2010	91,225	5,145	180	96,550[2]	86	
	2009	80,413	5,381	170	85,964	96	
Global	2011	103,562	17,325	780	121,667	74	-
	2010	91,225	13,457	607	105,289	68	
	2009	80,413	14,299	444	95,156	70	

- Water use per unit production: Total water use ÷ Sales (Korea or Global)

[1] Target does not include waste use by LCD division, as it was established as an independent company in April 2012.

[2] The adjustment was made to reflect changes made in management scope with the separation of the LCD division as an independent company.

Water Reuse

Type		Water Reuse		Ultra Pure Water Recycling		
		Reused Amount (1,000 tons)	Reuse Rate (%)	Supply (1,000 tons)	Recovered Amount (1,000 tons)	Recovery Rate (%)
Korea	2011	81,863	74.7	117,321	59,289	50.5
	2010	72,832[1]	75.4	121,170	67,693[1]	55.9
	2009	72,296[1]	84.1	109,300	66,927	61.2
Global	2011	90,068	74.0	128,554	66,676	51.9
	2010	79,012	75.0	127,636	72,812	57.0
	2009	72,570	76.3	113,224	69,166	61.1

[1] Data was adjusted in accordance with a change in calculation method for assessing reuse.

Waste Water Discharge

Type	Discharges	2009	2010	2011
Korea	Discharge (1,000 tons)	78,745	87,639	97,370
	Discharge per unit production (tons/KRW 100 million)	88	78	81
Global	Discharge (1,000 tons)	82,866	91,183	102,906
	Discharge per unit production (tons/KRW 100 million)	61	59	62

- Waste water discharge per unit production: Total waste water discharge ÷ Sales (Korea or Global)

Stakeholder Communication Effort on the Importance of Water Resources

Samsung Electronics has recognized the importance of water resource management and has endeavored to communicate our water resource management policies and the importance of reducing negative environmental impacts. We are openly sharing water quality data on bodies of water in the vicinity of our operation sites, and we are promoting water quality improvement/ecosystem restoration projects in conjunction with students and NGOs in local communities.

First, we have designated every Wednesday as a 'Water Conservation Day' since 1997. We also installed a Digital Information Display which shows water resource management tips and conservation methods to help employees contribute to water conservation. We also reduced the pressure in the water supply line to reduce water use and achieve reductions in operation costs.

Waste Water Discharge and its Impact on Bodies of Water Samsung Electronics processes all of its waste water through processing facilities before discharging the treated water into nearby rivers. Some of the domestic and overseas plants located in industrial parks discharge internally treated waste water into sewage treatment facilities located in the industrial parks for secondary treatment to ensure compliance with relevant legal standards.

We are disclosing information in regards to water quality of waste water discharged from our production facilities so they are informed of our activities. We are also conducting river ecosystem restoration activities with NGOs to ensure good communication with local community members. Additionally, we are working with NGOs and students at nearby schools to conduct environmental clean-up activities for biodiversity protection and environmental conservation.

For example, we have organized environmental cleanup volunteer groups in the U.S. and Hungary. We are collaborating with local governments in Vietnam to plant aquatic plants and for trash clean-up in local rivers. We are also conducting water conservation activities in all our domestic and overseas operation sites.

Destination of Discharges

Suwon	Hwasung	Gumi	Gwangju	Giheung	Onyang	Tangjung	Cheonan
Wonchun river	Wonchun river	Nakdong river	Youngsan river	Osan river	Gokgyo river	Gokgyo river	Cheonan river

- Waste water from the Gumi and Gwangju plant is first processed in the internal treatment system, and then transferred to municipal waste water treatment plants.

Aquatic Ecosystem Preservation and Water Quality Improvement Activities The Onyang production plant conducted an environmental impact study of sewage discharge to nearby rivers in collaboration with a local university. The study was conducted between November 2010 and October 2011 in collaboration with a local University. The team analyzed water quality characteristics of the discharge from operation sites and the water quality of the river where treated water is discharged, while studying the concentration of pollution in different parts of the river. The research results indicated that the water quality of Gokgyo River improved with improved waste water processing efficiency at the Onyang plant. We will continue to monitor the water quality of bodies of water near our production plants and implement pollution prevention activities.

Pollution Management

Samsung Electronics is enforcing an internal environmental standard which is stricter than required by regulations to ensure full compliance. We also set internal management targets to achieve further reduction and are employing most up-to-date environmental technologies in our new plants. We have tele-monitoring systems in our production plants for 24-hour pollution management, with emergency response systems in place for handling abnormal conditions. We also have an internal analysis lab which supports pollution management throughout production processes from its source to point of releases.

