
PREVIOUS ISSUE IN

2016

- 70 Creation of environmental value
- 72 Facilitation of respect for human rights and communication by employees
- 74 Community Engagement and Development

3.52 billion KRW

Investment in saving energy



8.2%

The ratio of female managers



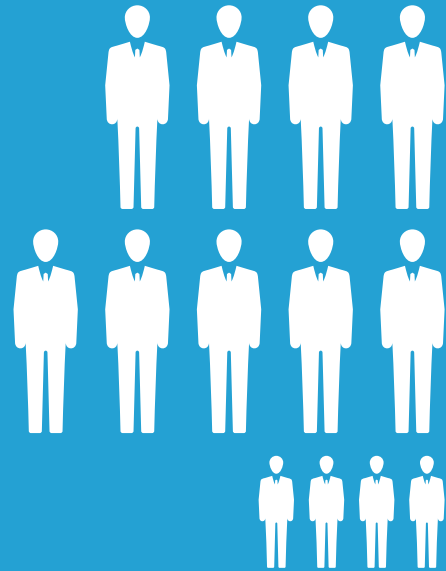
97%

The ratio of employee participation in social contribution



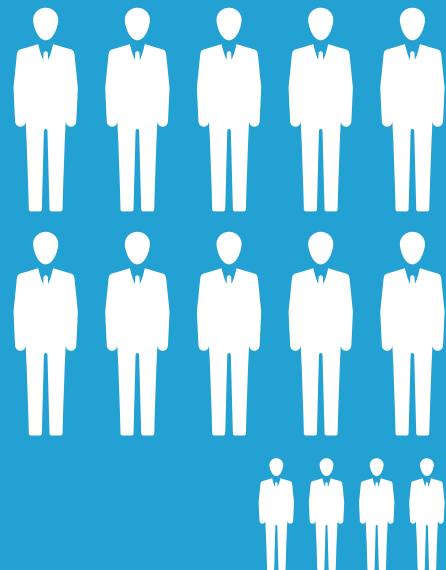
2016

94



2017

104



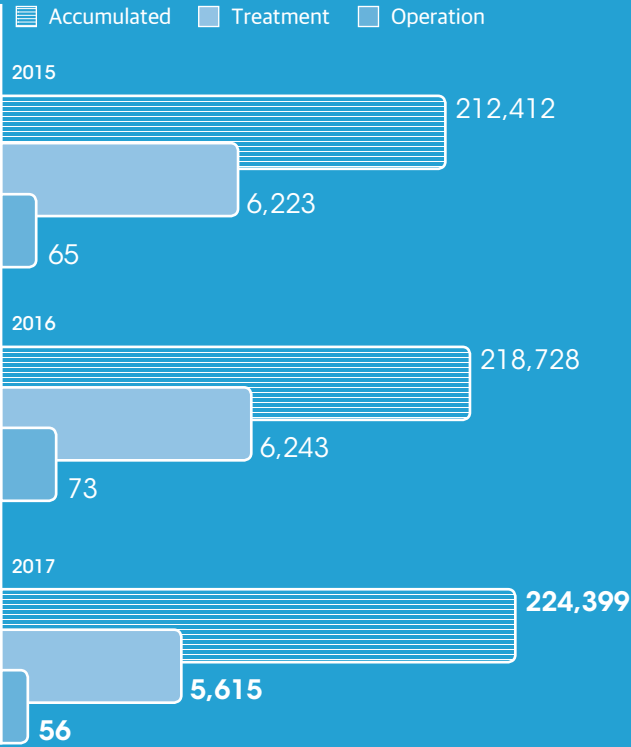
The number of scholarship recipients of 'Talent Nurturing Company' (Accumulated)

Unit: Persons

The number of scholarship recipients of 'Talent Nurturing Company' (Accumulated)