Management of Air Pollutants Global air pollutant release data could not be compiled due to differences in air pollution data management methods in some countries. Release of the total amount of air pollutants is increasing due to an increase in production volume and an expansion of production lines. Regardless, we are managing air pollution concentration below legal standards. A separate acidic substance processing method was implemented on new production lines which began operation in 2011 for improved overall pollution treatment efficiency over the integrated treatment methods

employed on old production lines. For example, HF gas processing efficiency at the new facility was improved by 50% compared to conventional facilities. The Suwon plant also succeeded in reducing SO_X emissions by employing new treatment chemicals.

An additional wet-type electric scrubber was installed on the chimneys at semiconductor production plants to reduce emissions of non-toxic particulates. This new technology contributed in a 52% reduction in dust emissions through a relatively small investment.

Emergency generators are installed at semiconductor and LCD production plants to prevent complicated work shut downs as well as costly damage associated with plant shut downs due to black outs. We installed an air pollution reduction unit employing a platinum catalytic converter to minimize the release of air pollutants associated with emergency power generator operation.

All new boilers installed at our operation sites are built with low-NO_X burners with reduced pollution. The low-NO_X burner equipped boilers emit up to 50% less NO_X emissions. For example, the introduction of low NO_X burners in our semiconductor plants reduced annual NO_X emissions by 20 tons. The Suwon operation site introduced a new treatment chemical for use in the on-site incinerator and achieved significant reduction in SO_X emissions.

Air Pollutant Discharge (Korea) (tons)

Type	2009	2010	2011
SO_X	0.024	0.059	0.006
NO_X	192	261	204
Dust	38	40	44
NH_3	8	10	6
HF	10	12	14

Water Pollutant Control Samsung Electronics is employing new technologies and renovating facilities to minimize water pollutants discharge. We are increasing our waste water recycling rate by installing organic waste treatment and water recycling facilities to reduce discharge of water pollutants. Waste water and water pollutants from semiconductor production facilities has been increasing steadily with the increase in production volume, but efficiency improvement made in waste water treatment facilities is keeping the concentration of water pollutants below internal management standards. We also achieved a 30% reduction in water pollutant concentrations by improving the efficiency of waste water processing facilities.

Water Pollutant Discharge (tons)

Type	Parameter	2009	2010	2011
Korea	COD	481	584	755
	BOD	100	110	210
	SS	55	56	91
	F	190	244	345
	Heavy metals	1.7	1.6	21.6[1]
Global	COD	569	685	876
	BOD	100	110	210
	SS	136	130	184
	F	247	274	430
	Heavy metals	3.6	2.2	25.3

● Waste water processed at the Cheonan industrial park waste water treatment plant is excluded

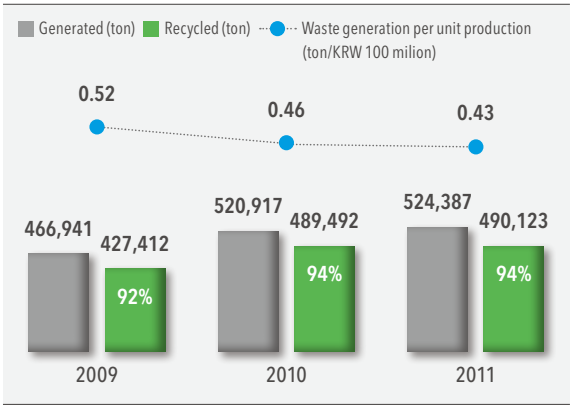
[1] 2011 Amount of total heavy metal release increased due to additional release of new heavy metals associated with changes made in the production process.

Waste Management

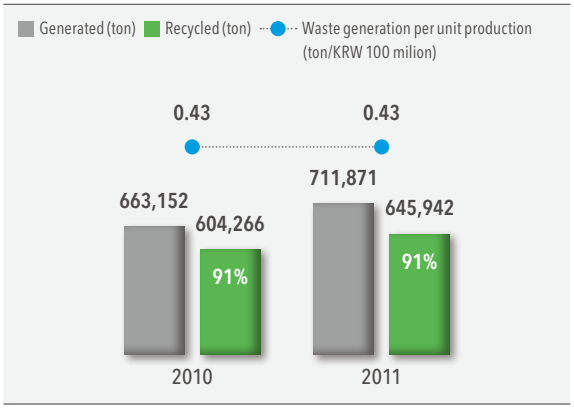
Achieving 100% recycling of all waste is the ultimate goal of Samsung Electronics' waste management policy. Additionally, we are working towards achieving the target by expanding the types of waste recycled. In 2011, we began recycling and utilizing of waste glass, waste plastics, and organic sludge which were incinerated or landfilled in the past. We have set a mid-term target of achieving a 95% waste recycling rate and to establish a recycling-oriented waste management system to achieve minimization in waste generation.

In addition to increasing our recycling rate, Samsung Electronics is striving to reduce waste generation. We have also set an annual waste reduction target of 10% each year until to 2015. In 2011, the volume of waste generated has increased by 7%. However, the volume of waste per unit of production has remained same level to previous years. Increase in production volume and scrap generated from replacement of old production facilities are contributing to an increase in waste generated. However, we are making various efforts including reduction and reuse of packaging for parts and reduction in paper use to achieve an overall reduction in waste generation. Additionally, Samsung Electronics is closely monitoring waste processing companies by making site visits and checking terminal processing of the waste to prevent illegal processing and illegal shipping of waste over national borders.

Waste Generated and Recycling Rate (Korea)



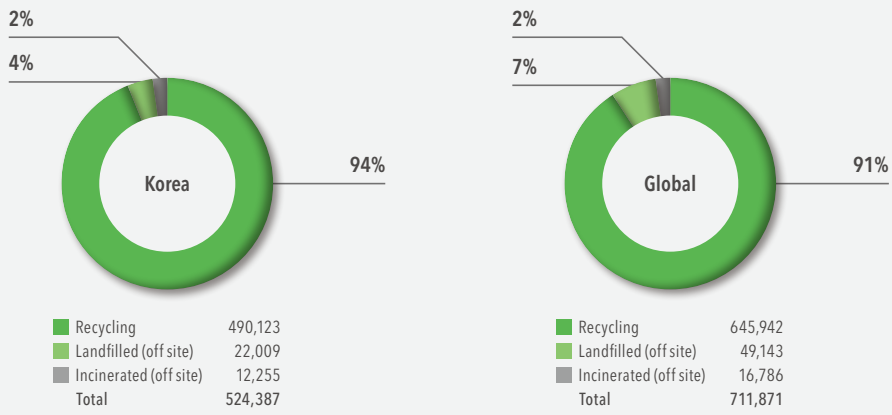
Waste Generated and Recycling Rate (Global)



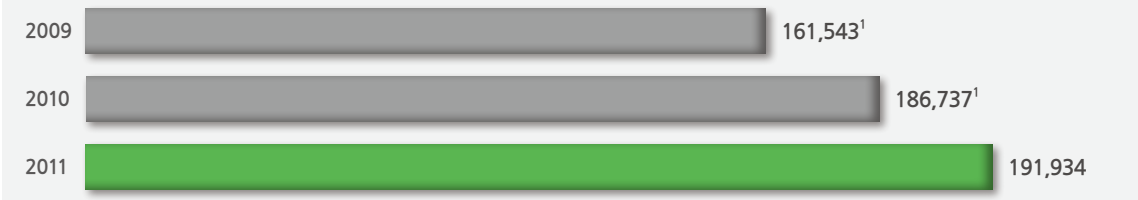
- Waste generation per unit production: Total waste generation ÷ sales (Korea or Global)

Waste Type and Processing Methods

(tons)



Hazardous Waste Generation (Korea) (tons)



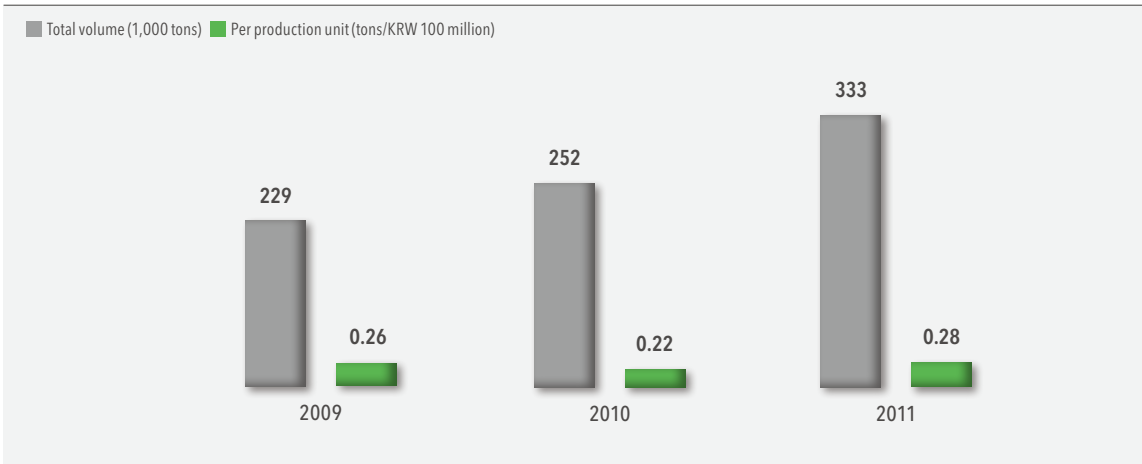
[1] Figures revised due to a change in hazardous waste management standard of a company separated in the same facility

Operation Site Hazardous Materials Management

Samsung Electronics is taking various measures, including implementation of a Hazardous Substance Pre-assessment System, to prevent release of hazardous substances within and outside of Samsung Electronics operation sites. Our computerized hazardous substance management system monitors all processes including purchasing, arrival, use, release and transfer of relevant chemicals to ensure that all hazardous substances are handled appropriately in compliance with relevant rules.