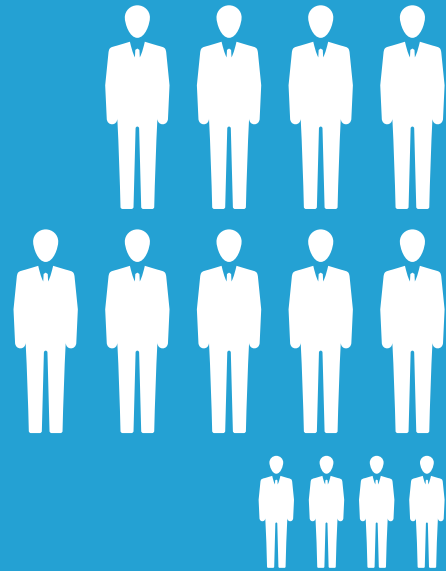
Unit: Persons

The number of recipients of Donated Eyesight Recovery Project

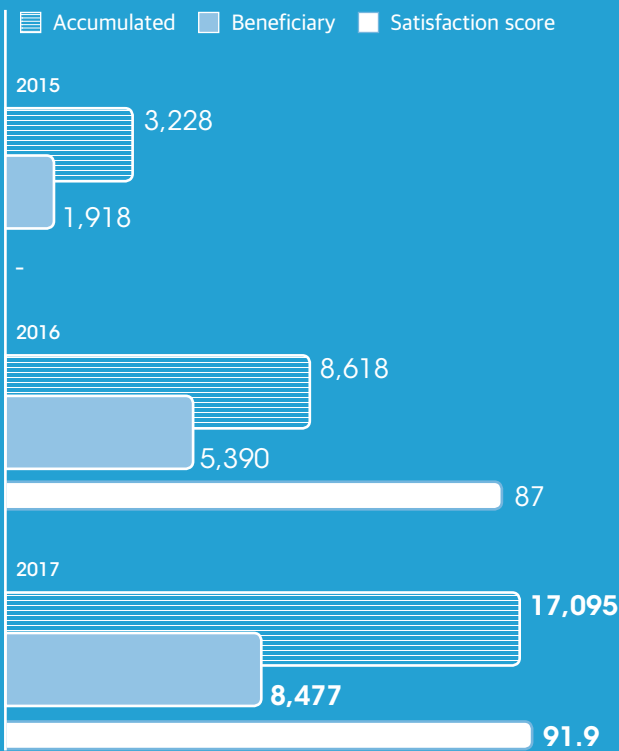


2016

94

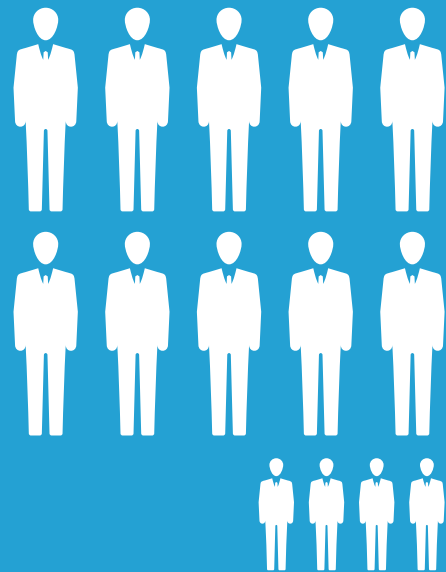


The number of recipients of 'Green Planet Environment School'



2017

104



01

Creation of environmental value



LCA (Life Cycle Assessment)

Life Cycle Assessment (LCA) refers to the activities that evaluate the impacts of products on the environment in the entire process, ranging from extraction of raw materials to recycling after the use of the products. In accordance with LCA Principles as specified in ISO14040/44, we conduct LCA by collecting environmental information on energy and utility in the manufacturing process and for the components. Aiming to assess environmental impacts in the manufacturing process, we classify Bill of Material (BOM) information to indicate components of products and the quantity of energy consumption in the Integrated Energy & Greenhouse Gas System (s-GEMS). We also collect information on atmosphere, water quality, and wastes by product from the internal EHS system and conducts LCA in the partial lifetime cycle from production to shipment.

● LCA Process

	Analyses of products and manufacturing process	<ul style="list-style-type: none"> Analyses of battery production process Definition of process input/output
LCA	Data collection	<ul style="list-style-type: none"> Input (raw materials, packing material, power, energy, and industrial water) Output (output, wastes, atmosphere and water system discharge) Transport information, etc.
	Data processing	<ul style="list-style-type: none"> Validation on collected data (Calculation errors, correlation, etc.) Data integration by unit process
	Establishment of environmental impacts	<ul style="list-style-type: none"> Analyses of battery production process Definition of process input/output
	Echo design	<ul style="list-style-type: none"> Generation of major environmental issues related to products based on LCA results Generation of improvement factors by life-cycle stage

The current state of progress

In 2017, we pushed for an improvement of the IT system in order to conduct LCA through the use of the existing management information system. The improved system enabled conducting LCA on all mass-produced products and instantly responding to customer requests in the development stage. In 2017, at the request of its clients, we conducted LCA on three models.