The volume of hazardous material used at Samsung Electronics production is increasing with expanding production volume. However, we plan to reduce the use of hazardous waste relative to sales by 1% each year. We are also conducting regular inspection of storage and facilities where the materials are used and conducting regular training for employees who handle the materials. We have had no accidental hazardous material leakages.

Volume of Hazardous Material Used (Korea)



- Hazardous material used per unit production: Hazardous material used/sales (Korea)

Management of Ozone Depleting Substances

Samsung Electronics continues to reduce the use of ozone depleting substances (ODS) as defined by the Montreal Protocol. The ozone depletion materials used by Samsung are refrigerants in freezers and a fire extinguishing agent in automatic fire control systems. We implemented a refrigerant recovery system to reduce the release of used refrigerants and to increase the recovery ratio by 15%. Old freezers were also retrofitted to reduce the release of ODS. The fire extinguishing agents are also gradually replaced with non-ODS agents to further reduce the use of ODS.

Biodiversity

Biodiversity Conservation: Basic Philosophy and Action Plan

Demand for the protection of biodiversity is increasing since an international agreement on biodiversity protection was signed in 1992. Samsung Electronics is responding to changing demands by raising awareness on the importance of biodiversity. We have created a basic philosophy and action plan on biodiversity protection to promote it in our business activities.

Biodiversity Conservation Policy

Basic Philosophy of Biodiversity Conservation

Samsung Electronics recognizes the benefits of healthy ecosystems and rich biodiversity, and we shall minimize negative impacts on biodiversity and actively promote ecosystem protection activities.

Action Plan on Biodiversity Protection

Value Recognition
All employees shall regard biodiversity conservation activities as an important part of green management.

Assessment and Reduction of impact on Environment
Analyze lifecycle impact of our products on biodiversity and the ecosystem while making an effort to minimize all negative impacts identified.

Biodiversity Conservation Activities
Place a higher priority on environmental management of operation sites with higher biodiversity and implement biodiversity protection activities tailored for each site.

Communication
Maintain good communication with stakeholders including employees, local communities and NGOs, and collaborate with them to make contributions in local biodiversity protection initiatives.