Future directions

As the establishment of the system was completed in 2017, we plans to push for optimum LCA by drawing consistent improvement assignments. The results of environmental impact assessments generated from LCA will be used in the development of products on a preferential basis so that the environmental impacts of the products can be improved.

Energy saving in workplaces

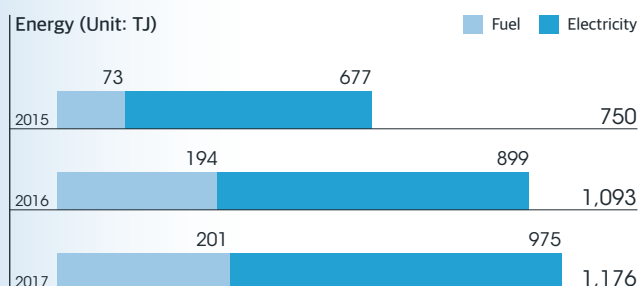
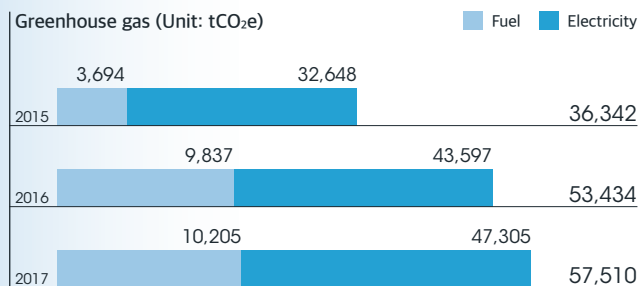
Advancement of energy saving activities and management

In 2017, we formulated an Energy Saving TF Team in connection with entire departments before conducting activities to save energy. This team strengthens energy-saving activities by standardizing operating methods of idle/stand-by facilities. We also set energy-saving targets by department, as well as conduct an Inspection Council Meeting under the supervision of management every other month to check on progress and to reward excellent cases. We expanded the Energy Management System (s-GEMS) into overseas workplaces to optimize the quantity of energy consumption and to better ensure validation of energy-saving effects. Regarding the quantity of energy consumption, external monitoring and verification were conducted.

Accelerated introduction of green energy

In an effort to decrease environmental impacts generated in the course of using energy in workplaces focused on accelerating the introduction of green energy, we gradually increase the used portion of green energy. As of 2017, renewable energy accounted for about 79% of the entire electric use of Samsung SDI Austria. We plan to induce all workplaces in various countries in the world to introduce green energy in the future.

● The quantity of reduction in greenhouse gas and energy



Response to domestic and international laws and regulations

Participation in the emission trading system

In an effort to proactively respond to the regulations in response to global climate changes, Samsung SDI has participated in an emission trading system introduced in 2015. In this respect, we are equipped with a carbon management system (MRV/ Monitoring, Reporting & Verification) so as to systematically manage goals based on the IT system (s-GEMS). In 2018, we plan to provide practical education on greenhouse gases to personnel in charge of greenhouse gases at home and abroad, aiming to improve managerial efficiency.

Response to the Carbon Disclosure Project (CDP)

The Carbon Disclosure Project (CDP) is a non-profit organization requesting that major listed firms in various countries provide environmental management information on greenhouse gases and energy on behalf of financial investment institutions all over the world. Samsung SDI transparently discloses this information on its climate change strategy and greenhouse gas reduction activities through CDP. In 2017, based on our disclosure of information through CDP, Samsung SDI was rated with 'A-.'

Industrial water management

Concerns about the possibility of reckless use and depletion of water resources are growing. Therefore, efforts have been made to recognize the importance of managing of water resources and their more efficient use. In addition, waste water discharged from plants goes through primary treatment in waste water purification facilities and is then sent to sewage treatment facilities operated by the government. Production sites in Ulsan and Malaysia directly discharge it.

Reduction in emission of pollutants and wastes

Samsung SDI is increasing the rate of recycling by turning wastes into resources instead of incinerating or reclaiming them in the process of production. In particular, all cobalt and nickel wastes resulting from the process of battery production are treated by recycling specialists. In 2017, a total of 72,729 tons of waste were produced, and of them, 69,417 tons (95%) were recycled. As for potential contaminants, the government applies stricter internal standards than legal standards.