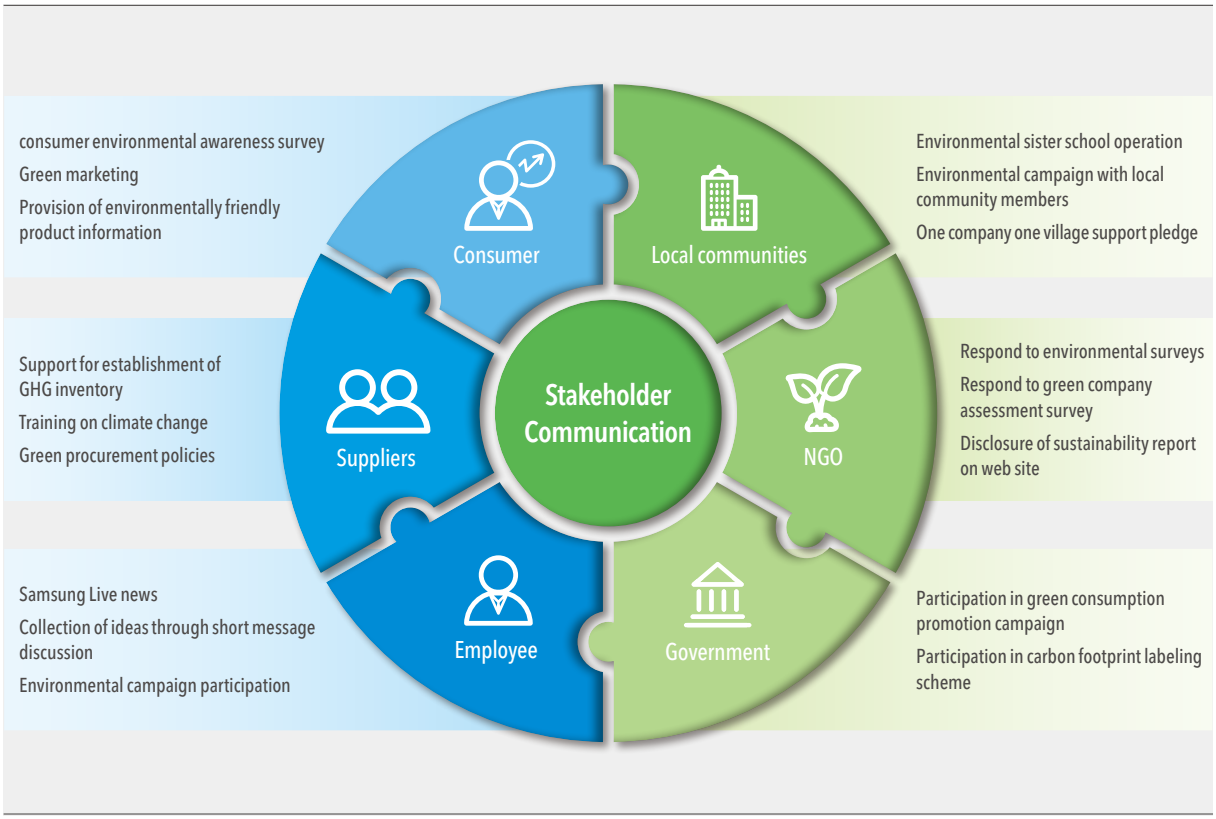
Green Communication

Stakeholder Communication

Stakeholder Communication Programs

Samsung Electronics is actively communicating with various stakeholders in recognition of the importance of stakeholder communication in making sound business decisions. We are listening to the opinions of all types of stakeholders including consumers, suppliers, NGOs, local communities, media and governments while striving to reflect their concerns and ideas in our green management activities.

Key Stakeholders and Communication Channels



Membership and Activities in Associations

Samsung Electronics is increasing membership to various associations for promotion of corporate social responsibility and green management in order to further strengthen its foundation for more responsible business management.

For example, Samsung Electronics joined the World Business Council for Sustainable Development (WBCSD) which pursues the creation a sustainable future for business, society and the environment. It currently has 200 CEOs of global corporations as members. We are participating in the annual meetings and working group council meetings to share Samsung Electronics' green management successes and learn about the green management status of other leading corporations as well as new trends in green business management.

Samsung also became the first company in Korea to join EICC (CSR consultation body for the Electronics Industry). We actively participated in EICC activities including revision of the code of conduct in addition to participating in general meetings. We also participated in the Business Summit (B20) which was held during the 2010 G20 summit. At the B20, Samsung Electronics participated in the Green Growth subgroup meeting and shared our green management achievements in addition to future plans with other industry leaders.

Employee Communication

Employee Environmental Communication

We are using internal communication channels including internal broadcasts and our intranet to share information on environmental affairs and exchange ideas on improvement.

A number of videos were created to encourage employees to live a greener life-style. A polar bear character was created to encourage the promotion of a green life-style in everyday activities. We established a short message discussion forum and environmental columns to discuss environmental issues. Employees can actively contribute Eco-Product ideas and green life-style tips to raise awareness about the environment.

Green Lifestyle Campaign Videos (Office Episode)

Green Lifestyle Campaign Videos (Automobile Episode)

Samsung Electronics Live Discussion

Employee Campaigns

We are conducting environmental volunteer activities and environmental education campaigns for employees.

The volunteer cleanup and environmental education program takes place twice a year at Gwangreung forest which is designated as a biodiversity protection area. In May 2011, Samsung Electronics invited family members of employees to a green away day with programs including a climate change experience center and environmental education classes for children.

Gwangreung Forest Ecosystem Protection Campaign

Climate Change Experience Center

Environmental Education Class

Global Environmental Preservation Activities

Samsung Electronics is conducting a number of programs to contribute to environmental protection around the world.

Korea

'World Day for Water' Ceremony

'World Day for Water' Ecosystem Preservation Activities

A number of volunteer activities were conducted on March 22, 2012, the 20th World Water Day. For example, 150 employees from the Suwon plant joined members of the Suwon YWCA, the Suwon Environmental Movement Center and the Citizens' Coalition for Economic Justice to remove trash from the Singal water reservoir. The student volunteers at Hwangsang elementary school, a sister organization of Samsung Electronics, conducted waterway tracking and cleanup activities as well. Another volunteer group conducted a water conservation campaign at Guhado eco-park in Hanam Industrial Park and cleaned up a lake located in the park.

Employee volunteer group conducted a collection of activities from installation of a sand collector, removal of non-native species, planting of native sweetbrier plants and trash clean-up to protect the dune ecosystem.

China

'World Day for Water' Clean Up Activities

Green Activities with Local Community

In China, 320 employees participated in trash removal at three lakes and planted trees around the lakes for preservation of the aquatic environment. The volunteers also spent time on raising awareness of the importance of environmental protection and green life-styles.