● Targets for environmental efficiency

Category	Unit	Base year (2015)	Target (2020)
The quantity of greenhouse gas emission per unit	tCO ₂ e	1,099,587 (2020 BAU)	Reduction by 30% or more against BAU*
The quantity of utilization of industrial water	1,000 tons/100 million KRW	0.11	Improved by two times or more
The quantity of utilization of hazardous materials	Ton/100 million KRW	0.43	Improved by two times or more
The quantity of emission of wastes	Ton/100 million KRW	0.97	Improved by two times or more
The rate of recycling of wastes	%	96	Maintenance of 95% or more
The rate of reclamation of wastes	%	4	Maintenance of 5% or less

* Targets for reduction in greenhouse gas BAU pertain only to energy business.

02

Facilitation of Respect for Human Rights and Communication by Employees



Human rights management and prohibition of discrimination

With the growth of corporate social interest in human rights management and respect for diversity, individual companies are requested to fulfill their responsibilities to respect human rights and diversity befitting global standards. Accordingly, partners and clients are urged to prevent violations of human rights. Recognizing the importance of human rights management, Samsung SDI thoroughly complies with ILO Conventions and labor laws in those countries where we conduct business. We also lay down the principles to prohibit child labor and forced labor in rules on management and employment before thoroughly complying with them. The results of monitoring on global workplaces and partners in accordance with RBA (Responsible Business Alliance), a global sustainable management initiative, showed that there were no violations of the policy prohibiting of child labor and forced labor and discrimination in 2017.

Human rights management in domestic and international workplaces

To protect and strengthen the human rights of its employees, Samsung SDI diagnoses and evaluates labor and human rights three to four times a year. We examine the areas and workplaces vulnerable to human rights abuses, as well as the factors that might lead to infringements of human rights. As for human rights-related situations that require improvement, which were found in the process, mid-to-long-term assignments were selected for advancement. In 2017, a diagnosis was made of human rights in China (Xian and Tianjin) and South-East Asia (Malaysia and Vietnam) to explore a total of 13 cases in need of improvement before measures were taken.

Fair performance evaluation and compensation

All Samsung SDI workplaces, both at home and abroad, comply with the minimum wage laws imposed by the countries involved and do not engage in gender discrimination in terms of wages. To encourage employees' motivation for work, we also adopt the principle of performance-based compensation. We also evaluate performance against annual targets set for each employee, as well as assesses competence required by position to differentially provide incentives according to the evaluation results.

Development of female leaders

To enable female employees to be competitive and demonstrate their expertise to the fullest measure and develop themselves in their workplaces, Samsung SDI guarantees gender equality in all areas, including the personnel management system and performance rating. We have a maternity protection lounge in each workplace to offer a resting space for women. In addition, we operate childcare centers in all domestic workplaces to help female workers get qualified help with their child-rearing duties and thus be able to focus on their work. We also aid maternity by adding 12 months to 12 months of legally mandated childcare leave if desired.

Works Council

The Works Council meetings composed of representatives of workers and an equal number of corporate representatives conducts both quarterly consultative meetings and ad-hoc meetings. In addition to a management system for human resources and labor focusing on wages and working conditions and improvement of working environments, the council provides consultations on workers' rights protection, as well as on the issues of workers' safety and healthcare. In addition, if it becomes necessary to conduct consultations between labor and management due to material managerial changes, we put out a notification in advance in accordance with the laws and regulations of the involved countries, and any changes made in the Works Council meetings are instantly communicated to all employees on a regular basis. These meetings also serve as a communication channels within the organization to figure out concerns of their workers and to resolve their complaints.

A channel for the resolution of complaints

Samsung SDI endeavors to resolve inconveniences to employees and protect their human rights by listening to their concerns and by dealing with those issues in a reasonable way. We operate an online message board to resolve complaints, making it possible to offer anonymous tips and to create a pleasant work environment while thoroughly protecting the identity of informers. Due to these efforts, in 2017, we managed to improve 420 situations from 441 tips received through a complaint-resolution channel. It will more proactively collect opinions from employees and create a better working environment in the future.



03

Community Engagement and Development



Purpose of social contribution

Samsung SDI emphasizes the creation of shared value by effectively using employees' competence with a vision to create 'Company for a better valuable world.' We perform various social contribution activities, ranging from education for children and youths in local communities and support for the vulnerable to global environmental issues. We also take the lead in creating a better future by donating the talent of employees and sponsoring culture and sports activities. In 2017, a total of 4.0172 billion KRW, mostly focused on education and social welfare, were invested in domestic workplaces for social contribution activities. In 2018, we plan to focus on expanding and advancing social contribution projects that can contribute to resolving fundamental social problems instead of being preoccupied with donations, while inducing employees to proactively donate talent and take part.