Central and South America

'Global Action' Day Program

'Global Action' Children Event

Samsung Electronics has been conducting campaigns on a ban of clear-cutting of the Amazon rainforest and other relevant activities. The Samsung Electronics office in Manos, Brazil hosted a 'Global Action' day program on May 14, 2011 with more than 3,000 members of local communities. Samsung Electronics volunteers gave away toys made of recycled industrial waste and taught local children on the importance of recycling.

South East Asia

River Clean-up Activities in Vietnam and Philippines

Indonesia Tree Planting Activities

Samsung Electronics volunteers conducted river clean-up activities in commemoration of World Water Day. In Vietnam, volunteers removed trash and planted aquatic plants along the Cau river in partnership with the local government. In the Philippines, volunteers conducted clean-up activities along the San Cristobal river and planted trees around the plant premises.

The volunteers of Samsung Electronics' Indonesia branch make regular visits to local orphanages to conduct eco-system protection education and to plant trees.

Europe

Slovakia Children Eco-Class

Slovakia Birdhouse Campaign

In Slovakia, we conducted a birdhouse installation project to protect rare bird species living in the vicinity of our operation site. Children from local communities participated both in the construction and installation of birdhouses. The participants were also given lessons on the importance of the ecosystem and environmental protection.

In Hungary, we held an employee environmental protection campaign poster contest and encouraged the use of bicycles for commuting to raise awareness on environmental protection.

Africa

Solar-Powered Internet School

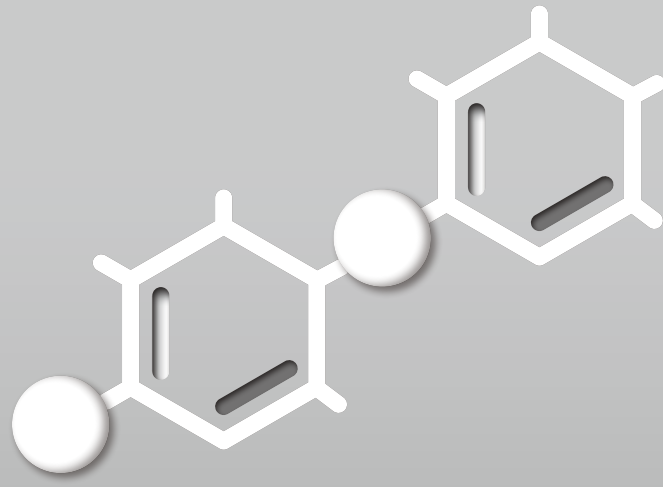
Donation of Solar LED Lantern

Samsung Electronics has created a 100% solar-powered mobile classrooms named the 'Solar-powered Internet School' and supplied them in Africa.

We also began the supply of solar-powered LED lanterns, for areas that do not have access to electricity, in collaboration with the Korea Volunteer Organization. Manufactured using durable Samsung Electronics' parts including LEDs, solar panels, and batteries, the LED lantern is designed to last for more than 10 years without GHG emissions.

We plan to conduct green communication activities using our green IT technologies and provide benefits to 5 million African residents by 2015.

Appendices



Independent Assurance Report

To the management of Samsung Electronics
We have been engaged by Samsung Electronics to perform an independent assurance engagement in regard to the following aspects of Samsung Electronics' 2012 Sustainability Report (the "Report").

Scope and Subject Matter

The information for the year ended December 31, 2011 (hereinafter, collectively referred to as the "Sustainability Information") on which we provide limited assurance consists of:

- Samsung Electronics' conclusion on meeting the principles of Inclusivity, Materiality and Responsiveness in the AA1000 Accountability Principles Standard 2008 ("AA1000APS");
- The "Facts and Figures" information on page 52 ~ 81 in the Report (except for the GHG emissions scope 1, scope 2 data and Energy consumption data, the "Sustainability Data") which is based on the reporting principles set out on "About This Report" (the "Reporting Principles").

With regard to the financial data included in the key figures on pages 50~51, our procedures were limited to verifying that they were correctly derived from Samsung Electronics' audited consolidated financial statements.

We read the other information included in the Report and consider whether it is consistent with the Sustainability Information. We consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with the Sustainability Information. Our responsibilities do not extend to any other information.

Assurance Work Performed

We conducted our engagement in accordance with ISAE 3000(1) and AA1000AS(2). The term 'moderate assurance' used in AA1000AS is designed to be consistent with 'limited assurance' as articulated in ISAE 3000. Our assurance is a Type II assurance engagement as defined in the Guidance for AA1000AS.