Representative social contribution activities

Green Planet Environment School

As a creative leader of energy and state-of-the-art materials, Samsung SDI operates 'Green Planet Environment School,' an environmentally friendly energy education program. Green Planet Environment School is a training program dealing with the importance of environmental protection and energy use. Since 2011, our employees have taken part in the program as teachers in person and conducted various environmental education and training activities focusing on new renewable energy, global warming, and environmentally friendly vehicles. In particular, we further enhanced program reliability by acquiring certification from the Ministry of Education based on a self-developed educational course in 2015.



We operate 'Visiting Green Planet Environment School' for all primary schools in Gyeonggi-do for which it runs a summer camp and uses dedicated educational buses for children from low-income families in five areas of Korea. Owing to children's strong interest and parents' enthusiastic support, 8,477 students participated in the program in 2017, and a total of 17,095 students have benefited from the education through now.

Four implementation systems

Brand name	Recipients of benefits	Unit
We Dream School	Children·Youths	We sponsor education for children in local communities who have yet to benefit from advanced education and experience due to economic difficulties or a lack of resources and incentives.
We Dream Home	Sister Village	Sister Village provides support to people in local communities to create a healthy and warm environment and to help villagers to stand on their own feet.
We Dream Green	Environmental protection	We protect the Earth and the environment for the next generation and helps resolve social problems by creating environmentally friendly energy.
We Dream Global	Global	We perform various social contribution activities for local communities through participation of heads and employees of overseas corporations and fulfills our social responsibilities as a global company.

WE Dream School :: Children·Youths

Science Dream of Child (SDI) Science Classroom

Since 2016, Samsung SDI Suwon has operated an after-school Science Classroom for primary school students from low-income families. The children spend time in a local children's center for two hours once a month where they deepen their understanding of science and strengthen convergent and creative thinking through scientific experiences, producing things, and experiments that are not usually included in school curricula. In an effort to reduce the educational gap, we plan to continuously provide children from low-income families with a chance to benefit from scientific education in the future.

Sports School and Sports Competition for Disabled Students in Chungcheongnam-do

Cheonan Production Site established a MOU with Chungnam Provincial Office to conduct activities focused on promoting sports for 4,100 disabled youths in Chungnam Province from 2014 to 2018. We hold athletic meetings to select disabled youths with strong growth potential and provide support to help these youths develop into elite athletes through Sports School. Overall, the athletes nurtured in the SDI Sports School from 2014 to 2017 obtained a total of 193 medals in the National Sports Festival.

Dream Book Campaign

We operate an employee book-donation campaign to help children and youths from group homes to obtain diversified knowledge while growing up. If employees donate books that inspired them, or if they want to recommend books to children, we purchase as many books as the number of donated books and delivers them to children and youths in group homes nationwide.



- ① Science Dream of Child (SDI) Science Classroom
- ② Sports School and Sports Competition for Disabled Students
- ③ Dream Book Campaign



We Dream Home :: Community

Donated Eyesight Recovery Project

Since 1995, when we established an agreement with Siloam Eye Hospital, we have offered Donated Eyesight Recovery Project in order to help the poor who have difficulties in getting eye surgery and who are in danger of going blind due to financial difficulties. Mobile medical examination buses donated by Samsung SDI equipped with state-of-the-art medical equipment, such as operating microscopes and cataract surgery instruments, to visit rural provinces in mountainous areas suffering from a lack of such medical equipment. We also donate equipment for eye examination services. Up to now, a total of 224,000 people have benefited from these medical services. In 2017, a total 5,615 people received free examination services; of these, 56 persons had an emergency operation in a mobile operation bus.

Sister Village Activities in Rural Provinces (Direct Marketplace & Helping Framers)

Samsung SDI has established sisterhoods with 19 rural villages in Gyeonggi, Gangwon, Chungcheong, Jeolla, and Gyeongsang. We have our employees and their families visit them, get diverse agricultural experiences, including Farm Stay, and conduct volunteer activities to help farmers. On national holidays, We operate in-house direct marketplaces to explore sales routes for farmers and help increase revenues, as well as to provide the elderly living alone in sister villages with an opportunity to have cultural experiences.

Sharing 'Kimjang'

We conduct volunteer activities to show love for the vulnerable in local communities in the winter by sharing 'Kimjang' Volunteer Service. In 2017, local volunteer service providers in six workplaces took part in transferring the expertise in Kimjang (the traditional process of preparing and preserving kimchi) to employees who made kimchi for the first time. A total of 6,600 heads of kimchi made by the team of dedicated volunteer service providers were delivered to the elderly who live alone and to the welfare centers in local communities.