(1) International Standard on Assurance Engagements 3000 (Revised) – 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by International Auditing and Assurance Standards Board
(2) AA1000 Assurance Standard(2008), issued by AccountAbility

Our work involved the following activities:

1. Interviews with the personnel responsible for internal reporting and data collection to discuss their approach to stakeholder inclusivity, materiality and responsiveness.
2. Visits to four of Samsung Electronics' domestic and overseas sites: to review the systems and processes in place for managing and reporting on the Sustainability Data.
3. Review of a sample of internal documents relevant to output from the risk assessment process, sustainability-related policies and standards, the sustainability Materiality Assessment Matrix and other documents from stakeholder engagement activities.
4. Evaluating the design and implementation of the key processes and controls for managing and reporting the Sustainability Data.
5. Limited testing, through inquiry and analytical review procedures, of the preparation and collation of the Sustainability Data.

Respective Responsibilities of the Management of Samsung Electronics and Samil PricewaterhouseCoopers

The management of Samsung Electronics is responsible for establishing assessment criteria that meets the principles of Inclusivity, Materiality and Responsiveness in the AA1000APS, measuring performance based on the "Assessment Criteria", and reporting this performance in the Report.

Our responsibility is to provide a conclusion based on our assurance procedures in accordance with ISAE 3000 and AA1000AS.

This report, including the conclusion, has been prepared for the management of Samsung Electronics as a body, to assist the management in reporting on Samsung Electronics' sustainability performance and activities. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the management of Samsung Electronics as a body and Samsung Electronics for our work or this report save where terms are expressly agreed and with our prior consent in writing.

Inherent limitations

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the methods used for determining such information. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgments.

A limited assurance engagement is less in scope than a reasonable assurance engagement under ISAE 3000. Consequently, the nature, timing and extent of procedures for gathering sufficient, appropriate evidence are deliberately limited relative to a reasonable assurance engagement. In particular:

- We did not attend any stakeholder engagement activities. Therefore our conclusions are based on our discussions with management and staff of Samsung Electronics and our review of selected documents provided to us by Samsung Electronics.
- The scope of our work was restricted to 2010 performance only, as set out in the scope and subject matter section above. Information relating to the year ended December 31, 2009 and earlier periods have not been subject to assurance by us.

Conclusion

Based on the results of the assurance work performed and the Assessment Criteria, our conclusion is as follows:

- On the AA1000APS principles;

  ### Inclusivity

  Samsung Electronics has collected concerns and opinion through stakeholder communication channels that include customers, business partners, stockholders/investors, the government, local communities, employees, and NGOs.

  Nothing has come to our attention to suggest that material stakeholder groups were excluded in these channels.

Materiality

Samsung Electronics has identified most relevant and significant sustainability issues through process for identifying material issues.
Nothing has come to our attention to suggest that material issues were omitted in this process.

Responsiveness

Samsung Electronics has included in the Report its response to the material sustainability issues which are defined through process for identifying material issues.

Nothing has come to our attention to suggest that there is material deficiency in issue management system.

Nothing has come to our attention that causes us to believe that Sustainability Data for the year ended December 31, 2011 are not fairly stated, in all material respects, in accordance with the Reporting Principles.

Recommendations

From our work, we have provided the following recommendations to the management.

- We recommend that Samsung Electronics are needed to improve the performance continuously with settlement of standard for performance management and goal allocation to respond strategically to the changes of business environment. And these activities and progress toward achieving goals should be communicated with stakeholders through sustainability report.
- The data management process and reporting boundary should be expanded to all organizational level to communicate with all stakeholders on more accurate and complete sustainability performance data and performing periodical reviews are needed to improve the data reliability.
- Reliable performance data should be produced by data management system to maximize the opportunities to help management make more informed business decision. We recommended that Samsung Electronics are needed to reinforce the data management system including performance reporting and controls to improve accuracy, consistency and completeness of performance data.

Samil PricewaterhouseCoopers

Seoul, Korea
May 31, 2012

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	3.4	Contact point for questions regarding the report or its contents	About This Report	Front cover
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	3.6	Boundary of the report	About This Report	Front cover
	3.7	State any specific limitations on the scope or boundary of the report	About This Report	Front cover
	3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	About This Report	Front cover
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Environment Disclosure on Management Approach				36, 40, 82~89
Materials	EN1	Materials used by weight or volume	●	75, 76, 78, 81, 104
	EN2	Percentage of materials used that are recycled input materials	●	76, 104
Energy	EN3	Direct energy consumption by primary energy source	●	74, 75, 96, 97
	EN4	Indirect energy consumption by primary source	●	74, 75, 96, 97
	EN5	Energy saved due to conservation and efficiency improvements	●	74, 75, 96, 97, 99
	EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	●	74, 75, 96, 97, 99
	EN7	Initiatives to reduce indirect energy consumption and reductions achieved	●	74, 75, 96, 97, 99
Water	EN8	Total water withdrawal by source	●	40, 41, 78, 111
	EN9	Water sources significantly affected by withdrawal of water	●	40, 41, 78, 111, 112
	EN10	Percentage and total volume of water recycled and reused	●	40, 41, 78, 111
Biodiversity	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●	116
	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	●	116
	EN13	Habitats protected or restored	●	112, 119
	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	●	116
	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	⊖	Not measurable
Emissions, Effluents and Waste	EN16	Total direct and indirect greenhouse gas emissions by weight	●	36~39, 71~74, 92~95
	EN17	Other relevant indirect greenhouse gas emissions by weight	●	36~39, 71~74, 92~95
	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	●	36~39, 71~74, 92~95
	EN19	Emissions of ozone-depleting substances by weight	○	115
	EN20	NOx, SOx, and other significant air emissions by type and weight	●	79, 113
	EN21	Total water discharge by quality and destination	●	78, 79, 113
	EN22	Total weight of waste by type and disposal method	●	77, 80, 81, 114
	EN23	Total number and volume of significant spills	●	81, 115
	EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	●	No waste shipped internationally

● Fully Reported ◐ Partially Reported ○ Not Reported ⊖ Not Applicable

G3.1	Disclosure Items		Application Level	Page
Emissions, Effluents and Waste	EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	●	112
Products and Services	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	●	38, 72, 75, 98~100
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category	●	77, 103
Compliance	EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	●	No violation
Transport	EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	●	73, 74, 94, 95
Overall	EN30	Total environmental protection expenditures and investments by type	●	81, 86
Labor Disclosure on Management Approach				22~27, 62
Employment	LA1	Total workforce by employment type, employment contract, and region, broken down by gender	●	58, 59
	LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region	●	62
	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations	●	64
Labor/Management Relations	LA4	Percentage of employees covered by collective bargaining agreements	●	62
	LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	●	62
Occupational Health and Safety	LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	◐	106
	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender	●	64
	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	●	26, 27, 64
	LA9	Health and safety topics covered in formal agreements with trade unions	●	106
Training and Education	LA10	Average hours of training per year per employee by gender, and by employee category	●	63
	LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	●	63
	LA12	Percentage of employees receiving regular performance and career development reviews, by gender	●	Samsung Electronics offers fair compensation irrespective of gender, ethnicity, religion, social status or age.
Diversity and Equal Opportunity	LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	●	16, 17
	LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	●	Samsung Electronics offers fair compensation irrespective of gender, ethnicity, religion, social status or age.
Employment	LA15	Return to work and retention rates after parental leave, by gender	●	61
Human Rights Disclosure on Management Approach				22~27, 62
Investment and Procurement Practices	HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening	●	Before setting up a new business site, Samsung Electronics carries out QA procedure including human right & labor.
	HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken	●	46~48, 69
	HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	◐	62, 63
Non-discrimination	HR4	Total number of incidents of discrimination and corrective actions taken	●	No violation
Freedom of Association and Collective Bargaining	HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights	●	62
Child Labor	HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	●	62
Prevention of Forced and Compulsory Labor	HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	●	62
Security Practices	HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	◐	69
Indigenous Rights	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	●	No violation

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G3.1	Disclosure Items		Application Level	Page
Assessment	HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments	●	Before setting up a new business site, Samsung Electronics carries out QA procedure including human right & labor.
Remediation	HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms	●	19
Society Disclosure on Management Approach				31~33
Community	SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	●	Before setting up a new business site, Samsung Electronics carries out QA procedure including human right & labor.
Corruption	SO2	Percentage and total number of business units analyzed for risks related to corruption	●	No operation site with corruption risks
	SO3	Percentage of employees trained in organization's anti-corruption policies and procedures	●	29, 56
	SO4	Actions taken in response to incidents of corruption	●	30, 57
Public Policy	SO5	Public policy positions and participation in public policy development and lobbying	●	18~20
	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	●	Our code of conduct prohibits contribution to political parties
Anti-competitive	SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	◐	28
Compliance	SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	◐	70
Community	SO9	Operations with significant potential or actual negative impacts on local communities	●	No operation site with significant potential or actual negative impacts on local communities
	SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	●	31~33
Product Responsibility Disclosure on Management Approach				70
Customer Health and Safety	PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	●	75
	PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	●	No violation
Product and Service Labeling	PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	●	76
	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	●	No violation
	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	●	70
Marketing Communications	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	●	70
	PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes	●	70
Customer Privacy	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	●	70
Compliance	PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	●	70

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In compiling the 2012 Sustainability Report (the Report), Samsung Electronics used the Global Reporting Initiatives (GRI) G3.1 Sustainability Reporting Guidelines. Accordingly, Samsung Electronics makes a self-declaration that the Report meets the requirements for GRI's Application Level A+. Samil PricewaterhouseCoopers confirmed that the Report meets the requirements for GRI's Application Level A+ (+ refers to 3rd party assurance).

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