Fall Sports Picnic for Disabled Children

A fall sports picnic is held every year for disabled children with the Eunkwang Child Care Center in the playground of SDI Samsung Gumi. The fall sports picnic, where disabled children are matched one-on-one with employee volunteers and can enjoy themselves, is attended by a total of 150 people, including disabled local children, their families, teachers, and employee volunteers of SDI. This event helps to create a lot of fond memories. Celebrating its 12th anniversary this year, the fall sports picnic for disabled children has established itself as a representative social contribution event organized by Samsung SDI Gumi.

We Dream Green :: Environmental protection

Sharing Walk Festival

On the occasion of our foundation day, we organize an annual Sharing Walk Festival in order to ensure clean air to future generations. In 2017, we established a matching fund where money is saved based on the distance walked by employees before delivering the money to the Mongolian desert, the source area of fine dust and yellow dust, in order to raise a 'Forest of Hope in Asia.' In September 2017, we also planted 1,000 trees to create a windbreak in Tuv Aimag and Erdene Soum in Mongolia.

River caring campaign

To commemorate World Water Day on March 22, in cooperation with local communities, we conduct activities to purify the environment and improve the water quality of local rivers. In 2017, a total of 1,600 employee volunteers conducted environmental clean-up activities around workplaces and delivered 3,000 tumblers to help children in local childcare centers use water in an appropriate way.

- 1 Free Eyesight Recovery Project
2 Sharing 'Kimjang'
3 Fall Sports Picnic for Disabled Children



We Dream Global :: Global

Sisterhood relationships with underprivileged children abroad

Seeking to improve living environments for overseas children living in poverty, Samsung SDI sponsors one-on-one matches of company employees and 400 children. This helps poor children to grow up with the help of regular medical check-ups, free examinations and nutrients, and to benefit from quality education with donated school supplies.

Social contribution by overseas corporations

Major overseas Samsung SDI corporations conduct diversified social contribution activities to help develop local communities. For instance, Samsung SDI Malaysia promotes cultural experiences for children from low-income families and provides volunteer activities for emotional support and activities to improve perception in connection with local communities. Likewise, Samsung SDI Tianjin provides environmental protection education and volunteer services to primary school students. In addition, Samsung SDI Vietnam conducts tailored social contribution activities reflecting local characteristics while offering desired items to low-income families in local communities. Samsung SDI plans to expand global volunteer services offered by both domestic employees and overseas corporations.

Employee-participating volunteer services

Blood-donation campaign

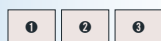
In February each year, i.e. when a lack of blood supply usually occurs, we conduct an annual blood-donation campaign. In 2017, a total of 1,916 employees (i.e. 888 employees more than in the previous year) took part in the blood donation. The company collected 1,000 Blood Donor Cards from employees to donate to local trauma centers while continuously raising public awareness about the importance of blood donation.

Grand Volunteering Festival, in commemoration of Samsung SDI's foundation

Celebrating the 47th anniversary of its foundation in June 2017, Samsung SDI held a Volunteer Service Festival. The event featured diversified social contribution activities, including a 'Dream Plant Program' created to deliver fine-dust-removing plants to children from lower-income families, a 'Wall-Painting Campaign' created to enable employees to draw paintings on the dilapidated outer walls of primary schools and to help children have a safer and more pleasant school life. The 'Suit Donation Campaign' was created to help job-seeking youths from low-income families to overcome difficulties in getting a job.

Talent donation campaign

Samsung SDI provides proactive support to help employees make the most of their personal competence and working knowledge in donating their talent. The Badminton Club provides regular training for disabled wheelchair badminton, and the Mountaineering Club breathes new life into mountain-climbing activities with the participation of visually impaired local people. This also offers consistent volunteer services to living-alone neighbors through projects designed to improve the residential environment of severely handicapped people with the use of working knowledge and by operating study rooms in local childcare centers. Furthermore, members of the Photo Club of Samsung SDI Giheung have donated their talent in order to take 624 pictures of students with Suwon Seokwang School for yearbooks for 14 years since 2004. Employee volunteers accompanied students on a graduation trip to add special fond memories to their yearbook, and we installed a photo-taking booth at the graduation ceremony where students and their parents could sit for a commemorative photograph.



- ① Establishment of a fund for 'Forest of Hope in Asia.'
- ② Blood-donation campaign
- ③ Grand Volunteering Festival, in commemoration of Samsung SDI's foundation

